NOVARTIS

caring and curing

ANNUAL REPORT 2012

CONTENTS

OUR MISSION

We want to discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life.

We also want to provide a shareholder return that reflects outstanding performance and to adequately reward those who invest ideas and work in our company.

GROUP REVIEW

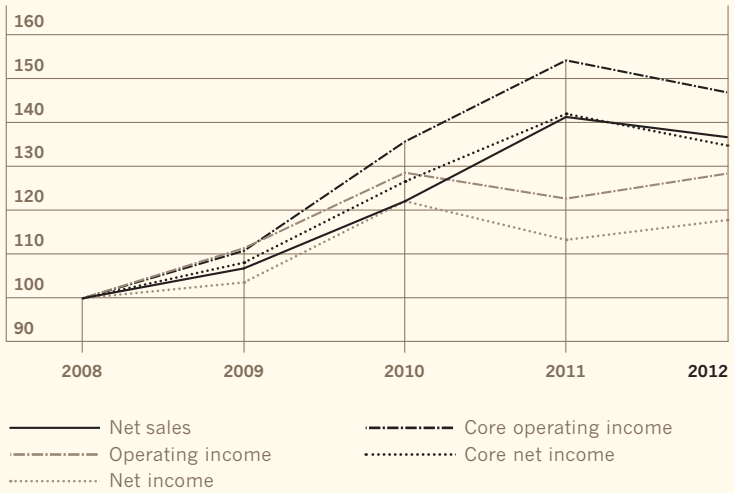
Novartis provides healthcare solutions that address the evolving needs of patients and societies worldwide. Our portfolio focuses on broad areas of healthcare: pharmaceuticals, eye care, generics, vaccines, consumer-based OTC and animal health.

FINANCIAL HIGHLIGHTS

KEY FIGURES
(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**56 673**	58 566
Operating income	**11 511**	10 998
Return on net sales (%)	**20.3**	18.8
Net income	**9 618**	9 245
Basic earnings per share [1] (USD)	**3.93**	3.83
Core operating income [2]	**15 160**	15 909
Core return on net sales (%)	**26.7**	27.2
Core net income [2]	**12 811**	13 490
Core earnings per share [1,2] (USD)	**5.25**	5.57
Core Research & Development [2]	**9 116**	9 239
As a % of net sales	**16.1**	15.8
Number of associates (FTE) [3]	**127 724**	123 686
Group free cash flow	**11 383**	12 503

NET SALES, OPERATING INCOME, NET INCOME, CORE OPERATING INCOME AND CORE NET INCOME
(Index: 2008 = 100%)



SHARE INFORMATION

	2012	2011
Share price at year end (CHF)	**57.45**	53.70
ADS price at year end (USD)	**63.30**	57.17
Dividend [4] (CHF)	**2.30**	2.25
Payout ratio [5]	**65**	66

2012 NET SALES BY REGION
(% and in USD millions)

United States	33	18 592
Europe	35	19 708
Asia/Africa/Australasia	23	12 936
Canada and Latin America	9	5 437
Total		**56 673**

[1] 2012 average number of shares outstanding: 2 418.1 million (2011: 2 382.5 million).
[2] Core results for operating income, net income, earnings per share (EPS) and R&D eliminate the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[3] Full-time equivalent positions at year end.
[4] Dividend payment for 2012: proposal to 2013 Annual General Meeting.
[5] Payout ratio is calculated by converting into USD the proposed total gross dividend amount in CHF at the CHF-USD exchange rate of December 31, 2012 based on an estimated number of shares outstanding on dividend payment date and dividing it by the USD consolidated net income attributable to shareholders of Novartis AG based on the Novartis Group's 2012 consolidated financial statements.

NEWS IN 2012

PERFORMANCE	Net sales were USD 56.7 billion, down 3% (unchanged in constant currencies, or cc) from the previous year. Operating income grew 5% (+8% cc) to USD 11.5 billion. Core operating income declined 5% (–2% cc) to USD 15.2 billion. Core operating income margin decreased by 0.5 percentage points to 26.7% of net sales.
PRODUCTS	Recently launched products accounted for USD 16.3 billion or 29% of Group net sales, up from 25% in 2011. Continuing to rejuvenate the portfolio, Pharmaceuticals achieved 11 major regulatory approvals for innovative medicines and new indications in the United States and the European Union. Key approvals included *Afinitor* in the United States and the European Union in advanced breast cancer, *Jakavi* in the European Union in myelofibrosis, and *Seebri Breezhaler* in the European Union for patients with chronic obstructive pulmonary disease (COPD). Alcon also received FDA approval for *Dailies Total1*, the industry's first water-gradient silicone hydrogel contact lens. In Vaccines and Diagnostics, *Flucelvax*, the first cell-culture vaccine in the United States to help protect against seasonal influenza, received FDA approval, and *Bexsero* secured a positive CHMP opinion for use preventing meningococcal serogroup B infections in individuals 2 months of age and older.
PIPELINE	Novartis has a leading new product pipeline with more than 200 projects in clinical development, including 138 in the Pharmaceuticals Division. In pipeline highlights, the first five studies in the QVA149 Phase III IGNITE clinical trial program all met their primary endpoints and showed that QVA149 significantly improved lung function compared with other COPD therapies. Results from a Phase III study showed that investigational compound RLX030 reduces the mortality rate in patients with acute heart failure. Alcon has leveraged the capabilities of the Novartis Institutes for BioMedical Research to gain access to a range of technologies and has prioritized glaucoma and macular degeneration in drug discovery efforts. Sandoz initiated a Phase III clinical trial for epoetin alfa in the United States, and continued to progress the follicular lymphoma Phase III clinical trial for biosimilar monoclonal antibody rituximab. The Vaccines and Diagnostics pipeline continues to focus on meningococcal disease and influenza.
RESEARCH AND DEVELOPMENT	Reflecting our commitment to innovation, we invested 21% of Pharmaceuticals net sales in R&D, focusing on the areas of greatest patient need and scientific promise.
PORTFOLIO	We continued to strengthen our broad, diversified healthcare portfolio with the acquisition of Fougera Pharmaceuticals Inc. by our Sandoz Division, making it the number one generic dermatology medicines company in the United States and globally.
CORPORATE RESPONSIBILITY	Engaging with society to improve access to healthcare is integral to the way Novartis operates. In 2012, our contributions and programs in this area were valued at USD 2 billion, providing medicine to more than 100 million patients, and health education, infrastructure development and other programs to another 7.2 million people worldwide.
DIVIDEND	We propose to deliver our 16th consecutive dividend increase, with a 2% raise proposed for 2012 to CHF 2.30 per share (2011: CHF 2.25 per share), a dividend yield of 4.0%.

Daniel Vasella, M.D.

DEAR SHAREHOLDER

The economic and debt crisis has cast a shadow over Europe and the United States for more than four years, and it significantly affected 2012, as well. Despite major concerted efforts, the end of this troubling period is not yet in sight.

Even the regions and markets that have so far escaped the crisis are now in danger of being affected by its socioeconomic side effects. Protectionist market interventions, monetary expansion and over-regulation – all signs of reactive politics – are increasing and can lead to a deepening of structural deficits. Persistent weak growth is likely, despite low interest rates and monetary expansion. High levels of public debt make the problem worse in many countries, and there is no certainty as to whether pension funds and social welfare institutions will be able to meet their promises in the medium term.

Despite this ominous backdrop, Novartis once again posted strong results in 2012. This is all the more remarkable given that we were forced to deal with increased price pressure, the patent expiration for our successful heart drug *Diovan*, and persistent turbulence on financial and currency markets. Moreover, quality problems at Sandoz and Consumer Health led to production downtime, which also affected results.

Despite these far-reaching events, Novartis was able to provide 1.2 billion patients worldwide with medical care in 2012 – exceeding the record-setting level of previous years – thanks to recently launched products and the further expansion in fast-growing markets.

The Group's net sales reached USD 56.7 billion (–3%, unchanged in constant currencies), while net income increased by 4% (7% in constant currencies) to USD 9.6 billion.

The **Pharmaceuticals** Division (USD 32.2 billion, 2% in constant currencies) rejuvenated its product portfolio with the help of recently launched products such as leukemia drug *Tasigna* and ophthalmic medicine *Lucentis*, which helped balance the *Diovan* patent loss. Moreover, groundbreaking therapies such as *Gilenya* and *Afinitor* – which in 2012 posted revenue growth in constant currencies of 147% and 85%, respectively – are expected to generate sustainable growth in the future.

Alcon (USD 10.2 billion, 5% in constant currencies) was able to assert itself and withstand the growing price pressure and competition from generics, due to product launches and the successful integration of CIBA Vision. **Sandoz** (USD 8.7 billion, –4% in constant currencies) succeeded in compensating for the competition-driven price decline of enoxaparin, on the back of strong demand for biosimilars, growth in emerging markets, and the strategically significant acquisition of US dermatology drug maker Fougera.

The performance of **OTC and Animal Health, which together make up Consumer Health** (USD 3.7 billion, –16% in constant currencies), was hurt by quality issues at a US production site in Lincoln, Nebraska, which required additional investment. Both divisions, however, are expected to return to growth once again in 2013.

Production bottlenecks also affected **Vaccines and Diagnostics** (USD 1.9 billion, –4% in constant currencies). On an encouraging note, the division received EU approval in January 2013 for the new, potentially life-saving meningococcal disease vaccine *Bexsero*.

Our strategy of focused diversification is effective, especially during times of crisis. Geared toward the needs of patients, the strategy centers on the research and development of innovative and cost-effective medical treatments. This clearly defined approach enables us to respond to ever-changing demand and to focus on areas that have the potential for long-term success.

Since Novartis was created in 1996, we have consistently focused on markets and technologies with potential for sustainable growth. This has enabled the company to grow from a chemical and pharmaceutical group into a pure healthcare company. This forward-looking approach and long-term planning have helped maintain the growth and earnings prospects of Novartis despite the expiration of the patent for *Diovan* and other products.

Our geographic diversification is just as critical as our broad product portfolio. Our global presence enables us to take advantage of market opportunities quickly and decisively – especially during turbulent times, which require flexibility, a stable foundation and the ability to adapt to new market conditions.

In addition to cost synergies in purchasing, cross-divisional cooperation in sales, research and development, distribution, and production allows us to benefit from the advantages of our Group structure.

Central to our strategy and the fulfillment of our primary task is our ability to consistently introduce new drugs that are more effective or more cost-efficient. Research and development remains our essential core competency in achieving this mission. This is why Novartis began several years ago to overhaul and promote its internal research activities. These efforts have paid off: From 1996 through 2011, Novartis received more product approvals for new molecular entities in Europe and the United States than our competitors, and our product pipeline, currently with 138 pharmaceutical development projects, is one of the most promising in the industry.

To maintain our leading position, Novartis invested more than USD 9 billion in the research and development of new drugs in 2012. This is especially noteworthy because many of our competitors are instead reducing their research spending to achieve short-term savings in this difficult economic climate. We believe this strategy is shortsighted. The detrimental effects of these activities often will not come to light until sometime in the future, which is not in the best long-term interests of patients, the company and shareholders.

Novartis achieved a number of key approvals in 2012. In the past 12 months, the Pharmaceuticals Division has reached 11 major regulatory approvals.

And our rich pipeline also offers the prospect of future success. We are focusing on serious illnesses for which there are currently no or only inadequate treatments. This applies to cancer, diabetes, and cardiovascular and lung diseases, which are expected to increase due to global demographic trends.

As scientific understanding of genetics advances, we are increasingly able to discover drugs that can be used in a targeted manner, even for diseases with different phenotypes.

We are also advancing the research of medicines for rare and neglected diseases. One milestone has been the approval of *Signifor* to treat adults with Cushing's disease, a rare and life-threatening disease caused by too much cortisol in the blood.

A closer look reveals, however, that increasingly stringent public policies – in particular, pressure on drug prices – threaten to erode the culture of innovation in healthcare. This is made worse by the one-sided and biased public debate that ignores the built-in uncertainties that are part of a complex knowledge-based industry such as the healthcare sector.

Despite major medical breakthroughs and therapeutic successes, the healthcare sector remains an industry fraught with considerable risks. The costs involved in bringing a drug to market have risen substantially in recent years and have surpassed the USD 1 billion mark, which is repeatedly quoted as the cost of a successful drug launch. But according to retrospective analyses for the period from 1997 to 2011, launching a new drug actually costs anywhere from USD 3.7 billion to USD 11.8 billion, depending on the company. During this period, Novartis obtained the most approvals from US authorities and had the second-highest rate of productivity.

Even though research and development at Novartis is among the most productive in the world, deep financial resources alone are no guarantee that drugs will receive marketing approval, even when they have advanced to late-stage development. The tremendous complexity of modern drug research must therefore factor in the risk of setbacks in order to offer the long-term innovation and ongoing medical progress that society justifiably demands. But this has its economic price.

The tougher environment requires additional skills from business leaders. Managers can no longer measure their performance based solely on financial success. They must also be measured by their ability to deal with the growing number of interest groups that participate in the often emotionally charged healthcare debate. Business leaders must set clear priorities, as it is impossible to take all wishes and demands into consideration, especially when they are often mutually incompatible. Close attention should be paid to the legitimate needs of patients, employees and shareholders.

This clash of opposing needs is also behind the dilemmas that arise ever more frequently in the current tense economic climate, when private healthcare companies deliver agreed-upon services without being compensated accordingly, or at all. A way out of this situation, which must always keep the patient's well-being in mind, can only be found through a cooperative process in which interest groups work together and engage in a rational dialogue in order to identify long-term solutions. We should avoid imprudent measures that often entail unforeseen risks.

This goal cannot be achieved in an atmosphere of distrust, which is reflected in the rising number of conflicts that are fought out in court. This tendency is reflective of the anxious atmosphere that has struck vast portions of society since the outbreak of the economic crisis. This also includes the increased attacks that risk undermining legal and contractual certainty, which only will lead to further instability.

Thanks to our profitability in 2012, we were once again able to support millions of patients who lack sufficient financial resources and access to life-saving treatments. As part of our corporate responsibility, we were able to provide more than 100 million people with access to medicines and treatments valued at more than USD 2 billion, or about 3.6% of total sales.

Besides our free anti-leprosy drugs – we have provided combination therapies to more than 5 million people since 2000 – Novartis continues to work with partners such as the World Health Organization and UNICEF to fight the spread of malaria and to stem the epidemic's health and economic consequences. Since 2001, the Novartis Malaria Initiative has distributed more than 500 million treatments of *Coartem* and *Coartem* Dispersible without profit. In order to help more patients and to save even more lives, Novartis is breaking new ground by using state-of-the-art information technology to improve the distribution and management of drugs in Africa and Asia. These new solutions will enable us to supply much-needed drugs to people in remote areas in the future.

But the concept of corporate responsibility goes beyond charitable donations. To combat the health disparity resulting from neglected diseases and develop new therapies against widespread infectious diseases, Novartis also maintains research facilities such as the Novartis Institute for Tropical Diseases in Singapore and the Novartis Vaccines Institute for Global Health in Siena, Italy.

In addition, we are extending our for-profit social business to improve access to medicines in economically underdeveloped regions of Kenya, Vietnam, Indonesia, Nigeria and Ghana. This builds on work we have done over the past five years to provide access to medical care to more than 40 million people in 33 000 villages in rural India.

Times of structural change are marked by uncertainties. There is no question, however, that the macroeconomic challenges will

remain significant and the threat of over-regulation will grow. As a consequence we need a stronger dialogue between the private and public sector to find common ground and keep the crisis from escalating. Short-term political calculations can do major harm to the healthcare industry, which depends on long-term policies. This ultimately could risk prolonging the current crisis and irreparably weaken the economic structure.

Excessive price reductions and discounts on drugs usually receive quick and broad-based political support, but they threaten the necessary funding for the research and development of new drugs. Hasty popular decisions also disregard the fact that in-patient and outpatient treatments generate a large part of today's healthcare costs, and gloss over the positive economic impact of effective medical therapies. Studies show that spending USD 1 on drugs can save about USD 6 in the healthcare sector and thus provide significant savings to the overall economy.

Society simply has not yet recognized the potential of prevention. At a time when healthcare budgets are restricted and debates rage over how to allocate resources fairly, prevention measures offer a sensible alternative due to their high cost-benefit ratio. Healthy lifestyles should be rewarded, as should diagnostic tests to advance early detection so diseases can be diagnosed and treated in a timely manner. Measures such as these can benefit the entire healthcare system and help rein in costs.

Our business model has proven itself to be stable and attractive to investors despite the ongoing economic and political challenges. In a time of dangerous levels of debt and fundamental uncertainty over what an efficient market economy should look like, together with fluctuating share prices, we offer our shareholders a high degree of reliability, evidenced by continually increasing dividend payments and above-average creditworthiness.

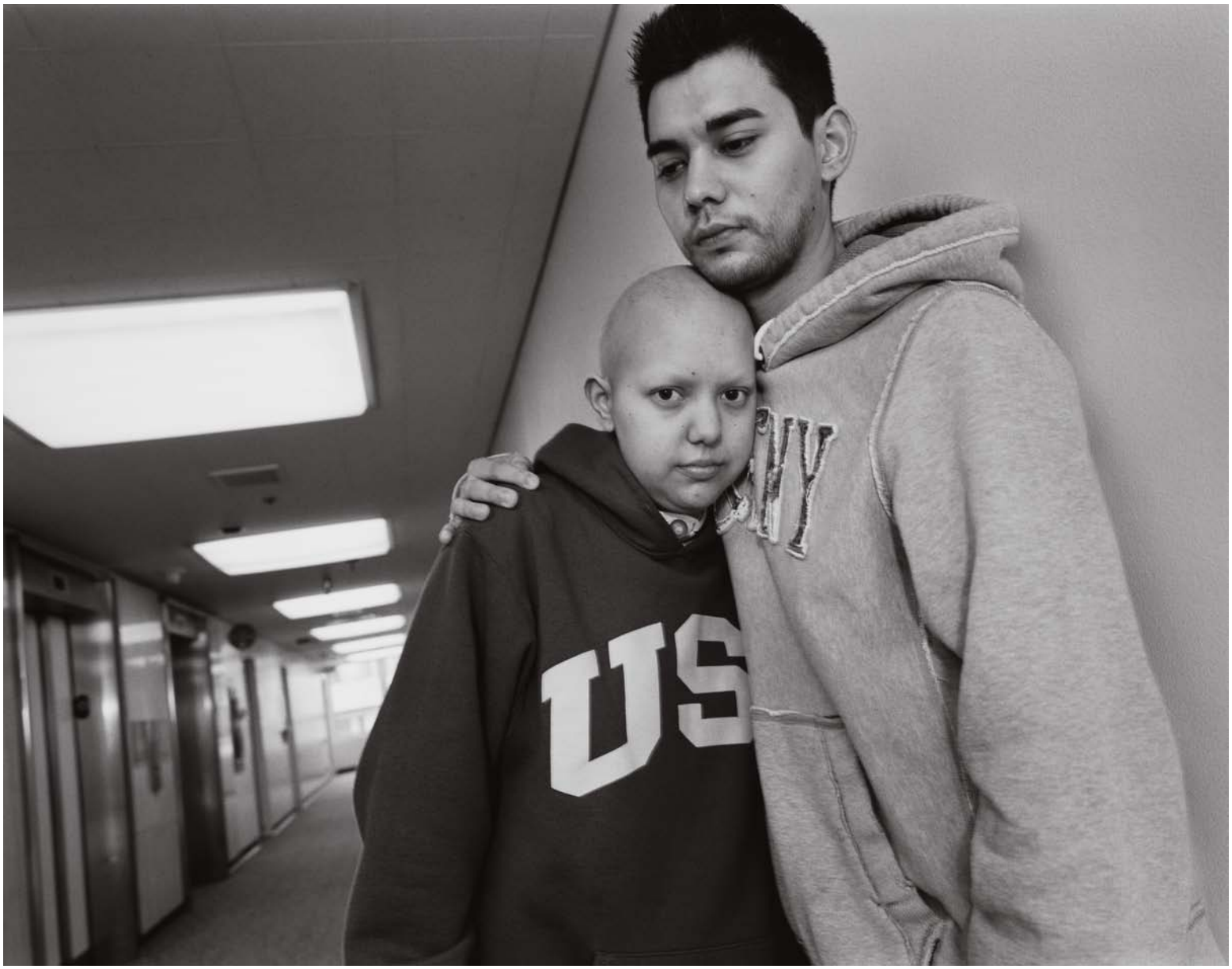
Thanks to our strategic positioning, focus on innovation, strong product portfolio and healthy pipeline, we can therefore look to the future with confidence and the certainty that we can build on the strong performance we have delivered in the past.

I would like to take this opportunity to thank all employees for their dedication and tireless commitment, which helped us in 2012 to generate results on par with our record-breaking results of the past despite the pitfalls of the financial crisis and the expiration of the patent for *Diovan*. We will continue to do everything we can in 2013 to consistently focus our efforts on the needs of patients around the world, and I am confident that this will enable us to generate strong, sustainable results over the long term.

Dear shareholders, I am pleased to propose an increase in the dividend to CHF 2.30 (2%) at the next Annual General Meeting. And finally, I would like to thank you for the trust you have placed in our company and my leadership. After 25 years with the company and 17 years in a top management position, I have decided not to stand for re-election to the Board of Directors. I am pleased to propose Dr. Jörg Reinhardt, a very experienced healthcare executive with deep knowledge of our company, as my successor. Jörg will serve as Non-Executive Chairman of the Board after an interim period during which Prof. Dr. Ulrich Lehner will lead the Board of Directors.

Sincerely,

Daniel Vasella, M.D.
Chairman of the Board



Joseph Jimenez

INTERVIEW WITH JOSEPH JIMENEZ

WHAT WERE THE HIGHLIGHTS OF 2012 FOR NOVARTIS?

Two things set Novartis apart and drove our performance in 2012: Our broad healthcare portfolio centered on growing segments of healthcare, and our sustained commitment to science-based innovation. Despite another year of transformational change for the healthcare industry, we met most of our objectives for the year, and made significant progress across our core strategic priorities of innovation, growth and productivity.

In financial terms, we delivered results generally in line with the previous year, despite the loss of the patent for *Diovan* in key markets and higher investments in quality. Group net sales amounted to USD 56.7 billion, which represents a 3% decline in USD compared to the prior year. In constant currencies the sales remained flat. Group core operating income margin was 26.7%, slightly below 2011. These numbers are in line with our expectations set at the beginning of the year.

Strong new product launches are rejuvenating our portfolio. We achieved 17 major approvals across our portfolio in 2012. We lead the industry in revenue from medicines launched over the past five years, offsetting losses from patent expirations. Recently launched products now comprise USD 16.3 billion, or 29%, of Group net sales, up from 25% a year ago. For example, in our Pharmaceuticals Division, *Gilenya* grew 147%; *Tasigna* rose 44%; *Lucentis* was up 22%; and *Afinitor* climbed 85% (all in constant currencies, or cc), as sales accelerated with the approval to treat advanced breast cancer. Together, with our pipeline, we believe these products strongly position the division for growth.

Alcon, our eye care business, grew 5% cc. Many factors drove this, including the introduction of *Dailies Total1*, technologically advanced contact lenses that offer superior comfort.

Sandoz experienced a decline in 2012 due to loss of exclusivity of enoxaparin and supply issues. But Sandoz delivered strong double-digit sales growth in Western Europe (outside of Germany), Asia and parts of Latin America. In biosimilars, we maintained our position as the global leader, with more than 50% segment share in key countries, and many more molecules in various stages of development.

Net sales were down for Vaccines and Diagnostics and Consumer Health, due largely to shipping delays and production issues.

We continued to improve productivity – focusing on procurement, resource allocation, our manufacturing network and the ongoing Alcon integration – saving around USD 2.8 billion this year. This is important strategically because it helped offset losses from patent expirations and enabled us to invest in growth opportunities.

Throughout 2012, we've been on a journey toward achieving "quality beyond compliance,"

and have taken significant steps forward. We had 264 health authority inspections, including 56 from the US Food and Drug Administration (FDA) – the majority with good or satisfactory results. We still have more work to do at our Consumer Health facility in Lincoln, Nebraska, and at two of the Sandoz sites under the warning letter in North America. But we're making progress. The Sandoz site in Broomfield, Colorado, had a satisfactory FDA inspection; progress on the warning letter items was recognized and resulting compliance status of the facility was upgraded. We continue to invest in improving skills, modifying processes and modernizing equipment to enhance our level of quality as quickly as possible at the sites with remaining issues. Diligence about quality is critical to our reputation with regulators.

HOW IS NOVARTIS TURNING INNOVATION INTO GROWTH?

We focus on driving growth across the broad spectrum of healthcare through our strategy of science-based innovation, the intersection of cutting-edge science and patient needs. We're investing significantly in R&D even as other companies cut back.

As a result, we have one of the industry's strongest pipelines. Our 138 pharmaceutical R&D projects include 71 new compounds, which is among the highest number of new molecular entities in the industry. Over the past five years, Novartis has surpassed competitors in delivering 43 approvals of new molecules in Europe, the United States and Japan. And Sandoz leads in segments of generics driven by innovation – biosimilars, injectables, ophthalmics and dermatology.

Vaccines and Diagnostics has 13 programs in development focused on novel targets – among the highest of our peers. One promising product, *Bexsero*, was just approved in the European Union. *Bexsero* is the first broad-spectrum vaccine that can help protect all age groups, including infants, against the B serogroup of meningogoccal disease, which can kill within 24 hours. In addition, the FDA approved *Flucelvax* as the first cell-culture-derived flu vaccine.

Several of our Oncology medicines show how we aspire to discover novel treatments that change the practice of medicine. *Afinitor*, which gained approval this year in Europe and the United States for the most common form of advanced breast cancer, represents the first major breakthrough in 15 years for the 220 000 women who are diagnosed each year with this disease. *Jakavi*, an oral drug, is the first treatment option for a rare blood cancer called myelofibrosis, which has a median survival rate of less than six years. And *Tasigna*, a second-generation tyrosine kinase inhibitor, has the potential to achieve deep molecular response in patients with Philadelphia chromosome-positive chronic myeloid leukemia, providing the foundation for a new clinical research program to explore whether patients can achieve treatment-free remission.

We are also making progress in heart failure and working to build a portfolio across its spectrum. Today, about half of all heart failure patients die within five years of diagnosis. This disease places a tremendous burden on healthcare systems, with acute heart failure causing more than 2 million hospitalizations per year in the United States and the European Union alone. Our therapy RLX030 demonstrated in a six-month study that it helped to reduce deaths of patients with acute heart failure.

WHAT PERFORMANCE DID YOU SEE IN EMERGING MARKETS?

We are delivering strong performance in emerging markets, and with 6% growth cc,

these markets contributed USD 13.8 billion, or 24%, to Group net sales. China, which now ranks among our top 10 markets, led this growth, with net sales up 24% cc over the previous year.

We are prioritizing innovation in China. Our Pharmaceuticals Division is leading this, with strong results from *Diovan*, *Glivec*, *Exforge* and *Aclasta*, and recent approvals for *Onbrez Breezhaler*, *Galvus* and *Lucentis*, which is off to a good start. Alcon and Vaccines and Diagnostics are also advancing their positions in China.

We credit much of this success to our emphasis on recruitment and training in China. It is very important that our associates understand the Novartis medicines for which they are responsible, and that they can discuss them with doctors. That's why we've created the Novartis China University to systematically train associates. This is a competitive advantage, and it's important for our growth.

In Russia, we are the largest healthcare company, and we continue to expand our presence through the construction of a new plant in St. Petersburg. We're also actively contributing to the government's goal of raising life expectancy from 69 years to 71 by 2015. Through a partnership in the Yaroslavl region northeast of Moscow, where cardiovascular problems are common, a new Regional Hypertension Center and a public education campaign have been established, and three pilot sites now offer hypertension intervention tools. As a result of these measures, blood pressure control rates at the pilot sites have nearly doubled over the past 18 months.

We are also focusing on Africa, where we expect rising demand for healthcare. Africa is home to one-seventh of the world's population. Sub-Saharan Africa has up to one-quarter of the global disease burden, but only 2% of its doctors. There's a lot of opportunity to help people in Africa live longer, healthier lives. Today we're the third-largest multinational healthcare company in Africa, and we're making a long-term commitment to be part of the solution.

WHY IS IT VALUABLE FOR NOVARTIS TO HAVE FIVE DIFFERENT BUSINESSES THAT DELIVER SUCH DIFFERENT RESULTS?

Our broad healthcare portfolio enables us to offer a full range of healthcare solutions. Patients need innovative medicines, vaccines, generic options and therapies for self-care. We offer products in each of these segments, increasing choices available to patients. And in this uncertain economy, our diversified portfolio also helps us to balance risks in the marketplace. Our diversification means that less than 55% of our overall sales are reimbursed by a public agency, which insulates us more than pure-play pharma companies.

We also gain from sharing knowledge and relationships across our divisions, particularly in R&D. Our Sandoz biosimilar work is a good example. Our generics division collaborates with our Pharmaceuticals Division and our Oncology business unit to design and implement trials to get to the clinic faster for testing.

We see benefits as well on the commercial side. This year our Customers First initiative, through which our divisions work together to serve the diverse needs of our customers, helped generate more than USD 800 million in additional revenue. So our structure generates results.

HOW IS NOVARTIS HELPING MORE PEOPLE GAIN ACCESS TO HEALTHCARE?

Nothing is more important than ensuring that patients have access to healthcare, regardless of where they live or their ability to pay. We have several efforts under way to make sure this happens. In the developing world, we are committed to working to eliminate leprosy and malaria. We're pioneering new business approaches to deliver healthcare sustainably in low-income areas. And our scientists are searching for new therapies and adapting existing medicines to treat neglected diseases.

Our access to healthcare programs reached more than 100 million patients in 2012, and we reached 7.2 million people with health education, infrastructure development and other sustainable programs.

This year we extended our collaboration with WHO in its efforts to end leprosy. Novartis will continue to provide free multidrug therapy, valued at USD 22 million, to treat an estimated 850 000 people through 2020. Additionally, since 2001, we have delivered more than 500 million antimalarial treatments without profit, including 100 million treatments of our child-friendly formulation. We are expanding SMS for Life, a tool to monitor supply of medicines, throughout Kenya and Tanzania. This technology platform uses text messages and electronic mapping to track supply of malaria treatments, diagnostics and patient surveillance data at public health facilities. SMS for Life works with Vodafone, IBM, Roll Back Malaria and the government. It has already reduced stockouts in Tanzania by 70%.

It is clear, however, that philanthropic aid is no longer enough. The best way to improve global quality of life and health is to build locally sustainable solutions that will have an enduring impact. The most important societal issues in developing countries are healthcare education, infrastructure and distribution. We have launched a series of Novartis Social Ventures to address these issues by blending corporate responsibility with innovative business models.

One example is our Arogya Parivar or "healthy family" program in India. Through the program, we recruit and train local people to become health educators. At the same time, mobile clinics provide access to screening, diagnosis and therapies to patients in remote villages. We also increase access to 80 medicines from our Sandoz, Pharmaceuticals, OTC and Vaccines portfolios by selling them in smaller packages, which helps to track a patient's compliance and keep weekly out-of-pocket costs low. Arogya Parivar now offers improved healthcare for more than 40 million people living in 33 000 villages across India. And we're in the process of rolling out similar ventures in Asia and sub-Saharan Africa, with the aim to reach more than 100 million people in need of care.

HOW IS NOVARTIS POSITIONED IN THE GLOBAL COMPETITION FOR TALENT?

We're making a lot of progress in talent development. We have a new leadership development framework in place that helps associates learn how to better lead themselves, their teams, and their businesses.

I've personally led the creation of a development program for promising leaders in emerging markets, called LEAD. This year we've expanded the program to include people from across divisions and regions, including the Middle East, Asia and Latin America. Over 12 months, LEAD participants will work together in six small teams, each led by a Novartis Executive Committee member. The teams will work on action-learning projects in: 1) meeting and beating the local competition; 2) winning the war for talent; and 3) enhancing affordability and access to medicine. Exploring innovative approaches in each of these categories is important for our future success in emerging markets.

WHERE DO YOU SEE THE BIGGEST CHALLENGES AND OPPORTUNITIES IN 2013?

As I look ahead, I think of 2013 as a year with two halves for Novartis. In the first half, we will face the challenges of fully absorbing the impact of the expiration of the patent for *Diovan* and investing to improve our quality standards. In the second part, we expect to experience significant opportunity, with potential new product launches that we expect to move us into the next growth phase for our company.

With our industry-leading position, we will also be able to help shape the future of healthcare. For example, we need to break the mold on time and cost for clinical trials. The industry has said for a long time that it takes 10 years on average and costs in excess of USD 1 billion to develop a new therapy. And it's rising higher, as trials get more complex, with a recent 65% increase in the average number of total procedures required per trial protocol. This is unacceptable. Using biomarkers, we are better able to identify patients most likely to respond to therapies, shortening development timelines. We aim to use these types of approaches to lead collaborations with regulators, bringing new medicines to patients more quickly.

Finally, the technologies we use in our daily lives, such as smartphones and tablet devices, could make a real difference in helping patients to manage their own health. We are exploring ways to use these tools to improve compliance rates and enable healthcare professionals to monitor patient progress remotely. And because these technologies grew from the same spirit of innovation that drives Novartis, I see a real opportunity for our company to contribute.

Looking ahead, I'm confident that Novartis will make further progress on moving away from the industry's traditional business model of simply selling pills, toward an intensified focus on delivering positive patient outcomes. We believe that this will be good for the patients we serve, and good for Novartis.

I'm looking forward to 2013. It will be an exciting year.

BUILDING SUSTAINABLE LEADERSHIP IN HEALTHCARE

Novartis is the only healthcare company with leading positions in pharmaceuticals, eye care, generic medicines, vaccines and diagnostics, and consumer health. We focus on innovating to meet the evolving needs of patients, growing our presence in new and emerging markets, and enhancing our productivity to invest for the future and increase shareholder return.

PHARMACEUTICALS	ALCON	SANDOZ	VACCINES AND DIAGNOSTICS	CONSUMER HEALTH
Novartis discovers and develops innovative patent-protected medicines to enhance health outcomes for patients and healthcare providers. With an industry-leading pipeline, the division is a leader in oncology, primary care and specialty medicines. Innovation continues to rejuvenate our product portfolio to drive growth, with recently launched medicines representing 35% of division sales in 2012.	As the global leader in eye care, Alcon offers a broad spectrum of innovative surgical, ophthalmic pharmaceutical and vision care products. Alcon has played a key role in the evolution of cataract surgery and is the leading manufacturer of technologies used to treat cataracts. Alcon is helping people see the world better, enhancing sight to enhance life.	Sandoz is the world's number two generic medicine company, providing affordable, high-quality medicines. The division is a leader in differentiated generics that are difficult to develop, manufacture and market, and that can generate greater growth and profitability. Sandoz is also the global leader in biosimilar medicines.	Committed to disease prevention, Novartis is a leader in providing products to protect against many serious vaccine-preventable viral and bacterial diseases. The division's broad development pipeline, with more than 15 potential new products, includes an emerging platform of meningococcal vaccines. Our diagnostic tools help safeguard blood supplies and ensure patient safety.	Novartis is a world leader in over-the-counter medicines and animal health treatments. Our robust portfolio includes self-care products – such as medicines for coughs, colds, respiratory diseases, digestive health and pain management – as well as veterinary products that prevent and treat diseases in pets, farm animals and cultivated fish.

PATIENT-CENTRIC PORTFOLIO

STRATEGIC PRIORITIES

Extend lead in innovation Fueled by a distinctive scientific and clinical strategy, our research focuses on knowledge of disease and unmet medical need. This approach has resulted in a proven track record of bringing innovative products to market. Since 2007, Novartis has received approvals for more innovative medicines in Europe and the United States than any other company.

Accelerate growth To better address unmet medical needs and achieve positive treatment outcomes for patients, we are tailoring our commercial model to the rapidly changing healthcare environment. By successfully launching products, we are driving growth across our portfolio. We also are leveraging our broad portfolio to expand aggressively in emerging and established markets.

Drive productivity We strive to continuously simplify and streamline processes to improve profitability and support reinvestment in the business. This helps us sustain growth through patent expirations and continue to deliver high-quality, innovative medicines for patients in need.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HEALTHCARE PORTFOLIO

Our products reached 1.2 billion patients around the world in 2012, according to internal estimates.

While healthcare remains a growth industry, positive and negative trends continue to impact the way we operate. Aging populations, greater access to healthcare in emerging markets, and scientific advances create opportunities to enhance the lives of patients.

At the same time, an uncertain economy, patent expirations, regulatory issues, manufacturing issues, pricing pressures, and investigations and litigation exert downward pressure. Tensions will increase as healthcare spending outpaces economic growth.

Novartis is a leader in successfully navigating these pressures and meeting changing customer needs. Our strategy helps us fully leverage the changes in our industry while balancing risk.

CONTENTS

HEALTHCARE PORTFOLIO OVERVIEW [1]

2012 NET SALES BY SEGMENT

	%	USD millions
Pharmaceuticals	57	32 153
Alcon	18	10 225
Sandoz	15	8 702
Vaccines and Diagnostics	3	1 858
Consumer Health	7	3 735
Total		**56 673**

2012 CORE OPERATING INCOME [2] BY SEGMENT

	%	USD millions
Pharmaceuticals	66	10 213
Alcon	24	3 698
Sandoz	9	1 503
Vaccines and Diagnostics	0	– 75
Consumer Health	1	159
Corporate Expenses, net		– 338
Total		**15 160**

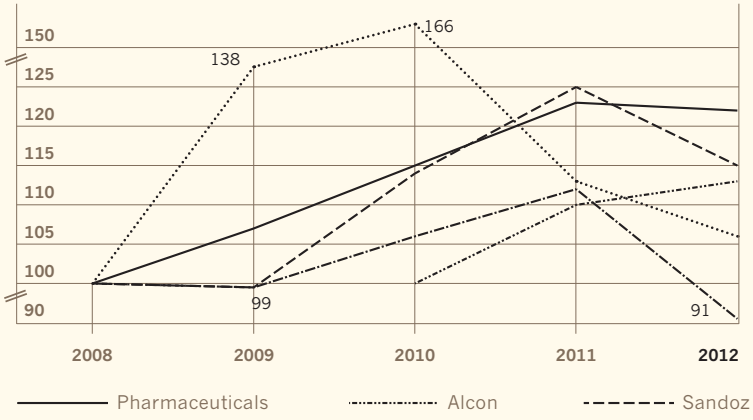
2012 NET SALES BY REGION AND SEGMENT

(% and in USD millions)

	Pharmaceuticals		Alcon		Sandoz		Vaccines and Diagnostics		Consumer Health	
United States	32	10 392	39	4 016	32	2 786	40	746	17	652
Europe	32	10 238	27	2 710	49	4 225	35	658	50	1 877
Asia/Africa/Australasia	26	8 434	23	2 395	12	1 057	15	273	21	777
Canada and Latin America	10	3 089	11	1 104	7	634	10	181	12	429
Total		**32 153**		**10 225**		**8 702**		**1 858**		**3 735**
Established Markets [3]	77	24 778	76	7 805	74	6 402	77	1 434	65	2 415
Emerging Growth Markets [3]	23	7 375	24	2 420	26	2 300	23	424	35	1 320
Total		**32 153**		**10 225**		**8 702**		**1 858**		**3 735**

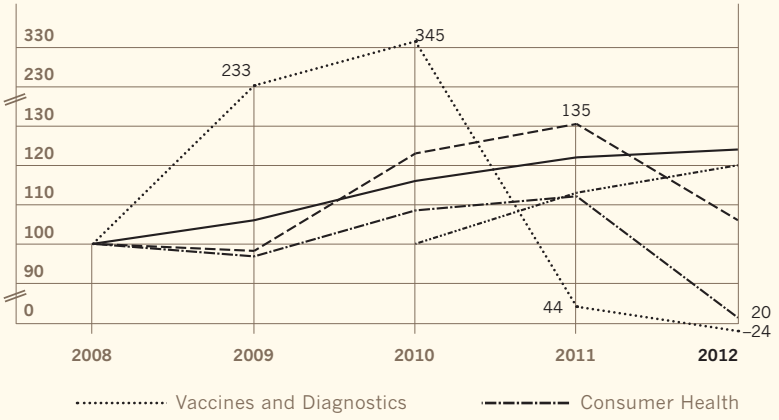
NET SALES BY SEGMENT

(Index: 2008 = 100%; Alcon only consolidated from August 25, 2010. However, Alcon 2011 growth rate is based on pro forma full year data for 2010)



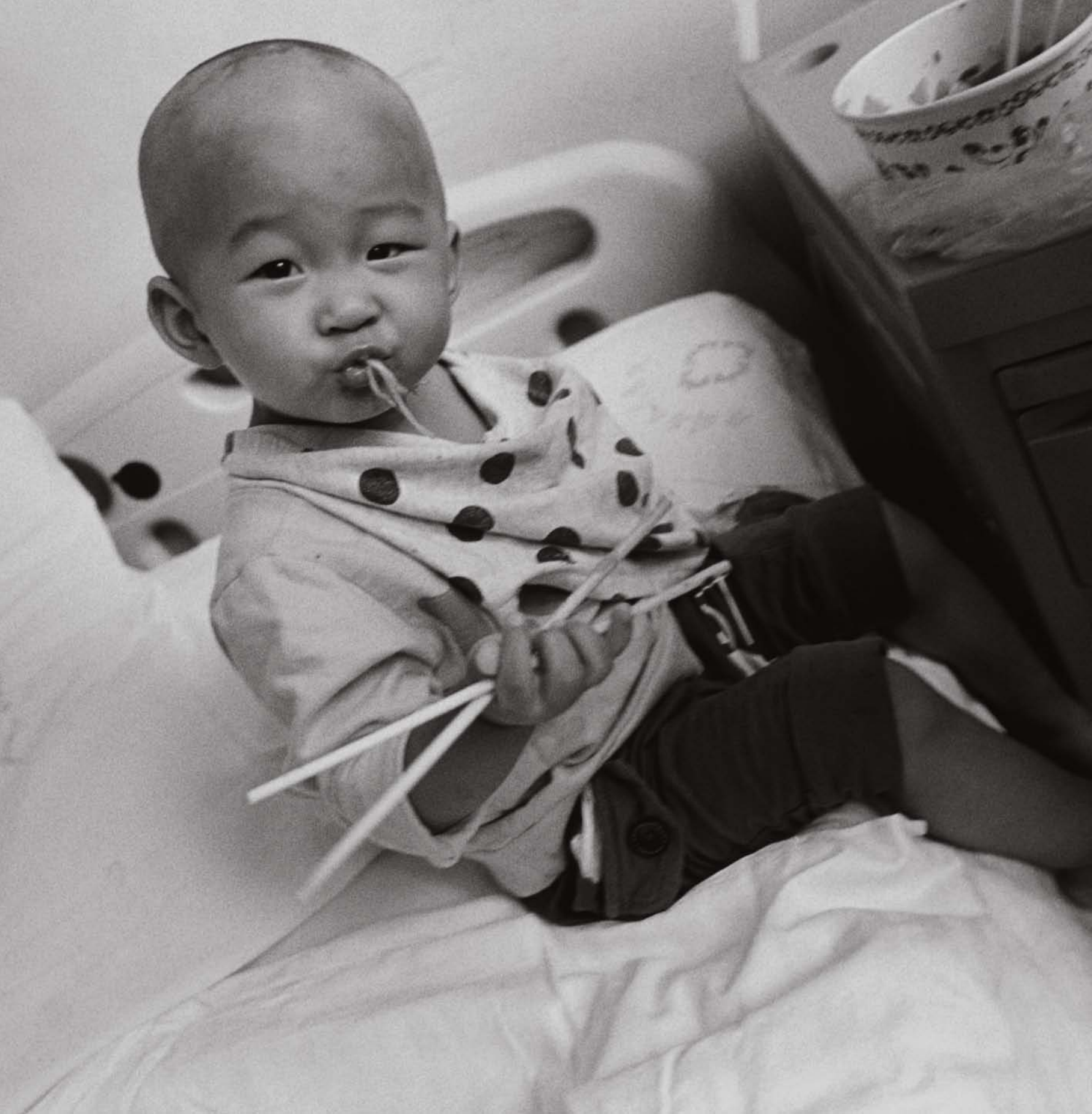
CORE OPERATING INCOME [2] BY SEGMENT

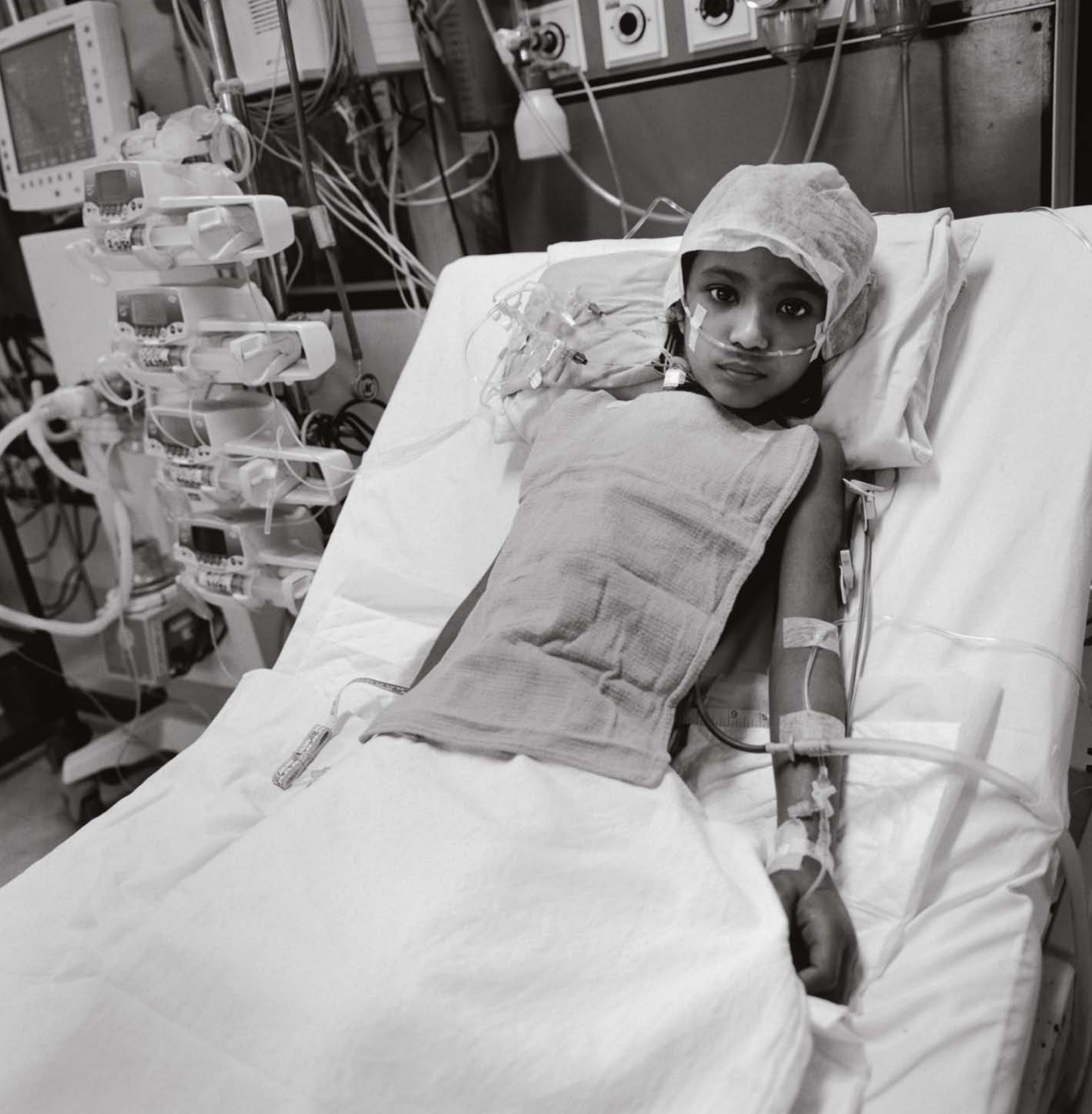
(Index: 2008 = 100%; Alcon only consolidated from August 25, 2010. However, Alcon 2011 growth rate is based on pro forma full year data for 2010)



Pharmaceuticals — Alcon — Sandoz — Vaccines and Diagnostics — Consumer Health

[1] Data since 2009 has been restated to reflect new segment allocation introduced in 2011.
[2] Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[3] Emerging Growth Markets are all markets other than the Established Markets of the United States, Canada, Japan, Australia, New Zealand and Western Europe.





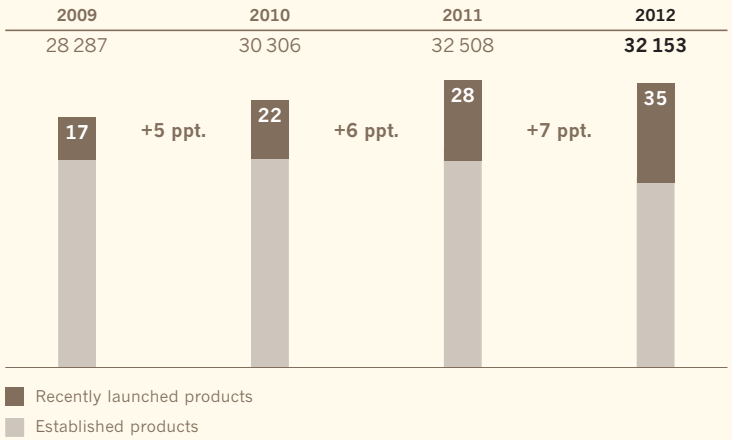
PHARMACEUTICALS OVERVIEW

KEY FIGURES
(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**32 153**	32 508
Operating income	**9 598**	8 296
Return on net sales (%)	**29.9**	25.5
Core operating income [1]	**10 213**	10 040
Core return on net sales (%)	**31.8**	30.9
Core Research & Development [1]	**6 697**	6 860
As a % of net sales	**20.8**	21.1
Free cash flow	**9 796**	10 538
Net operating assets	**14 283**	13 696
Number of associates (FTE) [2]	**61 268**	60 527

[1] Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[2] Full-time equivalent positions at year end.

PORTFOLIO REJUVENATION
(Sales in USD millions; share of sales from recently launched products [1] in % of total sales and increase of share of recently launched products [1] in percentage points (ppt.))



[1] Major products launched since 2007 including *Lucentis, Tasigna, Exjade, Sebivo/Tyzeka, Exforge, Galvus, Aclasta/Reclast, Cubicin, Exelon* Patch, *Afinitor/Votubia, Tekturna/Rasilez, Extavia, Arcapta Neohaler/Onbrez Breezhaler, Gilenya, Fanapt* and *Ilaris*

NEWS IN 2012

Pharmaceuticals delivered net sales of USD 32.2 billion (–1%, +2% cc), with strong volume growth (8 percentage points) more than offsetting the negative impact of generic competition (–6 percentage points).

Products launched since 2007 (USD 11.4 billion) contributed 35% of division net sales, up from 28% in 2011, driving portfolio rejuvenation across therapeutic areas. These products include: *Lucentis*, *Exforge*, *Gilenya*, *Tasigna*, *Galvus*, *Exjade*, *Exelon* Patch, *Afinitor/Votubia*, *Arcapta Neohaler/Onbrez Breezhaler* and *Ilaris*.

The division achieved 11 major regulatory approvals in the United States and the European Union in 2012. Of note, *Afinitor* gained US and EU approval in HR+/HER2- advanced breast cancer, marking the first advance in the treatment of this disease in more than a decade. *Jakavi* was approved in the European Union in myelofibrosis, a life-threatening blood cancer, and *Seebri Breezhaler* was approved in the European Union for patients with chronic obstructive pulmonary disease.

Europe (USD 10.2 billion, –5% cc) and the United States (USD 10.4 billion, +4%), our largest regions, maintained strong volume growth in recently launched products, which generated 45% and 33% of net sales in those regions, respectively, helping offset the negative impact of generic competition, particularly *Diovan*. Emerging Growth Markets (USD 7.4 billion, +6% cc) were led by double-digit growth in China and India. Japan, Latin America and Canada maintained solid growth rates.

Operating income grew 16% (+19% cc) to USD 9.6 billion. Core operating income advanced 2% (+5% cc) to USD 10.2 billion.

Constant currency core operating income margin expanded by 0.7 percentage points due to continuing productivity efforts. Currency had a positive impact of 0.2 percentage points, resulting in a core operating income margin of 31.8% of net sales.

PHARMACEUTICALS

Through an emerging portfolio of pioneering medicines, devices and services, Novartis is addressing the unmet needs of patients with chronic obstructive pulmonary disease, or COPD. This innovative portfolio is designed to establish a new standard of care and improve treatment outcomes for the estimated 210 million people living with COPD.

In November 2010, Dee Schofield was hospitalized after suffering an acute attack of chronic obstructive pulmonary disease, also known as COPD.

A part-time teacher and mother of six, Mrs. Schofield had never heard of COPD before the frightening episode. "I had a constant cough and had reached the stage where I couldn't walk a hundred yards up the road without stopping to get my breath back," she said. "I had avoided going to the doctor because I smoked and I didn't believe anything could be done about smoker's cough. But I got such a shock ending up in hospital on oxygen, that I realized I couldn't carry on like that."

After leaving the hospital, she managed to stop smoking and began taking medication to treat her COPD symptoms. "Today I feel I'm in control," she said. "I have the air to breathe and I often can do whatever I want to do."

COPD refers to a group of progressive lung diseases – including chronic bronchitis and emphysema – primarily associated with tobacco smoking, air pollution and occupational exposure. Although COPD affects an estimated 210 million worldwide, it is underdiagnosed, undertreated and poorly understood.

Furthermore, COPD is becoming more and more prevalent, and by 2020, it likely will be the third-leading cause of death in the world. The vast majority of COPD-related deaths will occur in low- and middle-income countries such as China, a global tobacco hotspot with more than 320 million smokers – more than the entire population of the United States. Many people also still cook indoors over wood or biomass fires, and exposure to smoke greatly increases the risk of COPD.

The disease affects men and women in nearly equal numbers, and this partially is attributed to increased tobacco use among women in high-income countries. Although COPD is often associated with the elderly, half of all patients are between the ages of 50 and 65 – many of whom are at their peak earning power and among the most active, productive contributors to society.

As a result, the financial burden of COPD on healthcare systems is daunting. According to a recent study by Harvard University's School of Public Health, the direct worldwide cost of COPD totaled about USD 1.9 trillion in 2010, and this figure could reach USD 4.3 trillion by 2030. Costs are driven primarily by exacerbations – acute, debilitating bouts of breathlessness that often necessitate hospitalization.

Today COPD cannot be cured, and underlying damage to patients' lungs cannot be fully reversed. However, COPD can be managed effectively, especially if it is diagnosed early. Bronchodilators – medicines that relax and open air passages in the lungs – are the fundamental first-line maintenance treatment for the symptomatic management of COPD.

Novartis is addressing the unmet needs of COPD patients through an emerging portfolio of pioneering medicines, devices and services that may help transform the delivery of care and improve treatment outcomes, benefiting patients and physicians,

as well as healthcare payors. "We are committed to innovation at every level of COPD and at a time when many other companies are exiting the field of respiratory medicine, Novartis is well-positioned to provide a broad range of innovative medicines to help physicians select the right treatment for the right patient at the right time," said David Epstein, Division Head, Novartis Pharmaceuticals and member of the Executive Committee of Novartis.

"Because of the compelling efficacy data we have seen in clinical trials, we believe our portfolio is an opportunity to change the way COPD patients are treated. And these innovative medicines are all being made available in the *Breezhaler* device which allows patients to hear, feel and see that they have taken the drug correctly."

EMERGING PORTFOLIO

The Novartis COPD portfolio spans four medicines with different, but complementary, mechanisms of action. These medicines include *Onbrez Breezhaler*, known as *Arcapta Neohaler* in the United States, which is a long-acting beta2-adrenergic agonist (LABA) and the only COPD treatment on the market that offers clinically relevant 24-hour bronchodilation combined with rapid onset of action at first dose. LABAs work by stimulating receptors in the smooth muscle of the airways, increasing the diameter of the airways that become constricted in COPD patients. First approved in 2009, *Onbrez Breezhaler* now is registered in more than 85 countries around the world.

Additionally, *Seebri Breezhaler*, approved in September 2012 in Europe under the brand name *Seebri Breezhaler* and in Japan under the brand name *Seebri* inhalation capsules, is a long-acting muscarinic antagonist (LAMA) developed as a once-daily inhaled maintenance therapy for the treatment of COPD. LAMAs prevent a natural chemical called acetylcholine from stimulating muscarinic receptors in the muscles surrounding the airways, allowing the airways to relax and open. Clinical trials demonstrated that *Seebri Breezhaler* improved patients' exercise endurance, reduced exacerbations and increased lung function over a 24-hour period compared to placebo, with a rapid onset of action at first dose.

Rapid onset of action can be particularly important to many COPD patients who report that symptoms of breathlessness are more severe in the morning than at other parts of the day. The GLOW3 study showed that after *Seebri Breezhaler* was administered in the morning, patients experienced improved exercise tolerance from the first dose, onward. In all studies, *Seebri Breezhaler* had an incidence of adverse events similar to placebo.

In October, Novartis also submitted an application to regulatory authorities in Europe for QVA149, an investigational, inhaled once-daily fixed-dose combination of the active ingredients in *Onbrez Breezhaler* and *Seebri Breezhaler*. These regulatory submissions are based on five studies that are part of the IGNITE clinical trial program, one of the largest international programs for COPD to date, encompassing 10 studies in total and more than 7 000 patients across 42 countries. A regulatory filing for QVA149 in the United States is expected at the end of 2014.

Furthermore, QMF149, an investigational treatment that combines the active ingredient in *Onbrez Breezhaler* with the inhaled corticosteroid mometasone furoate, is in Phase II clinical trials.

All of these medicines are inhaled through *Breezhaler*, a single-dose, dry-powder device. This common inhaler has low air flow resistance and therefore is appropriate for all COPD patients – regardless of their age or the severity of their disease. Additionally, it has multiple feedback features that help

patients determine if they properly administered their medication. From an efficiency standpoint, a common inhaler also eliminates the need for physicians to teach their patients how to use it more than once.

STRUGGLE TO BREATHE

"People with COPD feel suffocated, and without treatment, they become trapped in a cycle of deteriorating health," said Mark Lightowler, Global Brand Director for QVA149. "Because they struggle to breathe, their physical activity is limited. The goal of therapy is to improve shortness of breath and to make patients more active, to improve quality of life."

Primary care physicians initially treat most COPD patients, and diagnosing the disease is challenging, to say the least. One obstacle is comorbidities, the presence of one or more disorders in addition to the primary disease. Potential comorbidities range from asthma and diabetes to anemia, high blood pressure and heart failure.

"Many of these disorders are effects of the same lifestyle as COPD – particularly smoking," said Thys van der Molen, M.D., Ph.D., professor of primary care medicine at the Groningen Research Institute for Asthma and COPD in Groningen, the Netherlands. "A lot of things are interacting with each other, and primary care physicians have to deal with all of them."

A key to successfully managing COPD is early diagnosis, limiting damage to the lungs before treatment begins. "It's getting better: We have data showing that new diagnoses tend to be at an earlier stage today than 20 years ago," said David Price, M.D., professor of primary care respiratory medicine at the University of Aberdeen, Scotland. "About 20% of patients are diagnosed after missed opportunities – they were in front of doctors for respiratory tract infections, for example, but no one thought to test for COPD."

His prescription is systematic use of a simple diagnostic test called spirometry that measures how much air a person can inhale and exhale, and how fast air can move into and out of the lungs. "A quick blow into a spirometer should be a standard part of any consultation for smokers with diabetes, high blood pressure or other potential comorbidities – or even just having a routine health check. It only takes 30 seconds, and small hand-held spirometers are really good for ruling out COPD," he said. "After all, we wouldn't dream of sending patients away without taking their blood pressure."

Increasingly, healthcare systems are adopting integrated care models in which primary care physicians receive support from central laboratories and pulmonary specialists in diagnosing COPD patients. In Groningen, patients are referred to a laboratory that administers questionnaires and conducts a spirometry examination; results are reviewed by a pulmonologist who makes a preliminary diagnosis and provides treatment recommendations to the primary care physician.

Dr. van der Molen says more than 15 000 patients have participated in Groningen's integrated care model to date. "The system works: What we have seen is a pretty large reduction in the number of exacerbations, and stable health status for patients over three years," he said. "The focus on early detection means we get younger patients, more females, because smoking habits are changing. These patients want to know how they can deal with COPD – and they have higher expectations for treatment after diagnosis."

In London, a Community Respiratory Assessment Unit was established in 2004 to provide diagnostic support to primary care physicians working within the Hammersmith and Fulham area. The unit aimed to provide high-quality spirometry in association with focused history-taking to enhance detection of respiratory disease. A recent audit of the first four years of operations revealed that about one-third of COPD diagnoses in the community were incorrect, resulting in a significant number of inappropriate prescriptions.

EXACERBATIONS

Physicians, patients and payors agree that exacerbations are a major unmet need in the COPD space. Frequent exacerbations are linked to an accelerated decline in lung function, and many patients also have a poorer quality of life. Admissions to hospitals as a result of exacerbations are increasing, and patients with more severe underlying disease account for about 70% of the direct medical costs of COPD.

"Exacerbations kill COPD patients," said David Morris, M.D., Global Head, Primary Care Development at Novartis Pharmaceuticals. "More frequent exacerbations accelerate the decline in lung function and result in higher mortality.

"A one-size-fits-all strategy isn't enough. Patients respond differently to different treatments, and we have to look more deeply to understand the needs of the individual patient. Take comorbidities: Treatment with corticosteroids is effective in patients with asthma and is often used in patients with COPD, but corticosteroids can potentially worsen a comorbid disease such as diabetes or hypertension in a patient with COPD."

Novartis scientists are targeting exacerbations in two ways. First, they are developing inhaled therapies to reduce the rate at which patients have exacerbations and extend the time between exacerbations. In SPARK, a Phase III study in which patients were treated for 64 weeks, QVA149 was statistically more effective in reducing the overall rate of exacerbations (mild, moderate and severe) compared with *Seebri Breezhaler* 50 micrograms and open label tiotropium

18 micrograms. The adverse event profile of QVA149 was similar to both *Seebri Breezhaler* 50 micrograms and open label tiotropium 18 micrograms.

In addition, Novartis is racing to develop novel anti-inflammatory medicines to address underlying inflammation and other mechanisms of lung destruction. A promising anti-inflammatory compound known by the research number BCT197 is currently in Phase II clinical trials.

"SMART" INHALERS

The *Breezhaler* device was designed to provide multiple forms of feedback. For example, a patient can see when the capsule inserted into the inhaler is empty. When it is used, the *Breezhaler* device also emits a distinctive whirring sound and leaves a sweet taste of lactose at the back of patients' throats.

Novartis also is taking the development of devices to a new level – beyond today's mechanical devices designed exclusively to deliver medicines, to next-generation smart devices incorporating electronics that support both patients and physicians. "Our idea is to provide physicians and patients with real-time feedback on their disease – and the effect of treatment," Dr. Morris said. "It captures an overall vision at Novartis: going beyond the pill to provide an entire package of care to ensure the right patient gets the right drug at the right time."

The first step toward realizing that vision is a line extension of the normal *Breezhaler* device to the electronic *Breezhaler* device. Through an electronic chip designed to recognize distinct sound signatures, the electronic *Breezhaler* device can register the date and time the device is used. That information will be fed into a telehealth system and transmitted wirelessly to the physician's office. If a patient misses a dose, for example, a reminder can be sent automatically. During 2012, Novartis conducted a clinical trial assessing the ability of patients to use the respective devices – and whether use of the electronic *Breezhaler* device together with the telehealth system results in better treatment outcomes.

Meanwhile, a next-generation smart inhaler is being developed at the Novartis Center of Excellence for Inhalation Therapy in San Carlos, California. This location enables the Inhalation Therapy unit to tap the acumen of engineers in Silicon Valley to complement the innovative inhaler design.

The San Carlos unit includes staff and advanced technical expertise acquired when Novartis purchased the pulmonary business unit of Nektar Therapeutics Inc. in 2008. Today, working closely with the Basel, Switzerland-based Modeling and Simulation group, as well as Technical Research and Development experts, scientists in San Carlos are applying computational fluid dynamics and advanced mathematical models to track how drug particles of different sizes travel in healthy airways - and how those normal patterns are altered in COPD patients with abnormal lungs.

"This is a unique platform for inhalation therapies, pinpointing how particles flow and where they are ultimately deposited in the diseased airway," Dr. Morris said.

THE TELEHEALTH SYSTEM

The telehealth system is a critical link to realize the full potential of next-generation inhalers. "Today COPD patients receive care in the same way as many other chronic conditions," said Caroline Feeley, New Products Director for devices and telehealth at Novartis Pharmaceuticals. "They spend a great deal of time sitting in doctors' offices, and sometimes they are so sick that they go directly to the emergency room on their own, knowing they will have to stay in hospital until they're better. These patients drive a

significant proportion of total healthcare costs today – and it's simply not a sustainable model for the future," Ms. Feeley added.

She continued: "People diagnosed at a relatively young age are not going to be happy just sitting and waiting for care. We believe that people will increasingly utilize e-health services and expect closer interaction with their physician. Increasingly, the more severe patients are going to be willing to monitor themselves at home so the doctor can do something before they actually end up in the hospital. What we are doing is to try to change this in the future."

Through the telehealth system, patients will have a Novartis health hub in their homes. Resembling a contemporary tablet computer, the health hub will coach and guide patients through the different types of measurements that need to be taken and their personal activity plans. Moreover, the data collected by the health hub will be accessible to patients' physicians through a database. Methodology of these studies will be consistent with regulations on patient privacy and informed consent.

Additionally, algorithms will provide a "traffic light" system that will help identify patients whose conditions are worsening and enable physicians to better detect and prevent potential exacerbations.

"We understand that doctors can't wade through piles of spreadsheets of data every day to monitor patients and make treatment decisions," Ms. Feeley said. "The whole aim of the system is to enable patients to remain at home for as long as possible, and help them to lead active and productive lives."

During 2013, the telehealth system will undergo pilot studies at a number of large academic hospitals in Europe that specialize in COPD treatment.

"In chronic diseases like COPD, we know patients need more than a prescription and an appointment to see the doctor again in six months," said Marc Miravitlles, M.D., a senior researcher in the Department of Pneumology at the Hospital Clinic Barcelona and lead investigator in a telehealth study planned in Spain. "The interaction between physician and patient is crucial for the outcome of treatment, and we need to provide better tools for self-management – helping patients to take medication as prescribed, maintain good nutrition and remain physically active."

The Hospital Clinic Barcelona is related to the medical school of the University of Barcelona and is a reference center in Spain for the treatment of COPD. "We have a large registry of COPD patients, and extensive experience in managing these patients following admissions," Dr. Miravitlles added.

Still, he emphasized the importance of proceeding carefully with pilot studies to verify the usefulness of the telehealth technology. "There is a lot of interest in these strategies, but the key is to identify the right subgroup of patients who really need this type of support," he said. "We have some clues about who they are. Until we try it and see the final results, we won't know for sure."

TRANSFORMING DRUG DEVELOPMENT

At the same time, Novartis is putting technology to work when it comes to developing medicines and, in particular, conducting clinical trials. "We see potential to reduce development costs, improve post-marketing safety surveillance, and provide outcome data demonstrating the value of a medicine to patients, to payors and to society," Dr. Morris said. "Timing of the telehealth initiative has been ideal, and we are capturing this across our entire portfolio."

Additionally, advanced technologies are helping continuously monitor cardiac activity in trials of investigational medicines to treat heart failure and multiple sclerosis.

At a time of increasing surveillance of drug safety by regulatory authorities, telehealth promises to be a valuable tool. "The efficacy of a new drug in a large clinical trial can be undermined if patients don't take the medicine the way they are supposed to," Dr. Morris said. "If we had a better way of collecting data at the point of care, we could eliminate some of that noise. The telehealth system provides data we can trust: We can monitor a device delivering the drug, as well as patient adherence," he added.

"In the future, it can help us to distinguish adverse events resulting from a patient's failure to take medication, from side effects related to the medicine itself. That's another example of how technology is leading to changes in the practice of medicine that we have only just begun to imagine."

PHARMACEUTICALS PIPELINE

Novartis is consistently rated as having one of the industry's most respected pipelines, with 138 projects in clinical development in the Pharmaceuticals Division. Several of these projects, which include potential uses of new molecular entities, as well as additional indications or new formulations for marketed products, are for potentially best-in-class and first-in-class medicines that would significantly advance treatment standards.

This table provides an overview of selected pharmaceutical projects in confirmatory development.

PIPELINE GLOSSARY

Confirmatory development Projects for which a positive proof-of-concept has been established and are currently in either post-proof-of-concept clinical trials (Phase I/II/III) or under review by the regulatory agencies for the purpose of granting marketing authorization (submission).

Project/product Project refers to the Novartis development project reference code (combination of three letters and three numbers) used for projects in development. Product refers to the brand name for a marketed product.

Common name Official international non-proprietary name or generic name for an individual molecular entity as designated by the World Health Organization.

Mechanism of action Specific biochemical interaction with a molecular target such as a receptor or enzyme, through which a drug substance produces its pharmacological effect.

Potential indication/indications Disease or condition for which a compound or marketed product is in development and is being studied as a potential therapy.

Route of administration Path by which a medicinal preparation is administered into the body, such as oral, subcutaneous or intravenous.

The glossary continues on page 30.

Project/product	Common name	Mechanism of action
ACZ885	canakinumab	Anti-interleukin-1ß monoclonal antibody
AFQ056	mavoglurant	Metabotropic glutamate receptor 5 antagonist
AIN457	secukinumab	Anti-interleukin-17 monoclonal antibody
ATI355	–	Anti NOGO[3]-A mAb
AUY922	–	ATP-competitive non-geldanamycin inhibitor of HSP[4]90
BAF312	siponimod	Sphingosine-1-phosphate (S1P) receptor modulator
BCT197	–	Anti-inflammatory agent
BEZ235	–	PI3K/mTOR[5] inhibitor
BGS649	–	Aromatase inhibitor
BKM120	–	PI3K inhibitor
BYL719	–	PI3K inhibitor
BYM338	–	Inhibitor of Activin receptor type II
CAD106	–	Beta-amyloid-protein immunotherapy
CTL019	–	CD19-targeted chimeric antigen receptor (CAR) T-cell immunotherapy
DEB025	alisporivir	Cyclophilin inhibitor
Exjade	deferasirox	Iron chelator
Gilenya	fingolimod	Sphingosine-1-phosphate (S1P) receptor modulator
Jakavi	ruxolitinib	Janus kinase (JAK) inhibitor
KAE609	–	Unknown
LBH589	panobinostat	Histone deacetylase inhibitor
LCI699	–	Aldosterone synthase inhibitor
LCQ908	–	Diacylglycerol acyl transferase-1 inhibitor
LCZ696	–	Angiotensin receptor-neprilysin inhibitor (ARNI)
LDE225	–	Smoothened receptor/ hedgehog signaling inhibitor
LDK378	–	ALK inhibitor

[1] Refers to first planned filing date in a major market (US or EU) for lead indication
[2] Refers to current phase of lead indication only
[3] Neurite outgrowth inhibitor
[4] Heat shock protein
[5] Mammalian target of rapamycin

Potential indication/indications	Business franchise	Route of administration	Planned submission dates[1]	Current phase[2]
Gouty arthritis (lead development indication), systemic onset juvenile idiopathic arthritis, diabetes mellitus, secondary prevention of cardiovascular events	Integrated Hospital Care, Critical Care	Subcutaneous	Submitted US, EU	Submission
Fragile X syndrome (lead indication), L-dopa-induced dyskinesia in Parkinson's disease	Neuroscience	Oral	2014	III
Psoriasis (lead indication), arthritides – rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, multiple sclerosis	Integrated Hospital Care, Neuroscience	Subcutaneous, intravenous	2013	III
Spinal cord injury	Neuroscience	Intrathecal spinal infusion	≥ 2017	I
Solid tumors	Oncology	Intravenous	≥ 2017	II
Multiple sclerosis	Neuroscience	Oral	≥ 2017	III
Chronic obstructive pulmonary disease	Primary Care	Oral	≥ 2017	II
Solid tumors	Oncology	Oral	≥ 2017	II
Obese hypogonadotropic hypogonadism	Critical Care	Oral	≥ 2017	II
Breast cancer (lead indication), solid tumors	Oncology	Oral	2015	III
Solid tumors	Oncology	Oral	≥ 2017	I
Sporadic inclusion body myositis	Integrated Hospital Care	Intravenous	2016	II
Alzheimer's disease	Neuroscience	Subcutaneous, intramuscular	≥ 2017	II
Leukemia	Oncology	Intravenous	2016	II
Chronic hepatitis C	Integrated Hospital Care	Oral	≥ 2017	III
Non-transfusion dependent thalassemia	Oncology	Oral	Approved EU, submitted US	Submission
Chronic inflammatory demyelinating polyneuropathy	Neuroscience	Oral	2016	II
Polycythemia vera	Oncology	Oral	2014	III
Malaria	Established Medicines	Oral	≥ 2017	II
Relapsed or relapsed-and-refractory multiple myeloma	Oncology	Oral	2013	III
Cushing's disease	Oncology	Oral	2016	II
Familial chylomicronemia syndrome	Critical Care	Oral	2014	III
Hypertension (lead indication), heart failure	Critical Care, Primary Care	Oral	2013	III
Basal cell carcinoma (lead indication), solid tumors	Oncology	Oral	2014	II
Non-small cell lung cancer	Oncology	Oral	2014	II

continued on next page

PHARMACEUTICALS PIPELINE (CONTINUED)

GLOSSARY (CONTINUED)

Phase I First clinical trials of a new compound, generally performed in a small number of healthy human volunteers, to assess the clinical safety, tolerability, as well as metabolic and pharmacologic properties of the compound.

Phase II Clinical studies that are performed on patients with the targeted disease, with the aim of continuing Phase I safety assessment in a larger group, assessing the efficacy of the drug in the patient population and determining the appropriate doses for further testing.

Phase III Large-scale clinical studies with several hundred to several thousand patients to establish the safety and effectiveness of the drug for regulatory approval for indicated uses. Phase III trials also may be used to compare a new drug against a current standard of care in order to evaluate the overall benefit-risk relationship of the new drug.

Submission An application for marketing approval has already been filed with one or both of the following regulatory agencies: FDA (United States), EMA (European Union). Novartis has not yet received marketing authorization from both regulatory agencies.* The application contains comprehensive data and information gathered during the animal studies and human clinical trials conducted through the various phases of development of the drug.

*Filings that have received approval in one of the markets (either US or EU) but are awaiting approval in the other market are included in the table

Project/product	Common name	Mechanism of action
LFF571	–	Bacterial elongation factor Tu (EFTu) inhibitor
LGX818	–	RAF inhibitor
LIK066	–	SGLT 1/2 inhibitor
Lucentis	ranibizumab	Anti-VEGF[3] monoclonal antibody
MEK162	–	MEK[6] inhibitor
PKC412	midostaurin	Signal transduction inhibitor
QAW039	–	Anti-inflammatory agent
QGE031	–	High affinity anti-IgE mAb
QMF149	indacaterol, mometasone furoate	Long-acting beta-2 agonist and inhaled corticosteroid
QVA149	indacaterol, glycopyrronium bromide	Long-acting beta-2 agonist and long-acting muscarinic antagonist
Afinitor/Votubia	everolimus	mTOR[7] inhibitor
RLX030	serelaxin	Recombinant form of human relaxin-2 hormone
Seebri	glycopyrronium bromide	Long-acting muscarinic antagonist
Signifor LAR[8]	pasireotide	Somatostatin analogue
Tekturna	aliskiren	Direct renin inhibitor
TKI258	dovitinib lactate	VEGFR 1-3[9], FGFR 1-3[10], PDGFR[11] and angiogenesis RTK[12] inhibitor
Xolair	omalizumab	Anti-IgE monoclonal antibody
Zortress/Certican	everolimus	mTOR[7] inhibitor

[1] Refers to first planned filing date in a major market (US or EU) for lead indication
[2] Refers to current phase of lead indication only
[3] Vascular endothelial growth factor
[4] Visual impairment due to choroidal neovascularization secondary to pathological myopia
[5] Choroidal neovascularization and macular edema secondary to conditions other than age-related macular degeneration, diabetic macular edema, retinal vein occlusion and pathologic myopia
[6] Combination of mitogen-activated protein kinase and extracellular signal-regulated kinase
[7] Mammalian target of rapamycin
[8] Long-acting release
[9] Vascular endothelial growth factor receptor
[10] Fibroblast growth factor receptor
[11] Platelet-derived growth factor receptor
[12] Receptor tyrosine kinase

Potential indication/indications	Business franchise	Route of administration	Planned submission dates[1]	Current phase[2]
Clostridium difficile infection	Integrated Hospital Care	Oral	≥ 2017	II
Melanoma	Oncology	Oral	≥ 2017	I
Type II diabetes	Primary Care	Oral	≥ 2017	II
Pathological myopia (lead development indication)[4], choroidal neovascularization and macular edema[5]	Ophthalmology	Intravitreal	Submitted EU	Submission
Melanoma	Oncology	Oral	2015	II
Acute myeloid leukemia (lead indication), aggressive systemic mastocytosis	Oncology	Oral	2015	III
Asthma	Primary Care	Oral	≥ 2017	II
Allergic diseases	Primary Care	Subcutaneous	≥ 2017	II
Asthma, chronic obstructive pulmonary disease	Primary Care	Inhalation	2015	II
Chronic obstructive pulmonary disease	Primary Care	Inhalation	Submitted EU	Submission
Breast HER2 over expressing 2nd/3rd line (lead development indication), breast cancer HER2 over expressing 1st line, hepatocellular carcinoma, diffuse large B-cell lymphoma, non-functioning GI and lung neuroendocrine tumors, tuberous sclerosis complex (TSC) seizures	Oncology	Oral	2013	II
Acute heart failure	Critical Care	Intravenous	Submitted EU	Submission
Chronic obstructive pulmonary disease	Primary Care	Inhalation	Approved EU	III (US)
Acromegaly (lead indication), cushing's disease	Oncology	Subcutaneous, intramuscular	2013	III
Reduction of CV death/hospitalizations in chronic heart failure	Critical Care	Oral	2015	III
Renal cell cancer (lead indication), solid tumors	Oncology	Oral	2013	III
Chronic idiopathic urticaria	Integrated Hospital Care	Subcutaneous	2013	III
Prevention of organ rejection – liver	Integrated Hospital Care	Oral	Approved EU, submitted US	Submission

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH

With state-of-the-art technologies, the Novartis Institutes for BioMedical Research (NIBR) is discovering innovative therapies for rare diseases. Focused on areas where unmet medical needs and mechanistic understanding are greatest, NIBR scientists take a rational, scientific approach to drug discovery.

Novartis is a leader in the discovery and development of innovative therapies for rare diseases.

"Rare diseases are central to our mission," said Mark C. Fishman, M.D., President of NIBR and member of the Executive Committee of Novartis.

"We choose to work where there is unmet need and where the scientific understanding is strongest. Diseases that are uncommon often lack good therapy, in part because they have not been the focus of large pharmaceutical companies," Dr. Fishman added. "In some of these diseases the underlying mechanism is well understood: For example, 6 000 or so diseases have a genetic cause. This combination of great need with understanding of mechanism provides the foundation of a rational, scientific approach to drug discovery."

There is more to this logic as a cornerstone for drug discovery. Nature is conservative. The same mechanism that explains a rare disease may well be at work in subsets of patients with more common disorders.

Testing of promising new medicines at Novartis often starts with a rare disease in a "proof-of-concept" study. Choosing well-defined diseases or homogeneous patient populations enables quick confirmation of preclinical hypotheses about a drug's mechanism of action and potential therapeutic benefit. If successful, NIBR quickly extends development to other diseases in which the same mechanism is believed to be involved.

"CANARY IN THE COAL MINE"

Spinal muscular atrophy (SMA) is a group of inherited diseases that causes progressive muscle weakness and ultimately leads to death. There is no cure.

"This is a devastating disorder that can strike without any prior family history," said Brian Tseng, M.D., Ph.D., a Translational Medicine specialist in musculoskeletal disease research at NIBR. According to Dr. Tseng, who has in-depth experience treating children with SMA, "Babies with the severe form of SMA appear well in the newborn nursery, and go home fine. By 3 or 4 months of age, they are working so hard to breathe while feeding that they can't get enough nutrition. They slip into the 'failure to thrive' category, which brings them to medical attention."

These observations lead to a genetic test. "If the results come back positive, it can be a death sentence by 2 years of age in the most severe cases," Dr. Tseng said. "We have no approved medicine that can change the natural history of the disease. Invasive medical interventions can help to support growth and breathing, but the baby cannot sit up, crawl, nor walk."

SMA is caused by mutations in a gene called "survival of motor neuron 1," or "SMN1." The protein encoded by SMN1 is necessary for survival of nerve cells, or "neurons," that control all muscles in the body. In the absence of SMN protein, motor neurons do not function normally, causing muscles to weaken and shrink. The imminent danger comes from weakness of muscles needed to breathe.

SMA greatly varies in severity among patients. Humans have a second copy of the survival of motor neuron gene, or SMN2, which can partially compensate for loss of SMN1.

The severity of SMA varies, depending on the number of copies of SMN2 and upon how effective the SMN2 gene is at making the SMN protein. We cannot change the number of SMN2 genes. However, the Developmental and Molecular Pathways group in NIBR, led

by Jeffrey Porter, Ph.D., wondered if they could help it be more effective at making SMN protein.

The SMN2 gene has a mutation that leads to faulty splicing, or editing of the original DNA sequence into a streamlined RNA blueprint used by cellular machinery to manufacture proteins. "Could we improve splicing?" Mr. Porter asked. "If you could correct the splicing deficit in SMN2, you could mitigate symptoms by producing more SMN protein. That would be a novel type of drug, and an approach with great ramifications."

SMA isn't the only disease caused by splicing errors. Researchers estimate that RNA splicing errors may account for up to 15% of all inherited diseases, ranging from neurological to metabolic disorders. "Gene splicing happens in every cell in the body, but neurons are particularly sensitive – like the canary in the coal mine in terms of symptoms appearing early in affected individuals. We felt like SMA was a disease where we might be able to make progress applying some of our new research tools," Mr. Porter explained.

NIBR scientists designed assays for splicing, and then screened hundreds of thousands of compounds from their chemical library for activity. Lead compounds from that first round of screening were retested in genetically engineered motor neuron cells derived from skin cells provided by SMA patients. "Skin cells can be changed into nerve cells in culture by addition of a few genes," Mr. Porter said.

"We have several molecules now which work quite well in our assays and are being refined to have better drug properties. They seem to modulate splicing with exquisite specificity. Amazingly, they push production of more SMN protein through this backup [SMN2] system."

The lead compound in the drug discovery program is undergoing toxicology studies – a necessary precondition for clinical trials in humans. "We are going as fast as we possibly can, and will be talking with regulatory agencies soon about the design of potential clinical studies," Mr. Porter added.

PATHWAY PROWESS

The NIBR strategy is partially based on the importance of signaling pathways in human biology and disease. A relatively small number of core pathways play fundamental roles during embryonic development, as well as later in life, and are used time and again across species. Defects and imbalances in these core pathways are often the underlying causes of disease.

Signaling networks are robust systems but still vulnerable to attack at key nodes. NIBR scientists attempt to dissect pathways and pinpoint key nodes as a source of potential targets for drug discovery. One such node is mTOR, a biological master switch located at the intersection of several major signaling pathways. Normally the cell keeps mTOR under tight control, but genetic mutations can jam it in the "on" position, triggering uncontrolled growth and proliferation.

In recent years, NIBR programs focusing on mTOR converged with another pathway, denoted "PI3 kinase," after one component of a family of enzymes often linked with cancer. It has taken years to unravel the complex connections between mTOR, PI3 kinase and other related pathways. But Novartis has developed one of the industry's broadest pipelines of medicines targeting multiple nodes in the PI3 kinase/mTOR pathway.

A medicine from Novartis known by the name everolimus was approved in the United States and Europe as the first medication to treat patients with brain and kidney tumors associated with a rare genetic disorder called tuberous sclerosis complex. Tuberous sclerosis complex is caused by defects in tumor suppressor genes TSC1 and TSC2 – nodes in the PI3 kinase pathway that normally suppress mTOR activity.

Up to 80% of patients with tuberous sclerosis complex develop kidney tumors known as angiomyolipomas. Over time these tumors may grow large enough to cause severe internal bleeding, require emergency surgery, or lead to kidney failure. By inhibiting mTOR activity and signaling through the PI3 kinase pathway, everolimus may reduce cell proliferation and blood vessel growth associated with these tumors.

The success of everolimus in tuberous sclerosis has prompted research programs in two other rare genetic syndromes linked to defects in mTOR and the PI3 kinase pathway. "Tuberous sclerosis, neurofibromatosis and Cowden syndrome can all lead to hamartomas, benign tumors that occur in many parts of the body," said William Sellers, M.D., Head of Oncology Research at NIBR. "Instead of proliferative growth typical of cancer, hamartomas are abnormal, disorganized aggregations of cells and tissue. We also believe they have a common etiology in the PI3 kinase pathway – but they are caused by different genetic defects," he said.

Neurofibromatosis results from mutations in genes called NF1 and NF2 that cause tumors to grow in the nervous system; for example, from cells making up the protective myelin sheaths around nerves. Patients with neurofibromatosis have an increased risk of developing cancer. Recent studies suggest that mTOR is activated in some tumors with NF1 mutations, and several academic centers currently are conducting clinical trials of everolimus in treatment of neurofibromatosis.

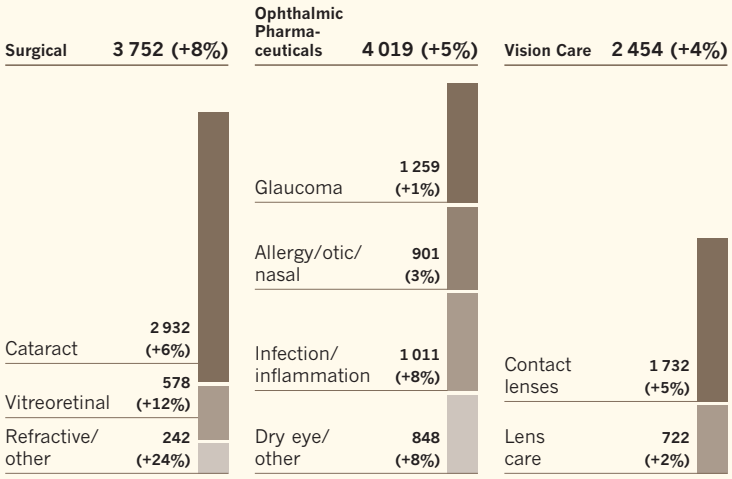
ALCON OVERVIEW

KEY FIGURES
(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**10 225**	9 958
Operating income	**1 465**	1 472
Return on net sales (%)	**14.3**	14.8
Core operating income [1]	**3 698**	3 492
Core return on net sales (%)	**36.2**	35.1
Core Research & Development [1]	**950**	869
As a % of net sales	**9.3**	8.7
Free cash flow	**2 886**	3 311
Net operating assets	**42 588**	43 792
Number of associates (FTE) [2]	**23 874**	22 987

[1] Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[2] Full-time equivalent positions at year end.

NET SALES AND GROWTH BY FRANCHISE AND TREATMENT AREA
(USD millions and growth in cc %)



NEWS IN 2012

Alcon achieved net sales of USD 10.2 billion, an increase of 3% (+5% cc) over the previous year, with sales growth in all three of its franchises.

Operating income was USD 1.5 billion (0%, +6% cc), in line with the previous year, while core operating income increased by 6% (+9% cc) to USD 3.7 billion. Core operating income margin in constant currencies improved by 1.1 percentage points to 36.2% of net sales.

The Surgical franchise (USD 3.8 billion, +8% cc) maintained consistent growth, driven by procedural volume in Emerging Growth Markets, equipment sales in the cataract, refractive and vitreoretinal categories, as well as solid sales of advanced-technology intraocular lenses, which benefited from the expansion of the *AcrySof* portfolio in Europe. The continued global rollout of the *LenSx* femtosecond cataract refractive laser also contributed to growth.

Within the Ophthalmic Pharmaceuticals franchise (USD 4.0 billion, +5% cc), the broad glaucoma portfolio continued to grow strongly outside the United States, led by *Azarga*, *Travatan* and *DuoTrav* solutions. The *Systane* dry eye portfolio also showed solid growth in various markets. Alcon expanded its pharmaceutical offering by entering into a strategic licensing agreement with ThromboGenics to commercialize *Jetrea* (ocriplasmin) outside the United States. Ocriplasmin, currently under review by the EMA, may become the first pharmacological treatment for vitreomacular traction and macular hole in Europe. In October 2012, *Jetrea* was approved by the FDA.

In Vision Care (USD 2.5 billion, +4% cc), the contact lens segment was driven by the strong performance of the *Air Optix* contact lens portfolio, which leads the marketplace in the multifocal segment. *Dailies Total1*, the industry's first water-gradient silicone hydrogel contact lens, was approved in the United States and Japan and continued to perform well in Europe following launches in 2011 and 2012.

ALCON

As the global leader in eye care, Alcon has played a key role in the evolution of cataract surgery and is the leading manufacturer of technologies used to treat cataracts. While meeting patient needs in both emerging and established markets, Alcon is pursuing opportunities to drive innovation for years to come.

For nearly 20 years, Brent Cannon has served as a professional firefighter and paramedic in his hometown of Salt Lake City, United States.

Mr. Cannon began wearing glasses as an adolescent, but vision problems never hampered his career until he was diagnosed with a fast-moving cataract in early 2012. "In the course of about six weeks I went from 20/20 vision with contact lenses, to about 20/50," he said. "A couple of weeks later I was suddenly down to 20/80."

"Reading the label of medications was virtually impossible. It finally reached the point that I told my crew I wouldn't be back to work until I had my vision fixed," he said.

His ophthalmologist recommended surgery and Mr. Cannon opted for an advanced-technology, multifocal intraocular lens that would correct both distance and near vision. "Immediately following surgery I was able to walk out of the clinic and see; the next morning I was 20/20 again," he said.

"Reading vision was there, as well, and I have peripheral vision and depth perception again. It's great."

A cataract – clouding of the eye's natural lens due to aging or injury – is the leading cause of preventable blindness worldwide. About 25 million people develop cataracts each year, and the only known treatment is surgical removal of the diseased lens.

Following a succession of technological breakthroughs in recent decades, cataract removal has become one of the most common operations performed in the United States. According to the US National Institutes of Health (NIH), it also is one of the safest and most effective types of surgery, and improves vision in about 90% of all cases.

Approximately 19 million cataract surgeries were performed worldwide in 2011. The World Health Organization (WHO) expects this figure to exceed 30 million by 2020 as the population ages, access to healthcare increases in many emerging and developing countries, and surgical advances enable people to undergo cataract removal at earlier stages of the disease.

As the world leader in eye care, the Alcon Division of Novartis has played a key role in the evolution of cataract surgery. For example, Alcon was a driving force behind the adoption of phacoemulsification, a procedure in which an ultrasonic device is used to remove a cataractous lens. Alcon scientists also led in the development of foldable intraocular lenses that, along with phacoemulsification, have enabled surgeons to reduce the size of incisions, speed up recovery times, and improve patient outcomes.

"Cataract surgery used to mean at least two weeks in the hospital. Because of the large incisions used to remove and replace the diseased lens, patients were required to lie in bed with their head immobile between two sandbags because surgeons were afraid of disturbing the wound," said Paul Soye, Ph.D., Vice President and Research and Development Head of Alcon's Cataract Franchise. "Today it is an outpatient procedure. The actual surgery is relatively short, and in most cases, patients will be seeing with excellent vision within a couple of hours."

Most cataract patients also have presbyopia, an age-related difficulty focusing on both near and distant objects. Moreover, about 70% of cataract patients suffer from astigmatism – when the somewhat oblong shape of the cornea causes images to appear

blurry and stretched out. Alcon's *AcrySof* advanced-technology intraocular lenses enable surgeons to treat cataracts, and at the same time correct these so-called refractive errors.

This is a significant improvement from monofocal lenses, which have one point of focus and typically require the use of eyeglasses after surgery to correct for presbyopia or astigmatism. "With advanced-technology intraocular lenses we can provide patients with an exceptional refractive outcome simultaneously with cataract removal: outstanding distance vision, intermediate vision and reading vision – all without the need for glasses," Mr. Soye said.

Cataract products are the cornerstone of Alcon's Surgical business, and net sales increased 6% during 2012, to USD 2.9 billion.

"As the world's leading manufacturer of cataract technology, one of Alcon's objectives is to continually improve our position within each of our current segments of the market," said Seba Leoni, Vice President and Global Commercial Head of Alcon's Commercial Cataract Franchise. "This can be achieved through the implementation of different initiatives, such as introduction of line extensions that better meet surgeon and patient needs, or through novel programs that help better differentiate Alcon's technologies."

In fact, Alcon recently launched an initiative intended to double the pipeline of intraocular lenses through accelerated development. According to Mr. Leoni, "Many of the products that will come through this initiative are expected to allow Alcon to either create new market segments by introducing technologies that fill currently unmet medical needs, or to participate in existing segments in which Alcon currently does not have a presence by introducing innovative offerings."

In 2012, Alcon received CE marking and launched the *AcrySof IQ ReSTOR* 2.5D multifocal intraocular lens in parallel with the 2.5D toric version of this lens. CE marking certifies compliance with European Union product directives. "In the past, there would have been as much as a two-year delay in introducing the toric line extension. Reducing a launch cycle from two years to a parallel process can go a long way in better meeting patient needs," Mr. Leoni said.

Additionally, Alcon's Cataract franchise is improving the technology transfer between research and development, and manufacturing. "This means we are bringing more innovative solutions to more surgeons as timely as possible," Mr. Leoni said.

Another strategic priority is improving access to optimal treatment for patients in many parts of the world. "Awareness of the treatment choices available today is still relatively low among patients – especially in countries that don't offer flexible options for patient participation in payment," Mr. Leoni said. "There is great room for improvement to ensure patients receive the information they need to make informed decisions. And this information should be provided as early as possible, not just before the procedure is being scheduled."

While emerging and developing countries likely will be a major source of growth, countries such as China and Russia are working to overcome a shortage of trained cataract surgeons.

"We are tailoring our products to improve access in emerging markets," Mr. Leoni said. "That speaks to our ability to expand overall volume of cataract surgery, as well as to increase the value of each procedure by ensuring the use of modern technologies. Alcon plans to continue to drive innovation in this field for years to come."

VISIONARY SURGEONS

Cataract surgery is one of the greatest medical breakthroughs of the 20th century. A handful of brilliant surgeons transformed the field, and their accomplishments have rescued the sight of millions of people

around the world. But decades of fierce opposition from conservative peers and professional organizations explain why most dramatic advances in safety and quality have been compressed into the past 25 years.

Cataracts are caused by the breakdown of collagen in the natural crystalline lens in the eye, which ultimately blocks the passage of light through the lens to the retina. During a landmark operation in 1949, British ophthalmologist Harold Ridley, M.D., implanted a replacement lens in the eye of a 45-year-old woman at London's St. Thomas Hospital. Dr. Ridley's experience with treating British pilots during World War II influenced his choice of material for this intraocular lens. Specifically, he observed that while Plexiglas fragments from cockpits and gunnery canopies frequently penetrated the eyes of crewmen, this material was inert and tissue rejection was minimal.

Dr. Ridley subsequently used clinical-grade material called Perspex, or PMMA, to develop the first intraocular lens and, anticipating criticism, conducted his groundbreaking operation in secrecy. While he eventually implanted replacement lenses in hundreds of patients, he was indeed ostracized by professional organizations.

According to Mr. Soye, this opposition stemmed in part from doubts about the use of permanent implants anywhere in the body. "The eye was considered particularly susceptible to inflammation and likely to cause serious complications. And early lenses, including the ones used by Ridley, often led to complications," he said, "and the majority of surgeons felt the rate of complications outweighed the benefits of a replacement lens."

Another breakthrough in cataract surgery occurred in the mid-1960s, when the American surgeon Charles Kelman, M.D., invented phacoemulsification by adapting an ultrasound teeth-cleaning device and using it to shatter a cataractous lens. Lens fragments could be removed from the eye through a smaller incision, which dispensed with the need for sutures to close the wound.

However, the benefits of phacoemulsification were limited as surgeons still required large incisions through which to insert a replacement lens. This challenge was met with the introduction of foldable intraocular lenses, including Alcon's *AcrySof* family. Alcon introduced its *AcrySof* intraocular lens in Europe in 1991, and in the United States in 1995.

The advent of foldable lenses was the tipping point for cataract surgery. From 1985 to 1996, the number of cataract procedures in the United States involving phacoemulsification soared from 16% to 97%.

Dr. Kelman died in 2004 and was posthumously awarded the prestigious Albert Lasker Prize for Clinical Medical Research. During the award presentation, Nobel laureate Joseph Goldstein proclaimed: "The vast majority of ophthalmologists viewed phacoemulsification as a radical procedure that totally challenged their conventional wisdom. They were shocked by Kelman's audacity to discharge his patients on the same day of surgery and permit them to return to full activity on the first or second postoperative day. Largely owing to Kelman's ingenuity, dedication and inspiration, phacoemulsification has become not only the most common, but also the most successful surgical procedure in history."

Dr. Ridley also received overdue recognition when he was knighted by Queen Elizabeth II in 2000, the year before his death. By then he was living proof of his accomplishments; in 1989 and 1990 he underwent cataract surgery in both eyes, and enjoyed years of 20/20 vision.

THE *ACRYSOF* REVOLUTION

AcrySof lenses were groundbreaking from both a design and materials-science perspective. These lenses are manufactured from a material that is biomechanical and biocompatible, and even at very high diopters for patients with severe refractive error, they are able to fold and slide into a delivery device. Once inside the eye, they unfold and settle into place.

Foldable lenses have enabled surgeons to shrink incisions from 4 millimeters to 2 millimeters. To date, more than 50 million *AcrySof* lenses have been implanted worldwide.

They include *AcrySof ReSTOR* multifocal lenses for cataracts and presbyopia, and *AcrySof* Toric lenses for astigmatism. *AcrySof* intraocular lenses filter ultraviolet and high-energy blue light without impacting vision, while *AcrySof* IQ intraocular lenses are aspheric and improve contrast sensitivity.

The development of these and other lenses has occurred along with advances in phacoemulsification. For example, the evolution of phacoemulsification instruments has resulted in decreased levels of ultrasound energy delivered to the eye, minimizing the impact on surrounding tissue and enhancing refractive outcomes. Alcon's *OZil* Torsional handpiece features a unique side-to-side movement, and because these oscillations occur at a lower frequency than traditional phacoemulsification, they reduce both energy consumption and the risk of thermal burns.

Another critical advance involved viscoelastic gel, which lubricates the lens as it travels down the delivery cartridge, through the surgical incision and into the eye. Viscoelastic gel also protects endothelial cells during the procedure and inflates the capsular bag that encloses the lens, enabling the surgeon to work in a much more accessible area.

Moreover, Alcon's flagship *Infiniti* system accounted for about half of all phacoemulsification systems sold from its launch in 2004 through 2012. Alcon also introduced *Laureate*, a system designed to provide high-quality surgical outcomes at an affordable price to buoy penetration of phacoemulsification in emerging markets.

PROMOTING PATIENT CHOICE

Unfortunately, economic challenges have prevented healthcare systems in some parts of the world from keeping pace with technological advances in cataract surgery. For example, about 15% of cataract operations in the United States involve advanced-technology intraocular lenses, while this number is lower in Europe.

This trans-Atlantic gap also reflects differences in market access policy and restrictions on patient choice. While the United States was first to dismantle bureaucratic rules curbing access to advanced-technology intraocular lenses, Europe is just now beginning to recognize the reimbursement opportunity.

Additionally, healthcare payors are in widespread agreement that cataract surgery is a cost-effective medical intervention that has major quality of life benefits. This is particularly true for many patients like Mr. Cannon, the Salt Lake City firefighter, who are professionally active when diagnosed with cataracts and need treatment to continue working.

Before 2005, Americans on Medicare also experienced a predicament as demand for advanced-technology intraocular lenses grew. Medicare fully covered the cost of cataract surgery, including the implant of a standard, monofocal lens. However, it prevented patients from choosing a multifocal lens and paying the additional cost as an out-of-pocket expense. That rule changed in 2005, and Medicare beneficiaries now have that option.

While cataract surgery and monofocal intraocular lens implants are reimbursed by public health insurance programs in most European countries, patients must pay for eyeglasses to correct presbyopia or astigmatism. Additionally, an "all or nothing" principle applies to patients who choose advanced-technology multifocal lenses, as they must pay for the entire medical procedure themselves.

It has become increasingly clear that allowing copayment for premium intraocular lenses does not increase public healthcare system expenditure. Furthermore, access to the latest technology provides significant public health benefits by enabling patients to sustain a more active lifestyle. According to a recent Alcon survey of 600 patients in Europe's six largest countries, between 40% and 60% of respondents said they were willing to pay the additional cost of advanced-technology lenses to eliminate the need for eyeglasses in their daily lives.

Several countries have promoted patient choice by changing their reimbursement guidelines to allow copayment for advanced-technology intraocular lenses. In October 2011, the Netherlands approved a copayment option, while new policies in Germany, Turkey and the Czech Republic took effect in January 2012.

EXPANDING ACCESS

Alcon's sales in emerging markets climbed 13% in cc in 2012, benefiting from strong sales of cataract procedures. The division's emerging markets strategy is focused on expanding the volume of cataract surgeries, as well as increasing penetration of phacoemulsification technology. In China, for example, the primary challenge is volume. While the country has more than 170 million people over age 60, surgeons perform slightly more than 1 million cataract operations per year – an overall penetration of 0.6%. On the other hand, phacoemulsification is becoming increasingly popular in China and accounts for about 50% of operations. This is partially associated with a phacoemulsification training program established by Alcon in that country.

The Alcon Phaco Development Program, launched in 2008, offers practicing ophthalmologists the opportunity to upgrade their skills and provide patients with comprehensive cataract care including the latest available technologies. Faculty members include Chinese specialists affiliated with many of the country's elite eye care institutions. Participants who complete the program are awarded continuing medical education credits recognized by China's Ministry of Health and provincial health authorities. Additionally, program participants receive long-term, on-site coaching and further education after they return to their home institutions and begin performing phacoemulsification procedures.

To date, more than 500 doctors have completed the program, and these graduates have performed more than 80 000 cataract surgeries in 2012. "This is a long-term investment in both capacity-building and market shaping," said Lawrence Fay, Area Director, Surgical Business Development and Head of the Phaco Development Program in Asia.

"In the major cities of China, one can find cataract services and technologies that are second to none anywhere in the world. In the remote areas of the country, people currently do not have the same access to these services," he said.

In ophthalmology, as in many other fields of medicine, patients even in rural communities have become increasingly sophisticated, and are prepared to travel to Beijing and other large cities where phacoemulsification procedures are offered by a teaching institution. "The ability to offer phaco technology enables hospitals and clinics around China to enlarge their patient base, with quality results driving demand for services," Mr. Fay said.

"With increased focus and resources being given to healthcare in China, we expect that the Alcon Phaco Development Program will continue to accelerate the already-impressive growth and uptake of these cataract services in the Chinese market," he added.

In contrast, surgeons in India performed an estimated 5.8 million cataract procedures in 2011, an overall penetration rate of 5.8%. Moreover, the share of phacoemulsification procedures was only 17%, and India's growth potential depends on shifting surgeons to phacoemulsification surgical

techniques and foldable intraocular lenses. For reference, overall penetration of cataract procedures in the United States is 5.7%, close to the rate in India, but the US proportion done with phacoemulsification is 99%.

In 2010, Alcon also launched phacoemulsification development programs in India and Vietnam. "More than 200 Indian ophthalmologists have completed the program so far, and we are seeing a trend similar to China with surgeons incorporating phacoemulsification procedures into their practice as part of a complete cataract care option for patients," Mr. Fay said. Alcon has also made good progress in building capacity and sustainable access to cataract care in Russia.

CRYSTAL BALL

The expanding role of laser technology is one of the clearest signs yet of the convergence of cataract and refractive surgery. Alcon is leading the way in the development of refractive cataract surgery through its acquisition of LenSx Lasers Inc. in 2010.

LenSx paved the way in gaining regulatory approval from the US Food and Drug Administration (FDA) for use of a femtosecond laser in cataract surgery. Alcon launched the *LenSx* Laser the following year, marking a new phase of technological innovation.

In many respects, the entrepreneurial flair of LenSx recalls the early years of cataract surgery when Drs. Ridley and Kelman gambled on unproven technologies. Ronald Kurtz, M.D., a co-founder of LenSx who joined Alcon after the acquisition and serves as Vice President, Research and Development and General Manager of Alcon LenSx, has a clear vision when it comes to the future of cataract surgery.

"If I look into my crystal ball, I expect that by 2020 we will see the vast majority of patients achieving uncorrected 20/20 vision after cataract surgery. And we'll look back at old photographs and wonder why so many elderly people had to wear glasses," he said.

Dr. Kurtz's interest in lasers began in 1992 when, as a resident surgeon at the University of Michigan's Kellogg Eye Center, he treated an engineering student who suffered retinal burns from a laser. Despite multiple damaged areas, Dr. Kurtz noted the laser's precision and that the student's vision remained normal.

That experimental laser emitted exceptionally brief pulses of light, lasting only a trillionth of a second (femtosecond), and a wavelength near the infrared end of the spectrum. At least in theory, this suggested that a femtosecond laser could be focused at varying depths inside the eye and produce surgical incisions without causing collateral damage to surrounding tissue.

Working with physicists at the university's Center for Ultrafast Optical Science, he began testing femtosecond technology as a surgical cutting tool. In 1997 Dr. Kurtz and physicist Tibor Juhasz co-founded IntraLase Corp., eventually establishing femtosecond lasers as the standard of care in LASIK, a form of laser-assisted surgery used to correct severe myopia.

TOUGHEST TEST

In 2008 Dr. Kurtz, Mr. Juhasz and colleague Eric Weinberg shifted their sights to cataract surgery, and founded LenSx Lasers. Now the Alcon LenSx unit is working to transform cataract surgery from a purely mechanical procedure to one that takes advantage of femtosecond precision.

The Alcon *LenSx* Laser automates several key steps in cataract surgery, including capsulotomy, an incision that opens the lens capsule. "The *LenSx* Laser makes a perfectly circular capsulotomy every time, at any size desired by the surgeon; pre-fragments the cataract to simplify removal; and makes all corneal incisions to optimally address astigmatism," Mr. Soye said.

"Under the surgical microscope, every movement counts, and this enables the surgeon to enter and leave the eye very quickly."

The laser platform works synergistically with Alcon's instrumentation and advanced-technology intraocular lenses to optimize patient outcomes following cataract surgery. It represents a critical portion of surgeons' resources to consistently help achieve superior patient outcomes.

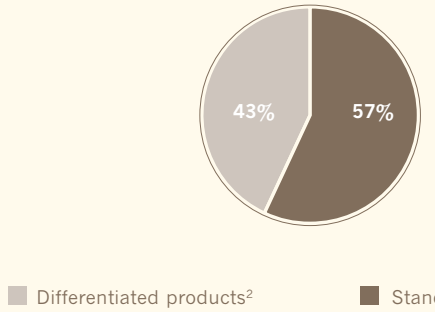
SANDOZ OVERVIEW

KEY FIGURES
(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**8 702**	9 473
Operating income	**1 091**	1 422
Return on net sales (%)	**12.5**	15.0
Core operating income [1]	**1 503**	1 921
Core return on net sales (%)	**17.3**	20.3
Core Research & Development [1]	**749**	724
As a % of net sales	**8.6**	7.6
Free cash flow	**1 435**	1 488
Net operating assets	**16 730**	15 223
Number of associates (FTE) [2]	**25 835**	24 377

[1] Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[2] Full-time equivalent positions at year end.

2012 NET SALES [1] – DIFFERENTIATED [2] VS. STANDARD GENERICS
(in %)



[1] Net sales percentage based on retail generics and biosimilar sales
[2] Differentiated products refer to products requiring specialized knowledge and expertise in development, production and/or commercialization, characterized by the active ingredient, formulation/delivery mechanism and/or underlying technology. Examples include complex oral solids, transdermal patches, implants, ophthalmics, inhalables, injectables and biosimilars

NEWS IN 2012

Net sales of USD 8.7 billion decreased 8% (–4% cc), primarily as a result of increased competition for enoxaparin in the United States, high prior-year sales of US authorized generics gemcitabine and lansoprazole, and a decline in Germany. Strong double-digit growth in the rest of Western Europe, Asia-Pacific, Russia and Brazil, as well as in biosimilars, partially offset these declines.

Operating income of USD 1.1 billion was down 23% (–24% cc). Core operating income declined 22% (–21% cc) to USD 1.5 billion, and core operating income margin decreased by 3.7 percentage points (cc), with a positive currency impact of 0.7 percentage points, to 17.3% of net sales.

Retail generics and biosimilar sales in Western Europe, excluding Germany, showed strong growth of 10%. Sandoz also grew strongly in Emerging Growth Markets, led by Russia, Brazil, Turkey and China. In Japan, Sandoz closed 2012 with its 20th consecutive quarter of double-digit growth, continuing to outperform the market.

Sandoz further expanded its leadership in differentiated medicines through its USD 1.5 billion acquisition of generic dermatology company Fougera Pharmaceuticals Inc. Differentiated products comprised 43% of division net sales in 2012.

Sandoz accelerated its growth momentum in biosimilars (USD 335 million, +36% cc), where it is the number one player globally and in each of its three marketed products, and made significant progress on its biosimilar pipeline with the start of Phase III clinical trials for two molecules in 2012. The division now has four molecules in Phase III clinical trials including the monoclonal antibody rituximab (Rituxan®/MabThera®).

The division also made good progress on quality remediation in 2012. In the fourth quarter, the FDA confirmed that our manufacturing site in Broomfield, Colorado, USA, one of three sites referenced in the November 2011 warning letter, achieved upgraded compliance status following a re-inspection in the third quarter.

SANDOZ

In 2012, Sandoz became number one in generic dermatology and expanded its leadership in differentiated medicines by acquiring Fougera Pharmaceuticals Inc. The division's differentiated portfolio has fueled dynamic growth at Sandoz. Today the Sandoz biosimilar pipeline is robust with several exciting projects, making Sandoz a global leader in biosimilar medicines, as well.

Sandoz, the generics division of Novartis, further expanded its leadership in differentiated medicines in 2012 by becoming the global leader in generic dermatology through its $1.5 billion acquisition of Fougera Pharmaceuticals Inc.

Generic dermatology is an attractive industry segment, especially in the United States, where the dermatologic market has grown at double-digit rates in recent years. With the acquisition of Fougera, Sandoz became the top provider of generic dermatologic medicines in both the United States and worldwide. The division plans to introduce Fougera products to new markets by leveraging the division's presence in more than 140 countries.

Differentiated generics are products with challenging active ingredients, specialized formulations and devices, or innovative underlying technologies. Although they are more difficult to develop and manufacture than standard generics, differentiated products offer greater growth potential and profitability. The division's differentiated portfolio has fueled dynamic growth at Sandoz and accounted for 43% of its sales in 2012, up from 30% in 2008.

Becoming number one in generic dermatology complements existing global leadership positions held by Sandoz in biosimilars as well as generic injectables, anti-infectives and ophthalmics. "Differentiated generics are the core element of our divisional strategy, and Sandoz has an industry-leading portfolio and pipeline," said Jeff George, Division Head, Sandoz and member of the Executive Committee of Novartis.

Biosimilars are follow-on versions of existing biotechnology medicines that have lost patent protection. Sandoz pioneered the field, winning regulatory approval for the first biosimilar medicines in Europe, the United States and Japan. In 2012, sales of Sandoz biosimilar products surged 36% to USD 335 million.

The Sandoz biosimilar pipeline currently comprises several molecules in various stages of development. Sandoz made significant progress on its biosimilar pipeline with the start of Phase III clinical trials for two molecules in 2012. Sandoz now has four molecules in Phase III trials including the division's first monoclonal antibody, a biosimilar version of the originator compound rituximab (Roche's Rituxan®/MabThera®), which is currently in a Phase III clinical trial for treatment of follicular lymphoma and a Phase II trial for rheumatoid arthritis. The other molecules undergoing Phase III testing are biosimilar versions of pegfilgrastim (Amgen's Neulasta®), filgrastim for US registration (Amgen's Neupogen®) and epoetin-alfa (J&J's Procrit®), also for US registration.

"These Phase III development programs underscore our continued focus on developing high-quality, affordable access to biologics – a key promise of our pipeline," Mr. George said.

GROWTH OPPORTUNITIES IN DERMATOLOGY

Generic dermatology includes three main categories: injectables, oral medications and topical formulations such as creams, ointments and gels. Most Fougera products

are topical formulations ranging from antibiotics and antifungals to anesthetics and corticosteroids.

An increasing prevalence of skin diseases presents additional growth opportunities for this market. "There are more than 3 000 different dermatological conditions ranging from acne and psoriasis to skin cancer," said Don DeGolyer, President of Sandoz US. "The very visible nature of skin conditions is reflected in high demand from patients for treatment."

Most generic dermatology brands are of modest size, and most products require clinical studies as part of regulatory applications, Mr. DeGolyer added. "Topical formulations require specialized development and manufacturing technology. Taken together, these requirements typically result in development cycles of five years or more."

The addition of Fougera strengthens both development and manufacturing platforms for Sandoz, particularly those related to semisolid formations such as creams and ointments. "There is also a strong cultural fit – both Fougera and Sandoz are very performance-based, with a strong customer and market orientation," Mr. DeGolyer said.

As a division in a diversified healthcare group, Sandoz also can benefit from interactions with other Novartis divisions in tackling challenges such as the design of clinical trials and specialized production technologies. "It matters that Sandoz has its roots within an innovation-based healthcare group with a scientific heritage that makes it natural for us to focus beyond standard generics to more differentiated products," Mr. DeGolyer said.

EMERGING MARKETS

Another highlight for Sandoz in 2012 was dynamic growth in key emerging markets, as illustrated by the division's 29% growth in Brazil, 27% in China, 15% in Russia, and 30% in Turkey. In a significant shift for the global pharmaceutical industry, sales of prescription medicines in emerging countries are increasing at more than twice the rate of sales in developed markets such as North America and Europe.

Moreover, in the generics industry, the list of "emerging" markets is somewhat surprising. For example, while Japan is the world's second-largest market for innovative medicines, it is an underdeveloped market for generics, which represent only 24% of overall consumption of prescription drugs in terms of volume. The comparable figure for the United States is approximately 80%, and generic penetration exceeds 60% in Germany, Russia and the United Kingdom.

To boost the use of generics, the Japanese government began offering significant incentives that have benefited Sandoz and its differentiated portfolio including injectable oncology medicines and antibiotics. As a result, Sandoz sales growth in Japan has outpaced that of the overall market for four consecutive years, recording 20 consecutive quarters of double-digit growth in a market growing in the high single digits.

Specifically, in 2003, Japan introduced a prospective payment system for large acute care hospitals. When a patient is hospitalized for a heart attack, for example, the hospital receives a flat daily payment based on that diagnosis. If the actual cost of patient care exceeds that payment, the hospital loses money; if it does not, the hospital profits.

"This prospective payment system has given hospitals a very strong economic incentive to switch to low-cost but high-quality generic products when they are available," said Junichi Nakamichi, Head of Sandoz Japan.

Buoyed by the success of this system, the Japanese government began offering incentives to physicians, pharmacists and patients, as well. Traditionally physicians have been responsible for dispensing medications to patients in Japan, but in recent years, more and more pharmacies have assumed this role. That's partly because the government now pays pharmacies a small fee each time they substitute a generic medicine for a brand-name drug prescribed by a physician.

Additionally, physicians receive a small payment each time they write a prescription using the international nonproprietary name (INN), or common name of a medicine, rather than the brand name. "These incentives won't transform the market overnight – but they add up," Mr. Nakamichi said. "We are confident that Japan's generics market is on a pretty clear path, heading in the same direction as the United States or Germany 15 to 20 years ago."

He continued: "With an aging population, fewer people in Japan are paying health insurance premiums, even as the cost of caring for the elderly rises. Our health insurance system isn't sustainable unless we cut costs. And the government has recognized that generics are one of the key tools they have in their hands to contain costs."

Savings likely will increase within the next several years as medicines with billions of dollars in annual sales lose patent protection in Japan. While gaining regulatory approval for new generic products in Japan remains a challenge, Sandoz Development team members have valuable experience in fulfilling the requirements of Japanese regulators.

Omnitrope, a biosimilar human growth hormone developed by Sandoz, was the first biosimilar approved in Japan. "We had to pioneer a regulatory pathway for biosimilars, but just as we have expanded systematically, beginning with the hospital sector and now moving more broadly into the primary care segment of the market, I believe we will generate a significant portion of our future sales in Japan from biosimilars," Mr. Nakamichi said. "It is an opportunity to lift Sandoz to the next level beyond 2015 or 2016, when patents on major biologic medicines begin to expire."

LOCAL MANUFACTURING

By contrast with Japan, generic products account for more than 70% of use in Russia – where Sandoz, Novartis Pharmaceuticals and Alcon, combined, rank as the country's largest pharmaceutical company.

As market leader, Novartis plays a key role in the Russian government's efforts to grow the domestic pharmaceutical sector, part of a broader strategy for industrial rejuvenation. In December 2010, Novartis announced a five-year, USD 500 million investment program in Russia, including construction of a state-of-the-art manufacturing plant in St. Petersburg. Commercial production at this new facility is scheduled to begin in 2014; generic products will account for the majority of output.

The Novartis investment program in Russia also includes research and development collaborations, as well as public health initiatives. In partnership with the government of Yaroslavl, a historic city and administrative center northeast of Moscow, Novartis launched a disease management initiative designed to improve the treatment of hypertension and other cardiovascular diseases. "It underscores our long-term commitment to the Russian market," said Peter Goldschmidt, Head of Central and Eastern Europe for Sandoz, which is the region's number one generics company.

Additionally, through a program called Pharma 2020, the Russian government is investing the equivalent of USD 4 billion to become more self-sufficient in producing prescription medicines and simultaneously crack down on counterfeit medicines. Following the collapse of the Soviet Union, Russia significantly depended on medical imports from countries such as Hungary, the Czech Republic and Slovenia, and in 2009 the Russian government named pharmaceuticals a priority industry. Within the next eight years, Russia is striving to increase self-sufficiency on the prescription medicine front from 25% to 50%.

Another Pharma 2020 pillar – and precondition for increasing Russian pharmaceutical exports – is the adoption of good manufacturing practice (GMP). Only about 10% of Russian pharmaceutical companies complied with GMP in 2012, and investments by Novartis and other international companies likely will promote the further adoption of GMP standards.

Brazil is another emerging market expected to achieve continued strong growth in generic medicines – and the government is determined to strengthen the domestic production of generic pharmaceuticals, as market dynamics are changing rapidly.

While Brazil is, for the most part, an out-of-pocket market, the government has experimented with a program called Farmacia Popular through which patients receive certain medicines free of charge. "We have seen volumes increase significantly for these fully reimbursed medicines," said Fernando Mateus, Head of Sandoz Brazil. "It shows there is hidden demand that is not being filled today because people don't have money to pay for medicines."

Other shifts in government policy have provided growth opportunities for Sandoz in Brazil. For example, there is increasing use of competitive tenders negotiated directly with the government. "The tender opportunity is big in Brazil. We are reviewing our portfolio to identify the best prospects: molecules where we can offer a competitive price and also have sufficient manufacturing capacity to deliver if we win the tender," Mr. Mateus said.

Technology transfer agreements are another important trend. The government wants to increase self-sufficiency and has identified dozens of medicines, including treatments for cancer, as a starting point. Under the government's proposed model, a manufacturer would receive market exclusivity for five years in exchange for transferring production technology to a Brazilian company. "There is a particular interest in biologic medicines," Mr. Mateus said. "The government is convinced that biologics are the future of pharmaceuticals. As the sixth-

largest economy in the world, they feel they can't afford to lose the race for such a key technology."

Moreover, the government and local manufacturers are willing to collaborate with international pharmaceutical companies, and Novartis has held exploratory discussions with potential partners, Mr. Mateus added. "These latest developments show how Sandoz strategy has to be flexible to address the diverse requirements in emerging countries."

ACCESS TO MEDICINE

In 2012, Sandoz management unveiled a new strategy for Africa and fostered partnerships in Cameroon and Zambia that provide a foundation for long-term growth. "Over the next three to five years, you will see Sandoz make significant contributions to increased access to affordable, high-quality medicines for patients across Africa," Mr. George said.

For example, 1A Pharma, a low-cost German affiliate of Sandoz that leads the German market for tender business, is cooperating with Cinpharm, a Cameroon-owned pharmaceutical company that manufactures generic pharmaceuticals distributed throughout sub-Saharan Africa. Under the agreement, 1A Pharma will share technical expertise and materials to support Cinpharm with the aim of ultimately increasing production in Cameroon. Initially, 1A Pharma will provide raw materials, including bulk active ingredients and packaging materials, enabling Cinpharm to fully comply with current GMP standards.

This partnership was initiated and facilitated by DEG, a German development finance institution that finances private-sector investments in developing countries. Cinpharm's production facility was built with financial support from DEG.

Sandoz and 1A Pharma also will play a key role in improving access to medicine in rural Zambia. In 2010, the Zambian government, together with the World Bank and development aid agencies from the United States and United Kingdom, launched a program to improve the supply of antimalarial medicines to rural communities through a network of health shops. This initiative is helping improve access to treatment for millions of people, and under an agreement with Zambia's Ministry of Health, Sandoz will provide additional support.

Sandoz and its 1A Pharma subsidiary will equip independently owned "health shops" in rural areas – where three-quarters of Zambia's 13 million people live. The health shops will offer affordable, high-quality generic medicines as well as innovative products such as *Coartem*, the pioneering antimalarial treatment from Novartis. Importantly, the closed distribution network established by 1A Pharma will ensure a reliable, safe supply of drugs in a country where counterfeit and substandard medicines are rampant.

"Donations and other access to medicine initiatives remain important in Africa," said Nick Haggar, Head of Western Europe, Middle East and Africa for Sandoz. "But governments also are working to build sustainable healthcare infrastructure. If you can establish a basic commercial framework that enables people to earn a living at each point along the distribution chain, you can make it sustainable, month in and month out, and that is what people want to see."

Sandoz


OMOROT

VACCINES AND DIAGNOSTICS OVERVIEW

KEY FIGURES

(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**1 858**	1 996
Operating loss	**– 250**	– 249
Return on net sales (%)	**– 13.5**	– 12.5
Core operating loss/income [1]	**– 75**	135
Core return on net sales (%)	**– 4.0**	6.8
Core Research & Development [1]	**429**	494
As a % of net sales	**23.1**	24.7
Free cash flow	**– 67**	– 291
Net operating assets	**4 977**	5 067
Number of associates (FTE) [2]	**6 391**	6 122

[1] Core operating loss/income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[2] Full-time equivalent positions at year end.

VACCINES LATE-STAGE DEVELOPMENT PIPELINE

	Phase I	Phase II	Phase III	Registration
Bexsero (EU) [1]				
Menveo infant (US) [2]				In progress
Menjugate liquid				
Fluad (US)				
Flucelvax pediatric (US) [3]			In progress	
MenABCWY [4]				
GBS [5]				
Pseudomonas aeruginosa [6]		In progress		
FCC [3] H5N1		In progress		
Quadrivalent Influenza Vaccine		In progress		

[1] *Neisseria meningitidis* bacteria serogroup B
[2] *Neisseria meningitidis* bacteria serogroups A, C, W-135 and Y; 2 months to 2 years
[3] Influenza cell culture
[4] *Neisseria meningitidis* bacteria serogroups A, B, C, W-135 and Y
[5] Group B Streptococcus
[6] Collaboration with Intercell

NEWS IN 2012

Net sales were USD 1.9 billion, down 7% (–4% cc) from USD 2.0 billion in 2011, which benefited from bulk pediatric shipments and a one-time pre-pandemic sale.

Reported operating loss was USD 250 million compared to a loss of USD 249 million in 2011. 2012 included a licensing settlement benefit of USD 56 million, while 2011 included an impairment of USD 135 million related to a financial asset.

Vaccines and Diagnostics reached key milestones in innovation in 2012. The EMA's CHMP adopted a positive opinion for *Bexsero* – our groundbreaking vaccine to help protect all age groups, including infants, from meningococcal serogroup B. Additionally, *Flucelvax* – the first cell-culture vaccine in the United States to help protect against seasonal influenza – was approved by the FDA.

VACCINES AND DIAGNOSTICS

With an innovative development pipeline, the Vaccines and Diagnostics Division is well-positioned to differentiate itself from the competition through products that can deliver for patients. These products include two potentially life-saving vaccines advanced by the division in 2012 – *Bexsero*, for meningococcal serogroup B (MenB) disease, and *Flucelvax*, for influenza.

The Novartis Vaccines and Diagnostics Division celebrated two key milestones during 2012, underscoring the promise of the division's innovative development pipeline.

In November, the division cleared the last hurdle prior to regulatory approval in Europe for *Bexsero* (Meningococcal Group B Vaccine [rDNA, component, adsorbed]), a groundbreaking vaccine for meningococcal serogroup B (MenB) disease. The Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) adopted a positive opinion for *Bexsero* for active immunization of individuals from 2 months of age and older against invasive disease caused by B strains of the bacterium *Neisseria meningitidis*.

In the same month, the US Food and Drug Administration (FDA) approved *Flucelvax*, the first cell-culture-derived influenza vaccine in the United States to help protect adults against seasonal influenza. *Flucelvax* is approved for use in adults 18 years and older.

With these milestones, the Vaccines and Diagnostics Division advances first-in-class technologies and differentiates itself from the competition through products that will deliver for patients. "In the past two years, we have marked the approval of *Menveo*, the CHMP positive opinion of *Bexsero*, and the FDA approval of *Flucelvax*," said Andrin Oswald, M.D., Division Head, Novartis Vaccines and Diagnostics. "Advancing three innovative and potentially life-saving vaccines in this short time period is very exciting."

GROUNDBREAKING VACCINE

The medical need for a MenB vaccine is significant. Global incidence of MenB disease varies between 20 000 and 80 000 cases annually, with as many as 8 000 deaths per year. In Europe, MenB is responsible for as many as 90% of cases of meningococcal disease in some countries.

MenB primarily affects infants and is easily misdiagnosed. The disease can kill within 24 hours, and about 1 in 10 people infected will die despite receiving appropriate treatment. Moreover, an estimated 1 in 5 survivors suffers from devastating, lifelong disabilities such as brain damage, hearing loss and limb amputations.

"We are proud of the major advance that *Bexsero* represents within the field of vaccine development against a very challenging disease target," Dr. Oswald said. "For more than two decades, our researchers and clinicians have been dedicated to finding a vaccine to broadly protect against MenB disease. Our steadfast determination has been inspired by the testimonies from survivors and families who have lost loved ones to this disease."

In 2010, regulators in Europe and the United States approved *Menveo*, a Novartis vaccine used to protect adults and adolescents against meningococcal disease caused by four other common serogroups of *N. meningitidis* – A, C, W-135, and Y. Together with *Menveo*, the anticipated approval of *Bexsero* underscores the leadership role of Novartis in the fight against devastating meningococcal disease.

Bexsero is a prototype for reverse vaccinology, a genome-based approach that has revolutionized vaccine discovery and development. *Menveo* and other conjugate vaccines developed against common serogroups of the bacterium *N. meningitidis* use the polysaccharide coat as an antigen – a fragment of the bacterium able to induce a protective immune response but not strong enough to cause the disease. The polysaccharide coat from MenB can't be used as a vaccine antigen, however, because it is similar to another molecule found in humans and, as a result, the human body will not mount the appropriate immune response.

To discover the antigens used in *Bexsero*, Novartis scientists combed a sequence of the *N. meningitidis* genome and identified genes encoding proteins located on the surface of the bacterium that are likely to interact with the immune system. "The entire scientific community working for 50 years had found about a dozen antigens to use in a potential MenB vaccine," said Rino Rappuoli, Ph.D., Global Head of Research at the Vaccines and Diagnostics Division. "Using reverse vaccinology we identified more than 90 antigens within 18 months."

No single antigen is sufficient to provide broad protection against the thousands of MenB strains in circulation around the world. But the multiple antigens ultimately selected for *Bexsero* are essential for the bacterium's survival, function or ability to cause infection inside the human body. Importantly, it is estimated that these antigens are found in the majority of circulating MenB strains.

Data from large clinical trials involving almost 8 000 people demonstrated that *Bexsero* can help protect vulnerable age groups, including infants, who are at greatest risk of infections. These data established the tolerability and immunogenicity profile of *Bexsero*, and showed that it can fit within standard vaccination schedules.

The European Commission generally follows the recommendations of the CHMP and delivers its final decision within three months. Upon approval, *Bexsero* would be the first and only licensed vaccine that can help protect against a broad range of strains that cause MenB disease worldwide.

PREDICTING STRAIN COVERAGE

Given the huge diversity of circulating MenB strains that vary across regions – and even within a single country – an efficacy study for *Bexsero* prior to launch would have been a challenge. This meant that to assess the potential breadth of coverage against MenB strains, Novartis had to develop a method for assessing whether a panel of disease-causing MenB strains is killed by antibodies induced by the vaccine. The solution was the Meningococcal Antigen Typing System, or MATS, an innovative, predictive model that can type large numbers of MenB isolates within a specific geographic area.

"In principle, MATS enables a far more precise estimation of vaccine coverage than was previously possible," Dr. Rappuoli said. "As such, it represents a significant step forward in the effort to develop broadly protective vaccines against meningococcal disease."

Novartis Vaccines and Diagnostics has worked closely with reference laboratories in major countries to roll out the MATS system and estimate the potential public health impact of a vaccination program with *Bexsero*. A study presented at the 2011 meeting of the European Monitoring Group on Meningococci evaluated more than 1 000 MenB strains isolated by national reference laboratories of England and Wales, France, Germany, Norway and Italy. According to the study, *Bexsero* covered an estimated 78% of the strains.

"The degree of estimated coverage we have seen with *Bexsero* surpassed our expectations," said James Wassil, Head, Global Program Team for Meningococcal Vaccines, Novartis Vaccines and Diagnostics.

Regulatory applications for *Bexsero* are pending in several other countries, including Canada, Brazil and Australia. In the United States, Novartis is continuing to work with the FDA to review the clinical program and assess potential next steps. In Europe, as with most new vaccines, the uptake of *Bexsero* will be linked to recommendations and funding in individual countries that can take several months to a few years. Novartis remains committed to working with regulatory authorities to make the vaccine broadly available as soon as possible.

A NEW ERA FOR FLU VACCINES

For decades, production of influenza vaccines has used chicken eggs to incubate virus strains. This traditional method requires long lead times. One egg is needed for each separate antigen in a dose of seasonal influenza vaccine, and manufacturers must order tens of millions of eggs at least a year in advance from a limited number of qualified, audited farmers whose facilities meet stringent regulatory standards of quality and hygiene.

As early as 1995, the World Health Organization (WHO) called for the development of alternative cultivation systems for influenza virus – particularly mammalian cell-culture technology, widely used in the manufacture of vaccines against other viral diseases, including hepatitis and rabies.

In 2007, the European Union approved *Optaflu*, the first seasonal influenza vaccine to use the proprietary Novartis cell line rather than eggs. *Optaflu* is produced at a facility in Marburg, Germany.

Approval of *Flucelvax* by the FDA was based on clinical trials that found the new vaccine to be well tolerated, with an efficacy of 83.8% against circulating influenza

strains compared with placebo. The clinical program included a multinational, randomized, observer-blinded, placebo-controlled trial performed to assess clinical efficacy and safety of *Flucelvax* during the 2007-2008 influenza season in adults aged 18 to 49 years in the United States, Finland and Poland. A total of 11 404 persons received either *Flucelvax*; *Agriflu*, a Novartis egg-based seasonal influenza vaccine; or placebo. *Flucelvax* does not contain preservatives, such as thimerosal, or antibiotics.

Cell-culture-based production takes place in a closed, sterile and controlled environment, and offers potential for a more rapid scale-up than traditional methods. That flexibility could be critical during an influenza pandemic, the emergence of a new influenza virus that can spread globally through efficient and sustained human-to-human transmission.

"This newly approved vaccine is a milestone in protecting Americans' health during flu season and in future pandemics. The cell-based vaccine is as safe and effective as traditional egg-based vaccine, and the technology used to manufacture it is more flexible and reliable than the traditional technology," said Kathleen Sebelius, Secretary, US Department of Health and Human Services (HHS), in a statement. "In the event of an influenza pandemic, this cell-based technology could provide a more rapid start-up of the vaccine manufacturing process, potentially increasing our nation's health security."

Cell-culture technology marks the most significant advance in influenza vaccine manufacturing in the United States in more than 40 years. Novartis expects to provide doses of *Flucelvax* in the United States in the latter part of the 2012-2013 influenza season.

Underscoring the strategic importance of cell-based production for pandemic preparedness, Novartis and the HHS, Biomedical Advanced Research and Development Authority (BARDA) together funded a new state-of-the-art facility for cell-culture influenza vaccine production located in Holly Springs, North Carolina. "For Novartis, cell-culture technology is the start of a new era in how we approach the influenza vaccine market," said Vas Narasimhan, M.D., Global Head of Development, Vaccines and Diagnostics. "Approval of *Flucelvax* is the first step in a whole set of activities to make this our core manufacturing platform for a differentiated portfolio of influenza vaccines."

Initially, *Flucelvax* will be manufactured at the Novartis facility in Marburg. However, production eventually will shift. "Cell-culture-based seasonal influenza vaccine will rise gradually as a percentage of our total output and become our mainstay product in the United States once Holly Springs is fully operational," said Nirupama Subramanian, Global Project Team Head for Influenza at the Vaccines and Diagnostics Division.

PUBLIC-PRIVATE PARTNERSHIPS FOR PREPAREDNESS

As a pillar of US biodefense, the Holly Springs facility also would be able to produce 150 million doses of adjuvanted pandemic influenza vaccine within six months of the declaration of a pandemic. Adjuvants are additives that can enhance the ability of a vaccine to elicit a protective immune response in people vaccinated.

The cooperation underpinning the Holly Springs facility dates from 2006, when the US government awarded grants totaling more than USD 1 billion to six vaccine manufacturers to accelerate the development of cell-culture-based production technologies as an alternative to traditional egg-based vaccines.

"The approval of this vaccine, manufactured by Novartis, demonstrates what can be accomplished through public-private partnership," Secretary Sebelius said. "BARDA, part of the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR), has supported industry partnerships to develop vaccines and other medical products as part of the national pandemic influenza preparedness strategy. The goal is simple: provide additional and better influenza vaccines sooner to combat public health threats, including pandemics. To this end, ASPR and Novartis partnered to move this vaccine forward in the development process, and both partners funded the studies needed to reach approval."

Of the six vaccine companies that received US government grants in 2006, only Novartis has succeeded in obtaining FDA approval for its cell-culture vaccine.

"This program exemplifies the Novartis culture of innovation," Ms. Subramanian declared. "We like to take on the hard problems – things that really make a difference for public health. And the success of *Flucelvax* is a testament to the tenacity and perseverance of our people, as much as to our technical capabilities."

In June 2012, Novartis and the US government further strengthened ties when Novartis was awarded a long-term contract to support a rapid manufacturing response in the event of a public health emergency. Accordingly, Holly Springs will be one of three national entities designated a Center of Innovation in Advanced Development and Manufacturing (CIADM) by HHS.

"Novartis is committed to maintaining a partnership with the US government to support known and emerging national public health threats," Dr. Oswald said. "Our experience shows us that ongoing dialogue, shared goals, and meaningful investment in technologies and infrastructure are important steps toward better preparedness and saving lives."

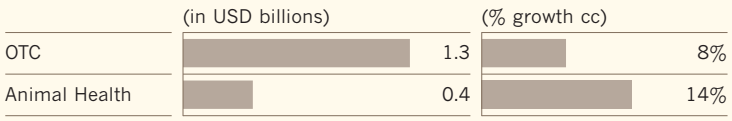
CONSUMER HEALTH OVERVIEW

KEY FIGURES
(in USD millions, unless indicated otherwise)

	2012	2011
Net sales	**3 735**	4 631
Operating income	**48**	727
Return on net sales (%)	**1.3**	15.7
Core operating income [1]	**159**	873
Core return on net sales (%)	**4.3**	18.9
Core Research & Development [1]	**291**	292
As a % of net sales	**7.8**	6.3
Free cash flow	**57**	852
Net operating assets	**1 761**	1 724
Number of associates (FTE) [2]	**8 752**	8 290

[1] Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.
[2] Full-time equivalent positions at year end.

2012 NET SALES OF FOUR LARGEST OTC AND ANIMAL HEALTH BRANDS [1] NOT IMPACTED BY LINCOLN [2]



[1] Four largest 2012 brands:
OTC: *Voltaren, Otrivin, Nicotinell* and *Fenistil*
Animal Health: *Denagard, Milbemax, Atopica* and *Ethicon*
[2] Other large brands from prior years that had limited sales in 2012 as a result of the suspension of production at our manufacturing site in Lincoln, Nebraska, USA
OTC: *Excedrin* and *Theraflu*
Animal Health: *Sentinel* and *Interceptor*

NEWS IN 2012

Consumer Health, which includes OTC and Animal Health, delivered net sales of USD 3.7 billion, down 19% (–16% cc) compared to 2011. The decline was mainly due to the absence of shipments from the manufacturing site in Lincoln, Nebraska, USA, where operations were suspended at the end of 2011 for quality upgrades and improvements. Consumer Health continues to make progress in the remediation of quality issues at the Lincoln facility, and select products (*Excedrin*, *Lamisil* and *Triaminic*) have been available to patients and consumers since the fourth quarter of 2012. As sales of brands originally manufactured in Lincoln have been limited, the Consumer Health organization has invested in other major global brands with strong sales growth results.

Operating income of USD 48 million was down 93% (–89% cc) from the previous year. Core operating income declined 82% (–78% cc) to USD 159 million, and core operating income margin declined 14.6 percentage points, mainly due to the loss of sales from Lincoln and costs related to the upgrades at the site.

OTC gained market share in most European countries and is growing significantly ahead of the market in key Emerging Growth Markets, notably Russia and China.

Voltaren, the world's number one OTC topical analgesic, expanded its position with high single-digit growth supported by the launch of an extra-strength formulation that is being rolled out across most European markets. *Otrivin*, the world's leading OTC nasal spray available in 113 countries, also strengthened its position with multiple product launches throughout the world.

Excluding the Lincoln brands, Animal Health maintained strong single-digit growth. The United States continued to show strong momentum, delivering double-digit sales growth excluding the Lincoln brands, mainly driven by *Denagard*, *Atopica* and *Capstar*. Emerging Growth Markets posted high single-digit sales growth, with particularly strong performance in China, India, Russia and Brazil.

CONSUMER HEALTH

Denagard, a veterinary antibiotic developed by Novartis and initially approved in 1979, today ranks among the top five global brands for farm animals. Its rejuvenation occurred despite the loss of patent protection in all key markets – and reflects an ambitious strategy that is expected to help drive future growth for Novartis Animal Health.

In 2008, a leading US pork producer with operations in many parts of the world began a series of product demonstrations with *Denagard*, a veterinary antibiotic developed by Novartis to treat respiratory and intestinal infections in pigs.

The product demonstrations continued into 2012, demonstrating the efficacy of *Denagard*, a broad-spectrum antibiotic, against troublesome swine diseases that have become increasingly common in recent years. A potent combination of compelling clinical data, convenient formulations and comprehensive technical support services appeals to large international customers as well as fast-growing midsize firms, and has fueled dynamic growth in the United States and Europe, as well as emerging markets such as Brazil and China.

In 2012, global sales of *Denagard* surged 16%. Today *Denagard* ranks among the top five global brands in the farm animal segment of the animal health industry.

What makes this an unusual success story is the fact that *Denagard* initially was approved in 1979 – and its recent growth spurt occurred despite the loss of patent protection in all key markets. A predecessor company to Novartis had licensed rights to distributors in some markets, and the new management team installed at Novartis Animal Health in 2003-2004 made the rejuvenation of *Denagard* the forefront of an ambitious growth strategy in the livestock side of the business. "*Denagard* was the most undersold product in the animal health industry," said Robert Jones, Head of International Operations for the Animal Health Division.

The resurgence of *Denagard* reflects hallmarks of the animal health industry. "Our products generally don't fall off the cliff after patents expire and generic competition appears," said Folkert Kamphuis, General Manager, Novartis Animal Health North America. Indeed, the global strategy crafted for *Denagard* could be applied to other animal health brands at Novartis. "We are looking for ways to drive the next growth phase, and delivering value by helping customers use the product at the right moment to maximize benefit," Mr. Kamphuis said.

Moreover, farm animals represent a quicker route to expansion in emerging markets than do the division's other strategic focus – medicines for pets. In developed regions such as Europe and North America, consumer spending on companion animals has outpaced growth of the farm animal segment in recent years. Despite the worst economic downturn in decades, consumer spending on pets in the United States was projected to grow almost 4% in 2012 to USD 53 billion, according to the American Pet Products Association.

"There is a renewed interest in the farm animal business due to increased global demand for protein," Mr. Jones said. "But we're also plowing the ground now, building a platform so that as these emerging countries get richer and become more interested in pets, they will have a line of products for companion animals they can buy from us, as well."

FULL CONTROL

Following a carefully crafted blueprint, Novartis Animal Health re-gained rights to *Denagard* in strategic geographies including

the crucial US market, which accounts for roughly half of worldwide sales of farm animal products. "We knew we needed full control of marketing and sales to execute our growth strategy and convince customers that *Denagard* was a better product that provided greater value," Mr. Kamphuis said.

The division then adopted the *Denagard* name as a uniform global brand, replacing a discordant collection previously used by distributors around the world. In another gamble, Novartis Animal Health optimized the pricing of *Denagard* in many countries to gain market share. These price optimizations led to increased volume and improved capacity utilization at a Sandoz manufacturing site in Kundl, Austria, which helped to increase the value of the product to Novartis.

"We also knew we needed more data to support marketing - big, head-to-head comparisons demonstrating that *Denagard* was more cost-efficient and produced better results for farmers than rival products," Mr. Kamphuis said. "It was risky because there are so many potential variables in field trials: differences in climate, in the way farmers keep their animals and in the way they use antibiotics – reflecting local traditions and husbandry systems."

But the division's faith in *Denagard* was rewarded. In 2005 and 2006, a series of studies in countries ranging from the United Kingdom and Germany to China, Thailand and Brazil confirmed that *Denagard* effectively treated a broad range of diseases in pigs, while providing a superior return on investment for producers.

Denagard was available in a wide range of formulations and presentations – including in-feed premix; a powder and solution to mix with drinking water for use when pigs will drink but not eat; and an injectable formulation providing rapid disease treatment in life-threatening situations. "But we had too much complexity in production and we agreed to whittle down the number of formulations to the ones that really added value for customers," Mr. Kamphuis said. "We tightened the whole business, simplified production and reduced costs."

PRUDENT CHOICE

Tiamulin, the active ingredient in *Denagard*, belongs to the pleuromutilin group of antibiotics that originally was isolated from two species of fungi.

Denagard works by preventing bacteria from assembling proteins necessary for growth. Clinical studies have demonstrated that *Denagard* is highly active against pathogens responsible for swine dysentery, ileitis and swine pneumonia, as well as mycoplasmas, major disease-causing organisms in poultry. (In the United States *Denagard* is approved exclusively for use in pigs, but approvals in many other countries include both pigs and poultry.)

"*Denagard* had an advantage in the fact that its active ingredient was not used in human medicine. And with new supportive data, we were able to refocus the use of *Denagard* in the therapeutic arena – for treatment of diseases – and to expand its use in pig production," Mr. Jones said.

Expanding the product's positioning in the production cycle was a strategic decision. "*Denagard* was being used mainly for baby pigs due to its cost/benefit profile," Mr. Jones said.

"Weaning is a very stressful time, when the baby pig is just developing its own immune system and comes off the sow's milk. This was the production phase where *Denagard* was most strongly positioned."

Optimizing the price of *Denagard* expanded its use in additional production phases, including in older pigs that succumbed to the same diseases as baby pigs. Product acceptance further increased in 2008 when the US team achieved improvements to the label for use of *Denagard* that aligned with today's pork production systems.

The value of *Denagard* also benefited from the regulatory approval in the United States of concurrent use of *Denagard* and chlortetracycline (CTC), another class of antibiotics with a complementary mode of action. In clinical trials, the combination of *Denagard* and CTC provided broad-spectrum activity particularly valuable for treating mixed bacterial infections. "We happened to be there with the right product at the right time with new technical support information that matched the needs of today's pork production systems," Mr. Jones said.

PRODUCTION PYRAMID

The structure of the pig production business provided a springboard for success in the United States and emerging markets including China and Brazil. The industry spans three distinct segments: first, fully integrated international giants with operations ranging from feed and animal production to meat processing and sales of their own branded products. A second segment of midsize companies focuses on feed and animal production – but stops short of meat processing and sales. The industry also includes backyard farmers who each have a handful of animals.

In the United States, for suppliers at the top of the pig production pyramid to be successful, dedicated sales and technical service teams must support the global scale of customer activities. "These integrated companies choose *Denagard* both for the quality of the product and the support services Novartis Animal Health is able to provide," Mr. Kamphuis said. "We do a lot of work with customers about the best time to treat their animals – and our technical support in every market is another crucial aspect of what we have done with the brand."

Today China has displaced the United States as the world's biggest pork producing nation, and while the US industry is now mostly vertically integrated, many developing

markets are just beginning the journey toward greater integration and consolidation. "For this reason, the 'go to market' strategy in China and many other countries needs to match the local market needs with a mix of Novartis Animal Health sales teams calling on specific customers and using distributors to cover other customer segments," Mr. Jones said. "It's in Asia where we see the greatest changes due to consolidation and integration."

KEY ACCOUNT TEAMS

As large international customers claim a bigger and bigger share of the farm animal business, key account teams are increasingly important to Novartis Animal Health. Charoen Pokphand Group (CP Group), Thailand's biggest agribusiness conglomerate, has influenced the division's approach to global account management.

CP Group is expanding its core agribusiness operations in more than a dozen countries. Novartis Animal Health takes a global approach in the way it works with CP Group. The key account team is intimately familiar with CP Group's strategy and priorities, and ensures that Novartis has the appropriate resources located in markets where CP Group is expanding.

Countries in which CP Group is expanding include Vietnam, where pork is a staple of the local diet. "Vietnam is a much smaller country than Brazil, but they have a similar number of pigs," Mr. Jones said. "CP has really organized itself well around producing pigs in Vietnam, and our account management team is providing comprehensive support."

Looking ahead, the *Denagard* strategic blueprint could undergo some minor changes. One possibility includes expanding the *Denagard* brand with complementary products also related to pig production. "There is reason to believe we could add a few other products to our portfolio that would complement *Denagard*, help to maintain sales growth and provide value to our customers," Mr. Jones said.

However, the successful foundation will remain intact. "We have managed to achieve the right balance between global coordination and tailoring execution to local markets. We provide guidelines and tools that we believe will enhance marketing and sales, but we don't demand that our staff in China do things in exactly the same way as in Denmark, for example," Mr. Jones said.

During the past seven years, Novartis Animal Health has made sure it has fielded a strong and knowledgeable sales force in key pig-producing markets around the world. "At the same time, we told countries to focus more time and resources on *Denagard* – and we incentivized them to ensure they did it," he added.

"I have found over the years that people in the animal health business are special. They are not only passionate, but they are in this for the long haul. There is a purpose to all this: Either they are going to help feed the world or help people be happier by having healthier pets."

CORPORATE RESPONSIBILITY

We aim to improve global health. Through our business, we make an important contribution to society: We discover and develop innovative healthcare products, targeting unmet medical needs.

Novartis collaborates with others to help address some of the world's greatest health challenges. We focus our corporate responsibility work on two areas:

Expanding access to healthcare

We work to expand access to healthcare and reach more patients with our medicines and vaccines. We concentrate our efforts on controlling and eliminating diseases such as malaria and leprosy, pioneering new business approaches to reach underserved patients, and finding new treatments and adaptive solutions to improve health in the developing world. In 2012, these efforts reached more than 100 million patients.

Doing business responsibly

Responsibility is a core part of our business and underscores our purpose of caring and curing. We care for our associates, strive to positively contribute to the communities where we live and work, and protect the environment. We conduct business ethically, maintaining a Code of Conduct and governance system to ensure our associates uphold our values.

CONTENTS

CORPORATE RESPONSIBILITY KEY PERFORMANCE INDICATORS

Indicator	2012	2011	2010	2009	2008
Economic					
Net sales in USD billions	**56.7**	58.6	50.6	44.3	41.5
Net income in USD billions; % of net sales	**9.6; 17%**	9.2; 16%	10; 20%	8.5; 19%	8.2; 20%
Core Research & Development in USD billions; % of net sales	**9.1; 16%**	9.2; 16%	8.1; 16%	7.3; 16%	6.8; 16%
Personnel costs in USD billions; % of net sales	**14.8; 26%**	14.9; 26%	12.2; 24%	10.9; 25%	10.6; 26%
Taxes in USD billions; % of net income before taxes	**1.6; 14%**	1.5; 14%	1.7; 15%	1.5; 15%	1.3; 14%
Dividends in USD billions; % of net income attributable to Novartis shareholders[1]	**6.2; 65%**	6.0; 66%	5.4; 55%	4.5; 53%	3.9; 49%
Cash returned to shareholders via second-line share repurchases in USD billions; % of Group total net income	**0; 0%**	2.4; 26%	0; 0%	0; 0%	0.3; 0%
Share price at year end (CHF)	**57.45**	53.70	54.95	56.50	52.70
Expanding access to healthcare[2]					
Total patients reached with Novartis products (millions)[3]	**1 200**	1 148	913	930	850
Patients reached through access to healthcare programs (millions)	**101.4**	89.6	85.5	79.5	73.7
Value of access to healthcare programs (USD millions)	**2 051**	1 784	1 544	1 510	1 259
Doing business responsibly					
Full-time equivalent positions	**127 724**	123 686	119 418	99 834	96 717
Resignations (incl. retirements); separations; hiring (% of associates)	**9; 5; 17**	8; 4; 15	8; 3; 14	8; 3; 14	10; 5; 14
Women in management[4]: % of management; % of Board of Directors	**37%; 16.7%**	36%; 18.2%	36%; 16.7%	35%; 16.7%	37%; 8.3%
Number of associate nationalities	**153**	153	149	144	143
Lost-time injury and illness rate (per 200 000 hours worked)[5,6]	**0.14**	0.19	0.18	0.22	0.34
Total recordable case rate (per 200 000 hours worked)[5,6,7]	**0.45**	0.61	0.73	0.93	1.09
Transportation-related injuries leading to lost time[5,6]	**37**	39	49	58	77
Contact water use, excluding cooling water (million m^3)[6,8]	**17.2**	17.1	15.1	15.0	15.1
Energy use (million GJ), on site and purchased[6,8]	**19.3**	19.3	17.5	17.0	16.9
GHG emissions, Scope 1 vehicles (1 000 t)[6,8]	**174**	192	166	174	180
GHG emissions, total Scope 1, including vehicles, and Scope 2 (1 000 t)[6,8]	**1 651**	1 703	1 504	1 509	1 523
Total operational waste not recycled (1 000 t), hazardous and non-hazardous[6,8]	**132**	142	154	141	138
Active associates trained and certified on Code of Conduct via e-learning course[9]	**98 175**	47 499	48 137	55 793	42 740
Cases of misconduct reported; substantiated[10]	**1 675; 907**	1 522; 842	1 236; 743	913; 541	884; 374
Dismissals and resignations related to misconduct[10]	**426**	716	608	564	217
Total number of suppliers[11]	**214 754**	225 500	241 365	206 155	228 769
Suppliers informed of Novartis Third-Party Guidelines (annual sales of more than USD 100 000 and not requiring a self-declaration)[11]	**37 007**	45 203	39 575	45 858	28 792
Suppliers to confirm key standards (self-declaration)[11]	**3 316**	3 926	3 388	842	1 157

[1] Dividend payment 2012: proposal to the 2013 Annual General Meeting
[2] See table on page 73 for additional detail
[3] 2012 number not fully comparable to previous years due to methodology changes
[4] Management defined locally. Data source % of management: FirstPort (Local Mgmt.Flag) as of December 2012
[5] Excludes data for contractors
[6] Alcon data included in Group figures from 2011 onwards
[7] Includes all work-related injury and illness, whether leading to lost time or not
[8] For details on environment see: www.novartis.com/environmental-care
[9] Prior to 2012: e-Training was given to new hires only and certification was only required from all US associates as well as all managers worldwide
[10] Figures of previous years have been updated to reflect completion of outstanding investigation
[11] Figures for 2012 exclude data for countries where a new Responsible Procurement Program Pilot has been implemented

EXPANDING ACCESS TO HEALTHCARE

NEWS IN 2012

Novartis extends collaboration with WHO to end leprosy. Through the Novartis Foundation for Sustainable Development (NFSD), Novartis continues to provide free multidrug therapy for all leprosy patients.

With the Zambian government, generics division Sandoz expands healthcare access by supplying quality medicines to Health Shops, which are the primary healthcare providers in rural areas.

Deliveries of antimalarial treatments without profit hit 500 million, including 100 million child-friendly treatments. SMS for Life, which uses SMS messages to track antimalarial stocks at public health facilities, expands across Africa.

Alcon supports 800 medical missions in more than 90 countries, restoring vision for 54 000 people who do not have regular access to eye care.

After 10 years of the *Glivec* International Patient Assistance Program (GIPAP) and four years of Novartis Oncology Access, nearly 50 000 patients are reached through these programs.

Novartis Social Business Group launches social business models Familia Nawiri in Kenya and Cung Song Khoe in Vietnam, aiming to expand access to healthcare for people living at the bottom of the economic pyramid.

NFSD and partners mark 10th anniversary of REPSSI (Regional Psychosocial Support Initiative), helping more than 5 million HIV/AIDS orphans and vulnerable children across sub-Saharan Africa cope with loss.

The primary objective of corporate responsibility programs at Novartis is to steadily increase the number of patients reached with medicines, vaccines and other products from our unique and broad healthcare portfolio.

Novartis has been a leader in access to healthcare for many years, based mainly on philanthropic and not-for-profit programs. Yet the number of underserved patients greatly exceeds the capacity of corporate philanthropy, and there is an increasing interest in shared value business models to complement ongoing philanthropic and zero-profit initiatives.

Financially sustainable shared value programs align societal and business ambitions – enhancing access to healthcare among underserved groups and at the same time enabling large-scale, long-term engagement by Novartis.

One example is Arogya Parivar, a commercial model developed to address health needs of impoverished people in rural villages of India. Arogya Parivar ("healthy family" in Hindi) caters to more than 40 million people in 33 000 rural villages across India; social impact and business growth go hand-in-hand.

Health educators from Arogya Parivar raise awareness about healthcare, hygiene and nutrition, and revenues from the sale of corresponding Novartis products cover the cost of these activities. The model expanded to Kenya and Vietnam in 2012 and is being expanded to Indonesia, Nigeria and Ghana in 2013.

Philanthropy remains indispensable to reach those in circumstances of abject poverty and unmet medical need. Since 2000, Novartis has worked with the World Health Organization (WHO) to provide free treatment to leprosy patients, helping to cure more than 5 million people worldwide. In 2012, we agreed to extend donations of multidrug therapy through 2020, and expect eventually to reach about 850 000 patients.

A LEADER IN MALARIA CONTROL AND ELIMINATION

Novartis is a leader in the global effort to control and eliminate malaria. Over the past decade, to ensure that effective treatment reaches patients, the Novartis Malaria Initiative has provided our antimalarial, *Coartem*, without profit to public healthcare systems in malaria-endemic countries as part of a groundbreaking, public-private partnership with WHO.

Launched in 2001, *Coartem* was the first approved artemisinin-based combination therapy (ACT), the most potent class of antimalarial medicine available. In 2009 Novartis launched *Coartem* Dispersible, the first pediatric ACT, developed jointly with Medicines for Malaria Venture. To date, more than 500 million treatments have been delivered to more than 60 malaria-endemic countries.

Still, only one in three patients treated for malaria in sub-Saharan Africa receives an ACT. To further enhance access to ACTs, the Novartis Malaria Initiative is exploring new ways to improve distribution through the private sector – without the support of donor subsidies.

Working with other partners, under the umbrella of the Roll Back Malaria Partnership, Novartis also helped develop SMS for Life, a tool to improve supply chain management and forecasting. Today, in line with its commitment to innovate and continue leading the fight against malaria, the Novartis Malaria Initiative is extending its commitment to enhance access to affordable, quality-assured antimalarials through the private sector.

"The long-term objective of Novartis is to help eliminate malaria," said Linus Igwemezie, Head of the Novartis Malaria Initiative. "You can only achieve elimination if you also address the needs of the huge proportion of patients who seek care through the private sector."

While poverty and disease remain major challenges, many parts of Africa have witnessed a dramatic economic expansion over the past decade. It is estimated that 625 million antimalarial treatments are bought each year in the private sector of endemic countries – yet obsolete or substandard medicines constitute a large proportion of the dispensed treatments. In an effort to provide these patients with quality-assured ACTs, Novartis is extending differential pricing of *Coartem* and *Coartem* Dispersible with the aim of enhancing access for this growing middle class.

To ensure tight control of quality and pricing, Novartis is working with a small number of distribution partners. The partners have experience in access programs and also share our goal of making affordable, quality medicines more accessible. As part of this effort, Novartis intends to train staff in pharmacies and retail outlets in appropriate diagnosis and treatment of malaria.

A pilot program in the private sector was launched in Malawi in 2012. Eight additional countries selected for rollout (Nigeria, Kenya, Uganda, Tanzania, Zambia, Rwanda, Ghana and Ethiopia) were chosen based on multiple criteria including high unmet medical need; lack of access to quality ACTs in the private sector; or low access to ACTs through public health systems.

STAYING ONE STEP AHEAD OF THE PARASITE

Malaria is a parasitic disease and, by definition, parasites always adapt and build resistance against available treatments. It is just a question of time.

"It is very important to keep one step ahead of the parasite and provide innovative treatments to support elimination efforts," said Thierry Diagana, Ph.D., Head of the Novartis Institute for Tropical Diseases in Singapore.

Even though the overall efficacy of ACTs is not yet affected, studies in Southeast Asia have shown the first signs of delayed response to treatment. Patients are still being cured – but it takes longer.

Novartis is working toward a new breakthrough in the fight against malaria, which kills a child every 60 seconds. "We are particularly excited about our two new drug candidates because, if successfully developed, they would be the first new antimalarials in many years not belonging to the artemisinin class, and provide a completely new option to treat the disease," Mr. Diagana added.

The first compound, known as KAE609, is currently in Phase II clinical testing. It is a so-called spiroindolone molecule that rapidly and potently kills malaria parasites.

In 2011, Novartis researchers reported the discovery of another new class of dual-acting compounds known as imidazole piperazines (IZPs) that target the parasite at both the liver and blood stage of its reproductive cycle. Scientists believe that future antimalarials will have to work against both blood and liver stages, and the lead candidate in the Novartis IZP program is now in Phase I clinical trials.

DOUBLE BURDEN OF DISEASE

While infectious diseases remain the biggest killers in developing countries, the pattern of disease is changing. Increasingly, sub-Saharan Africa faces a "double burden of disease" with prevalence of noncommunicable diseases rising. Data indicate that Africans have the highest incidence of elevated blood pressure in the world and the number of strokes is expected to reach epidemic levels in coming years.

Access to healthcare for millions of Africans is restricted by physical barriers, such as poor transportation, but limited capacity and capabilities of healthcare systems are another major obstacle. Africa has two physicians and nine hospital beds per 10 000 people; the corresponding figures in Europe are 33 physicians and 62 beds per 10 000 people. Epidemiological data is poor, which affects planning and resource allocation in public health systems.

The shortage of specialists is even more dramatic. Zambia, for example, has an estimated 900 physicians to serve a population of 13 million people. Only one Zambian physician in seven has specialist training.

Novartis is providing platforms to help improve capabilities by investing in greater awareness, earlier detection and better early management. These initiatives aren't always targeted at physicians – they involve nurses or community health workers on the ground.

"Our most important work in this arena is to discover new medicines. But to be effective, we also need to think about training and how to get existing medicines to the right patients," said Mark C. Fishman, M.D., President of the Novartis Institutes for BioMedical Research (NIBR) and member of the Executive Committee of Novartis.

"We are offering scientists from developing countries training at NIBR research hubs in Basel, Switzerland and in Cambridge, Massachusetts in the United States. And some of our own scientists are going to countries in the developing world to participate in training there," Dr. Fishman added. "This is a very important part of building expertise in these regions and encouraging scientists from these areas to come and collaborate with us."

Novartis is sponsoring African healthcare scientists in a master's degree program in clinical epidemiology at the University of Stellenbosch in Cape Town, South Africa. Assessing the prevalence of major noncommunicable diseases in countries and local communities is a major challenge. "Right now those data are next to impossible to obtain," said Patrice Matchaba, M.D., Global Head of Development Operations at the Novartis Pharmaceuticals Division.

During the master's degree program, a team of Novartis scientists travels to Stellenbosch University and serves as faculty for subjects ranging from the science of epidemiology to modeling and simulation and specialized pharmaceutical statistics.

There are currently 30 students in the program, drawn from a number of different countries. "These students are not bound by any ties to Novartis," Dr. Matchaba said. "We believe most of the participants will return home, find positions with their national Ministry of Health and begin work to provide the epidemiological data that are urgently needed."

"NEXT GENERATION" SCIENTISTS

In 2011, Novartis launched the Next Generation Scientist Program to support drug discovery and clinical research in developing countries. In 2012, 21 interns from 10 countries, including Brazil, Vietnam, Ethiopia and South Africa, spent three months in Basel under mentorship of Novartis scientists.

Interns are university graduates and prospective scientists already embarked on post-graduate studies. Interns work on drug discovery and clinical research projects, and interactions with mentors provide a platform for Novartis scientists to learn about healthcare challenges in diverse parts of the world.

The program epitomizes partnerships between African research institutes and the private sector. Each of the first two cohorts of interns has included a scientist from the Drug Discovery and Development Centre (H3-D) at the University of Cape Town, South Africa. H3-D is Africa's first integrated drug discovery and development institute.

Professor Kelly Chibale, Ph.D., Director of H3-D, has worked closely with Novartis to identify projects for interns to help plug local technology and skill gaps. "The attraction of the Next Generation Scientist program goes beyond the individual intern; for us it's about building an institution," Mr. Chibale said.

He emphasized the importance of addressing a problem that has long bedeviled African science. "Simply sending people to Novartis or European universities provides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no continuity when people return – what do they come back to? Interns returning to H3-D continue to work on the same project and with some of the technical infrastructure they saw at Novartis."

The relationship with Novartis has been further strengthened with the establishment of a Global Health Sabbatical Program by NIBR. During the sabbaticals, Novartis scientists travel to South Africa and remain at H3-D for several weeks.

"These Novartis scientists will be able to train more people at our center than just a single intern. And by doing it in our environment – with our infrastructure – they will get a better understanding of what we are dealing with, and they can advise us better," Mr. Chibale added. "This is about building sustainable programs and relationships to learn from people who have done it before."

CENTER OF EXCELLENCE

Since 2009, Novartis has worked with Kenyatta National Hospital in Nairobi, Kenya to establish a center of excellence for kidney transplantation. Rising incidence of diabetes and hypertension, and poor treatment available for both disorders, is leading to a sharp increase in end-stage kidney disease.

Kenya has a severe shortage of dialysis machines and treatment centers. Access to dialysis is limited to wealthy individuals who often also have the alternative of traveling abroad for kidney transplants. Unmet need is immense and is expected to continue to grow, so offering transplants locally could help ease some of the strain on local dialysis capacity.

The project, known as Interlife, has included training in Spain for Kenyan doctors as well as on-site training at Kenyatta Hospital supervised by Spanish transplant specialists. The first two volunteer trainers were Antonio Alcaraz, M.D., Head of the Urology Department at the Hospital Clinic Barcelona, and Federico Oppenheimer, M.D., Head of the Nephrology Unit at the same institution. "For all their previous contributions to the evolution of transplantation in Spain, they realized the huge impact on public health they could have in a developing country," said Maria Sotomayor Ruiz, a Novartis Spain associate and project manager for the Interlife initiative.

Today, Kenyatta Hospital performs approximately 30 kidney transplants per year. More than a dozen Spanish physicians have joined Dr. Alcaraz and Dr. Oppenheimer as mentors.

In 2013, Novartis plans to expand the Interlife program to Nigeria, with the support of transplant specialists from Brazil. Novartis pays for travel to and from Brazil plus expenses but the visiting physicians don't receive compensation. "The doctors from Brazil supporting our program in Nigeria come because they want to get to know Africa and help people in great need of care. It is good to take part in this kind of collaboration outside your own country – everyone gains at the end of the day," said Nathalie Cretin, M.D., Ph.D., Regional Medical Director for Novartis Pharmaceuticals.

CROSS-DIVISIONAL INITIATIVES

Dr. Fishman has been the driving force behind initiatives in Zambia aiming to improve access to care for asthma, hypertension and rheumatic heart disease patients.

During a visit in 2010 to the University Teaching Hospital in Zambia's capital, Lusaka, Dr. Fishman discovered that diagnosis and treatment of asthma lagged international standards of care. One reason was a deep-seated cultural aversion to use of inhaled medicines: Many patients associate inhaled therapy with illicit narcotics and fear they will become addicted.

Sandoz, the generics division of Novartis, agreed to donate medicines, but health

authorities demanded an epidemiology study to prove the existence of asthma in Zambia. Those studies are nearing completion, and results to date confirm a high prevalence of asthma in the country.

In parallel with the ongoing epidemiological studies, Novartis and the University Teaching Hospital of Lusaka began a training initiative called Zambora, modeled on the Interlife project in Kenya. In 2011 and 2012, a large group of asthma specialists from Spain traveled to Zambia to support three workshops per year at 11 primary care medical centers in Lusaka. The workshops introduce basic information about the disease, diagnosis and management. In addition, healthcare professionals from Zambia have visited five hospitals in Spain for further education.

Regulatory authorities have approved inhaled treatments, and Novartis agreed to donate medications for the first 18 months of the Zambora program and subsequently provide the drugs at no profit.

The training programs are planned to continue during 2013. Novartis and the University Teaching Hospital of Lusaka also are planning an audit to gauge improvement in diagnosis and treatment.

In addition to these efforts, physicians from NIBR conducted trainings in Zambia on diagnosis and treatment of hypertension during 2012.

Meanwhile, Dr. Fishman has another disease in his sights. One of the biggest killers of Zambian children between 5 and 15 is rheumatic heart disease, a condition easily controlled with antibiotics and virtually unknown in developed countries. “It is a disease children can get after a sore throat. It can be treated with a single shot of penicillin, but in Zambia penicillin isn’t widely available.” Dr. Fishman explained.

Health authorities again have insisted on an epidemiological study to confirm the prevalence of the disorder. NIBR scientists are working with local counterparts to design the study, and Sandoz will supply penicillin. “By working together, we believe that we might be able to eliminate rheumatic heart disease in Zambia,” Dr. Fishman said.

NOVARTIS ACCESS TO HEALTHCARE PROGRAMS 2012

Research & Development

Program	Strategic objective	FTEs [1]	Value [2] (USD millions)
Novartis Institute for Tropical Diseases	Discover and develop effective and affordable treatments for major tropical diseases, such as malaria, dengue fever and African sleeping sickness	104	15.7
Novartis Vaccines Institute for Global Health	Discover and develop effective and affordable vaccines to prevent infectious diseases prevalent in developing countries, such as typhoid	34	7.7
Novartis Institutes for BioMedical Research neglected disease programs	Discover and develop novel and affordable treatments for infectious diseases prevalent in developing countries, such as Chagas disease, leishmaniasis and infectious diarrhea	47	10.6
Total		185	34.0

Patient assistance

Program	Strategic objective	Patients reached (thousands)	Value [3] (USD millions)
Novartis Patient Assistance Foundation, Inc.	Assist patients experiencing financial hardship, without private or public prescription coverage for their medicines (US)	100.0	500.0
Glivec patient assistance	Ensure access to *Glivec* – where needed and possible – for patients with rare cancers who cannot afford the drug	52.3	1 036.2
Tasigna patient assistance	Expand access to *Tasigna* for patients with rare cancers through Novartis Oncology Access	3.1	92.3
Exjade patient assistance	Expand access to *Exjade* for more patients with thalassemia and sickle cell diseases, in more places	6.4	26.0
Alcon medical missions [4]	Provide traveling medical teams with Alcon products	712.2	41.2
Alcon US patient assistance	Assist patients experiencing financial hardship by providing Alcon products	19.4	17.9
Malaria/*Coartem*	Provide *Coartem* without profit for public sector use	99 799.9	281.7
Leprosy (WHO)	Contribute to the global elimination of leprosy by providing multidrug therapy (MDT) to all patients through WHO	266.1	4.8
Tuberculosis	Provide fixed-dose combination tablets to all adult category I and III patients in Tanzania	97.3	2.5
Fascioliasis/*Egaten* [5]	Provide *Egaten* free of charge to treat fascioliasis and paragonimiasis	178.5	0.1
Emergency relief (medicine donations)	Support humanitarian organizations to enable them to help people with first aid activities [3]	–	0.2
Total		101 235.2	2 002.9

Health systems strengthening

Program	Strategic objective	FTEs [1]	People reached (thousands) [6]	Patients reached (thousands)	Value [2] (USD millions)
Novartis Foundation for Sustainable Development	Improve access to quality healthcare and social services for poor people in developing countries through project work, think tank and stakeholder dialogue	7	4 649.3	–	10.6
Novartis research capacity-building programs	Educate the next generation of scientists and clinicians and improve research infrastructure in the developing world	4	0.5	–	3.5
Social Business: [7] Arogya Parivar, Familia Nawiri	Improve healthcare and medicine access in villages of developing countries for poor patients	563	2 565.9	248.1	–
Total		574	7 215.7	248.1	14.1
Grand total		**759**	**7 215.7**	**101 483.3**	**2 051.0**

[1] Full-time equivalent positions and contractors
[2] Operating costs
[3] Wholesale acquisition cost (WAC) plus logistics costs for some programs
[4] Retail value for surgical products
[5] Manufacturing costs
[6] Via training and service delivery
[7] People reached via training

For more information, updates and details on calculation methodology on access to healthcare programs, please see www.novartis.com/access


Is your
child
growing
right for
his/her
age?
Consult

CORPORATE RESPONSIBILITY: KEY TARGETS AND RESULTS FOR 2012 AND KEY TARGETS FOR 2013

ACCESS TO HEALTHCARE

Targets 2012	Results 2012	Targets 2013
Complete rollout of *Coartem* and *Coartem* Dispersible under Phase I of AMFm. Further expand access to *Coartem* and *Coartem* Dispersible in select malaria-endemic countries.	More than 95 million *Coartem* treatments, including 55 million *Coartem* Dispersible treatments, were provided to the public sector and under Phase I of AMFm. Access to *Coartem* and *Coartem* Dispersible was further expanded in the private sector in nine malaria-endemic countries.	Continue to expand access to *Coartem* and *Coartem* Dispersible through new channels driven by the private sector in select malaria-endemic countries.
Improve Arogya supply chain efficiency for remote villages by appointing direct distributors.	Eighty Arogya cells (30%) had direct distributors serviced from Novartis India warehouses, improving services and availability of medicines in remote areas.	Increase direct distribution to 50% of network. Expand Kenya pilot from three to 20 cells covering 1 000 villages, and increase portfolio to 15 medicines covering four additional disease areas. Expand Vietnam pilot from four to 20 cells. Initiate pilots in Indonesia, Nigeria and Ghana.
Research & Development		
Enter Phase IIa proof-of-concept (POC) with KAE609 (formerly NITD609) and Phase I with KAF156. Develop process for vaccine for nontyphoidal salmonella. Pilot scale GMP manufacture of Shigella vaccine.	Antimalaria spiroindolone compound KAE609 successfully completed clinical POC study, Phase II clinical testing against *Plasmodium falciparum* and *vivax* malaria is underway. Antimalaria imidazolopiperazine compound KAF156, active against liver- and blood-stage malaria, was tested in humans and Phase I clinical testing (POC) was initiated. Lab scale process was developed for nontyphoidal salmonella vaccine; in preclinical studies, prototype showed activity against the two main serotypes in Africa. Pilot scale GMP production process was developed for Shigella vaccine and GMP bulk antigen was produced by late 2012.	Successfully complete clinical POC study for KAF156. Identify new preclinical compound to eradicate liver-stage infection of *Plasmodium vivax*. Continue Phase II clinical testing for KAE609 against *Plasmodium falciparum* and *vivax*.

PARTNERSHIPS

Targets 2012	Results 2012	Targets 2013
Collaborate with key patient groups to spur government and employer action on COPD early diagnosis and treatment. Collaborate with MS groups to improve standards of diagnosis and management of MS. Advocate for, and provide better training for, diabetes nurses. Follow up on agreed actions to consolidate global advocacy initiative for gout patients.	The "COPD Uncovered" survey, supported by the COPD Foundation (patient group), Education for Health (nurse organization) and IHPM (employer organization), was used to increase awareness among policymakers. The European MS Patient Group helped coordinate MS Nurse PRO, a nurse training curriculum for the European Union. Following a diabetes nurse training workshop chaired by IDF Europe, outcomes were shared during an EU diabetic macular edema symposium at the Foundation of European Nurses in Diabetes (FEND). Held first advisory board for gout patient advocacy groups seeking support for better access to new treatments.	Work with patient community to help change attitudes toward and understanding of COPD. Encourage better disease awareness and education for dermatological conditions such as psoriasis. Support the global Heart Failure Coalition to increase understanding of the burden of disease, economic impact and treatment options. Improve knowledge of what life is like with MS and help patients connect to exchange experiences. Organize stakeholder dialogues in New York and Geneva on improving access to quality healthcare. Intensify efforts to build a multi-stakeholder initiative to eliminate leprosy.

TRANSPARENT REPORTING

Targets 2012	Results 2012	Targets 2013
Release 2011 UNGC Communication on Progress. Release 2011 Novartis GRI report at a high application level. Consistently update online CSR communications.	2011 UN Global Compact Communication on Progress was released in March 2012. 2011 GRI report received application level A+.	Conduct materiality analysis of corporate responsibility issues, risks and opportunities, and incorporate results into decision-making and 2014 planning.

For a full list of current Novartis targets and results, please see www.novartis.com/2013targets

NEWS IN 2012

Novartis scores high in industry rankings, outperforming all other pharmaceutical companies in Fortune's "World's Most Admired Companies" and Barron's "World's Most Respected Companies" surveys. Novartis receives SAM Gold Class award, and is included in Dow Jones Sustainability World and FTSE4Good indices.

Novartis partners with TED – a not-for-profit group formed to disseminate "ideas worth spreading" – to engage stakeholders in improving healthcare in Africa through live and online brainstorms at TEDGlobal in Scotland and Novartis Campus in Switzerland.

Novartis Be Healthy initiative, introduced in 2011, expands to include more than 95% of Novartis Group company associates worldwide, promoting healthy behaviors and providing access to key personal health metrics.

Novartis Environment and Energy Awards recognize projects that improve our environmental footprint. Of 179 projects submitted, more than 140 are completed, achieving cost savings of USD 21 million and reducing waste, water use and CO_2 emissions.

Supreme Court of India holds full hearing on the *Glivec* patent case from September to December 2012. Novartis seeks clarity on Indian patent system, and more than 95% of *Glivec* patients in India receive medicine free through the *Glivec* International Patient Assistance Program.

In addition to expanding access to healthcare, Novartis is committed to other important areas of corporate responsibility – from environmental protection and employee health and safety to establishing transparent, ethical corporate standards and policies.

The cornerstone of responsible business conduct at Novartis is our commitment to the United Nations Global Compact, an initiative that supports a set of core values in the areas of human rights, labor standards, the environment and efforts to combat corruption. Novartis was one of the first signatories to the Global Compact and set concrete, action-specific targets, defined performance indicators, and integrated measurement into existing systems and working practices.

Novartis strives to maintain a culture of safe behavior and on-site health promotion as well as a high level of employee engagement, sustaining a positive working environment for our associates. Novartis conducts a Global Employee Survey every two years to highlight strengths as well as opportunities for improvement.

Reducing environmental impact on the planet – in particular tight control of greenhouse gas emissions and energy efficiency – is not only important for Novartis but critical for society and future generations. We strive to operate in a manner that is environmentally sustainable and responsible toward stakeholders.

REDUCING GREENHOUSE GAS EMISSIONS

2012 was a year of reckoning for efficiency of energy use by Novartis.

In 2005, the Executive Committee of Novartis set a greenhouse gas target for the Group by voluntarily adopting the principles of the Kyoto Protocol. That commitment called for reducing on-site CO_2 emissions from the 1990 level by 5% by 2012. Energy efficiency has improved significantly during the past seven years, and combined with forestry projects, has enabled Novartis to attain its 2012 Kyoto target.

Significant improvements in energy efficiency at plants in Europe also have enabled Novartis to satisfy requirements of the European Union's "cap and trade" legislation.

By contrast with other major companies, Novartis has not purchased emission allowances to achieve the European Union's requirements, and Group companies actually currently hold a surplus of emission allowances.

Along with increasing the efficiency of energy used in existing operations and adopting renewable energy sources where feasible and economically attractive, the highlight of the Kyoto program at Novartis has been forestry carbon-offset projects in Argentina, Mali and China. Carbon sequestration, the uptake of carbon dioxide by trees as they grow and mature, is an environmentally friendly complement to other ongoing initiatives to reduce CO_2 emissions. These projects also have positive social benefits with local communities.

Afforestation projects are challenging. A fire during 2012 destroyed about 23 hectares of the plantation in Argentina. In the West African republic of Mali, local farmers planted jatropha bushes and fruits that are transformed to renewable biofuel. Some of the early plantings died, and replantings have delivered a lower volume of carbon offsets than originally expected.

Nonetheless, the jatropha project has been recognized as the first agroforestry project validated as a voluntary carbon standard. Importantly, farmers grow jatropha side by side with food crops like beans, peanuts, corn or sorghum. The jatropha bushes provide shade and protection from wind, as well as soil enrichment for food crops.

"Mali is at least as much a social project as an environmental one, and our project in China involves communities and enhances biodiversity, as well as reducing CO_2 emissions," said Keith Saveal, Head Corporate Health, Safety, Environment and Business Continuity at Novartis.

Looking ahead, Novartis has set new targets for greenhouse gas emissions for 2015 and 2020, compared with the baseline year 2008. The new targets will be more demanding than the initial Kyoto commitment. The largest source of greenhouse gas emissions at Novartis is purchased energy – primarily electricity – and these emissions are included under the new targets.

"The drive for energy efficiency and our commitment to climate control is not finished," Mr. Saveal said. "We have even more stringent commitments for the future. These are absolute numbers – not expressed as a percentage of sales or some other relative target."

GLOBAL DRIVER SAFETY

Novartis associates drive millions of kilometers every year on business, and traffic accidents were the second-biggest component in the Group's lost-time injury and illness rate (LTIR) as recently as 2011. Fleet safety programs have helped to reduce the number of serious accidents resulting in lost working time in recent years.

Novartis Pharmaceuticals Corporation in the United States was a forerunner, rolling out a fleet safety program in 2008. Under the SAFE Fleet Program, drivers complete online training programs, promoting safe driving techniques. Performance metrics for number and type of accidents, driver ratings and training completed are tracked closely; since 2008, the number of accidents and incidents involving US Novartis drivers has declined by 38%.

In 2012, Novartis further strengthened driver safety programs outside the United States. A global driver safety e-learning tool was introduced to provide even more rigorous training for thousands of associates around the world. The program includes video-based e-learning in which drivers encounter real-life simulations on their own roads, in their own language. Each driver has to complete six training modules every year.

The new driver safety program was piloted by drivers from Sandoz and the Pharmaceuticals Division in Mexico, as well as Sandoz associates in Poland. Both countries registered a sharp decline in the number of accidents, contributing to continued reduction in Group-wide LTIR during 2012.

ASSOCIATES BY REGION AND SEGMENT AS OF DECEMBER 31[1]

	United States		Canada and Latin America		Europe		Asia/Africa/ Australasia		Total	
	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Pharmaceuticals	11 352	12 869	4 569	4 557	26 784	26 338	18 563	16 763	61 268	60 527
Alcon	9 472	9 347	1 960	1 794	7 629	7 410	4 813	4 436	23 874	22 987
Sandoz	2 066	1 442	2 618	2 532	16 403	15 595	4 748	4 808	25 835	24 377
Vaccines and Diagnostics	1 553	1 530	116	114	3 931	3 676	791	802	6 391	6 122
Consumer Health	1 880	1 797	1 016	890	3 583	3 567	2 273	2 036	8 752	8 290
Shared services	107	124	9	25	224	281	22	52	362	482
Corporate	274	133	21	25	874	686	73	57	1 242	901
Total	**26 704**	**27 242**	**10 309**	**9 937**	**59 428**	**57 553**	**31 283**	**28 954**	**127 724**	**123 686**

[1] Full-time equivalent positions at year end.

"We continue to make significant progress in driver safety," Mr. Saveal said. "This is about taking responsibility for our own people, particularly associates in the sales force. So far we have more than 10 000 drivers around the world in state-of-the-art fleet safety programs."

DEVELOPING GREAT LEADERS

In 2012, Novartis introduced a leadership framework designed to ensure that Novartis leaders have the right skills to manage in an increasingly complex market environment. This framework will serve as a backdrop for development programs and define a clearer path for associates to follow for personal and career development.

"I believe great leaders need to balance three elements: leading themselves, leading their teams and leading the business," said Joseph Jimenez, Chief Executive Officer and member of the Executive Committee of Novartis.

"Being a good leader starts with being able to manage yourself. It means being authentic and aware of how your actions affect others. It also means continually challenging yourself to learn and develop, and to have the relentless will to deliver superior results. Great leaders also act with the highest integrity – leading with both courage and humility."

Leading a team, Mr. Jimenez added, means inspiring and empowering others to excel. "It also means developing the people and teams, and encouraging collaboration across the company for shared success."

Leading the business involves defining how you will compete in your sector to win against the competition. It involves setting a strategy that is clear for the organization, and giving each associate a line of sight to their role in delivering that strategy. "Most importantly, leaders need to set a clear direction for sustainable growth, building upon patient and customer insights to drive innovation," Mr. Jimenez said.

The framework for leadership fosters behaviors that will benefit all Novartis associates, not only leaders. One distinctive dimension is a heightened focus on self-awareness – understanding one's own impact, and using feedback and reflection to refine skills. This element is a focus of mentoring programs that serve as a complementary tool for development of leadership and interpersonal skills.

"In all mentoring programs people have the opportunity for self-reflection and to learn more about themselves – how to ask for and take feedback, and how to act on this feedback to change their behavior," said Juergen Brokatzky-Geiger, Ph.D., Group Head of Human Resources and member of the Executive Committee of Novartis. "Keeping up the momentum on mentoring supports our commitment to our people and sustains personal growth and engagement."

CHANGE MANAGEMENT

Leaders also have an important role to play in managing change successfully. "Our industry is going through significant change right now, which can cause uncertainty," Mr. Jimenez said. "But changes can also open doors to better ways of working and new opportunities for growth. When managed well, I believe change can be a positive experience for us and for all those we serve."

The latest Global Employee Survey signaled a need to improve change management at Novartis. Associates can feel overwhelmed by the scale and accelerating pace of change, and respondents also asked for more prioritization as well as sufficient training and involvement of associates.

In 2012, a common methodology was rolled out in several parts of Novartis to help understand, implement and manage change, as well as to track the impact of changes on our people. The "ChangeEx" model is a disciplined and people-centric approach that highlights critical success

factors. For example, a clear, concise description of what will change helps to set consistent expectations. Leaders need to explain the case for change, including the consequences of not changing, and to outline specific actions – who does what, and by when. Critically, every associate must receive the right training. We now have a community of Change Practitioners who work alongside business leaders and project managers to ensure we are managing a change process that will lead to greater likelihood of realization of long-term business benefits of any major change.

To further build leadership capabilities, Mr. Jimenez and the Executive Committee of Novartis are playing an active role in initiatives to develop future leaders in fast growth markets. LEAD, a specialized leadership program sponsored by Mr. Jimenez, focuses on developing strong country-based talent, combining local business expertise with a global perspective. In its initial year, LEAD was targeted to BRIC countries (Brazil, Russia, India and China). In 2012, participation was expanded to include 10 additional growth markets.

Over a 12-month period, LEAD participants work together in small teams on business-critical projects, led by members of the Executive Committee of Novartis. Throughout the program, participants receive intensive coaching, mentoring and career development interventions.

INVESTING AT THE GRASS-ROOTS LEVEL

At the same time, Novartis is investing aggressively at the grass-roots level to build the next generation of commercial and scientific leaders in fast-growing markets, particularly Asia-Pacific and Latin America.

According to Rainer Boehm, Head Region AMAC (Asia, Middle East and African Countries) for Novartis Pharmaceuticals, emerging markets will account for more than half of the division's sales growth over the next five years. Across the AMAC region, country organizations have formulated five-year transformational growth plans, focusing on what Mr. Boehm calls "down-to-earth operating necessities. Countries are deciding which sectors we need to be in, what capabilities we need to build, what new jobs we need to create, and what kind of talent we need to hire."

The rapid pace of growth in AMAC countries is compressing the timetable for evolution of Novartis organizations in emerging markets. These organizations often begin as representative offices, operating in collaboration with a local distributor. The Middle East represents a significant population, and a large and expanding pharmaceutical market, Mr. Boehm said.

In Saudi Arabia, for example, the government is aggressively promoting development of a domestic pharmaceutical sector as a complement to the nation's flagship oil and gas industry. During 2012, Novartis upgraded its local organization in Saudi Arabia from a representative office to a full-fledged country pharmaceutical organization. The move will lead to significant investment but also will require new capabilities. Under an agreement with the Saudi government, Novartis will steadily increase the proportion of Saudi nationals in the new country organization. This underscores the commitment of Novartis to provide employment opportunities and invest in expansion of a skilled workforce.

STATE-OF-THE-ART PRODUCTION

Saudi Arabia is not an isolated case: Novartis is playing a key role in ambitions to develop national healthcare industries across the Asia-Pacific region, including investments unveiled during 2012 to further strengthen links between Novartis and Singapore.

For example, Alcon, the eye care division of Novartis, opened a new site in Singapore for production of ophthalmic solutions and suspensions. In a separate accord, Novartis and Singapore's Economic Development Board announced a five-year extension of support for the Novartis Institute for Tropical Diseases (NITD), the Singapore-based research center focusing on "neglected" infectious diseases. Novartis also announced plans in 2012 to construct a state-of-the-art biotechnology production site in Singapore. The new facility will focus on manufacturing based on cell-culture technology, and will complement rapid expansion in China and India.

The concentration of four Novartis manufacturing sites in Singapore has spurred yet another leadership development initiative – this time focused specifically on technical operations, or TechOps. A new Novartis TechOps Academy, expected to open in 2013, will offer talented associates a fast track into the global technical operations network. Over five years, participants will rotate among the Singapore sites, and gain hands-on experience in four different manufacturing environments, from production of pharmaceuticals and contact lenses to the new biologics facility.

"We believe it will be an enormously attractive opportunity for people who want to build a career in technical operations," said Christopher Snook, Head Group Country Management and Novartis Country President, Singapore. "We often speak about our scientific and commercial communities and constituencies, but it is important to build those for manufacturing as well – especially with quality such an important consideration today."

NOVARTIS HEALTH, SAFETY AND ENVIRONMENT (HSE) DATA 2012

	Novartis Group[1]		Pharmaceuticals		NIBR		Alcon[2]		Sandoz		Vaccines and Diagnostics		Consumer Health[3]	
	2012	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011	**2012**	2011
HSE personnel	**494**	487	**212**	207	**32**	26	**58**	66	**121**	127	**36**	26	**22**	24
Lost-time injury and illness rate (LTIR)	**0.14**	0.19	**0.12**	0.13	**0.01**	0.09	**0.17**	0.33	**0.15**	0.18	**0.09**	0.17	**0.27**	0.21
Total recordable case rate	**0.45**	0.61	**0.43**	0.54	**0.45**	0.57	**0.57**	0.88	**0.36**	0.52	**0.34**	0.55	**0.50**	0.62
Total production (1 000 t)	**213**	221	**33**	29	**0**	0	**78**	69	**85**	85	**0.2**	0.3	**17**	37
Contact water use (million m^3)	**17.2**	17.1	**3.9**	4.1	**0.6**	0.6	**2.8**	2.7	**8.3**	8.3	**1.1**	1.0	**0.5**	0.4
Energy use (million GJ)	**19.3**	19.3	**5.4**	5.4	**1.3**	1.3	**3.0**	2.9	**7.5**	7.7	**1.6**	1.5	**0.6**	0.6
Emissions														
Effluent discharge (million m^3)	**17.7**	18.0	**3.9**	4.1	**0.6**	0.6	**2.3**	2.4	**8.3**	8.3	**1.3**	1.1	**1.4**	1.5
COD into water (1 000 t)	**4.0**	3.9	**0.8**	0.7	**0**	0	**0**	0	**3.1**	3.0	**0**	0	**0**	0
Sulfur dioxide SO_2 (t)	**47**	71	**8.3**	3.7	**0.4**	0.5	**2.1**	2.1	**35**	64	**0.1**	0.1	**0.1**	0.4
Nitrogen oxide NO_2 (t)	**294**	317	**93**	102	**10**	11	**50**	51	**119**	129	**13**	13	**10**	11
Halogenated VOCs (t)	**110**	147	**1.0**	2.1	**6.8**	6.8	**0**	0	**102**	138	**0**	0	**0**	0
Non-halogenated VOCs (t)	**934**	1 071	**227**	233	**27**	25	**51**	65	**617**	718	**1.1**	1.1	**11**	29
GHG Scope 1, combustion and process (1 000 t)	**458**	462	**130**	136	**19**	17	**66**	63	**183**	189	**43**	39	**17**	18
GHG Scope 1, vehicles (1 000 t)	**174**	192	**88**	101	**0.1**	0.1	**40**	47	**27**	27	**4.2**	4.2	**7.1**	7.8
GHG Scope 2, purchased energy (1 000 t)	**1 019**	1 049	**213**	220	**80**	79	**263**	265	**330**	353	**95**	91	**38**	41
Operational waste														
Non-hazardous waste not recycled (1 000 t)	**41**	48	**6.7**	7.3	**1.6**	1.6	**5.3**	6.1	**8.4**	8.8	**16**	21	**3.0**	3.6
Hazardous waste not recycled (1 000 t)	**91**	94	**63**	65	**1.2**	1.2	**0.8**	0.9	**23**	23	**1.2**	1.3	**1.9**	2.2
Non-hazardous waste recycled (1 000 t)	**53**	48	**13**	12	**1.4**	1.4	**12**	13	**22**	17	**1.6**	1.9	**2.5**	3.2
Hazardous waste recycled (1 000 t)	**94**	87	**20**	20	**0**	0	**5.3**	2.4	**68**	64	**0.1**	0.1	**0**	0

[1] Novartis Group includes Novartis Corporate
[2] Alcon data includes CIBA Vision, which was previously part of Consumer Health
[3] Consumer Health data includes Animal Health and OTC

For more information on Health, Safety and Environment at Novartis, please see www.novartis.com/hse2012

INDEPENDENT ASSURANCE REPORT ON THE NOVARTIS CORPORATE RESPONSIBILITY REPORTING

To the Audit and Compliance Committee of the Board of Directors of Novartis AG, Basel

We have performed assurance procedures to provide limited assurance on the following aspects of the 2012 Corporate Responsibility (CR) reporting of Novartis AG and its consolidated subsidiaries (Novartis Group).

SUBJECT MATTER

The subject of our assurance procedures related to the data and information disclosed in the consolidated CR reporting of Novartis Group for the year ended December 31, 2012 was limited to the following:

- Reporting processes with respect to the CR reporting and CR key figures as well as the related control environment in relation to data aggregation of CR key figures.
- CR key performance indicators on page 66, the "Novartis Access to Healthcare Programs 2012" figures on page 73, and the "Novartis Health, Safety and Environment (HSE) Data 2012" on page 82 as published in the "Novartis Annual Report 2012" (CR indicators).

CRITERIA

The management reporting processes with respect to the CR reporting and CR key figures were assessed against Novartis Group internal policies and procedures, as set forth in the following:

- Corporate Citizenship (CC) Policy including CC Guidelines and the Code of Conduct.
- Procedures, by which CR and Health, Safety and Environment (HSE) data is gathered, collated and aggregated internally.

RESPONSIBILITY AND LIMITATIONS

The accuracy and completeness of CR indicators are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Our Assurance Report should therefore be read in connection with Novartis Group guidelines, definitions and procedures on the reporting of its CR performance.

The Board of Directors of Novartis AG is responsible for preparation and reporting of CR information. Our responsibility is to provide limited assurance on the results of our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000.

ASSURANCE PROCEDURES

Our assurance procedures included the following:

- **Evaluation of the application of Group guidelines**
  Reviewing application of the Novartis Group internal CR reporting guidelines.
- **Management inquiry**
  Interviewing personnel responsible for internal reporting and data collection at Group, divisional and local level.
- **Assessment of key figures**
  Performing tests on a sample basis of evidence supporting selected HSE data concerning completeness, accuracy, adequacy and consistency.
- **Inspection of documentation and analysis of relevant policies and principles**
  Inspecting relevant documentation on a sample basis, including Group CR policies, management reporting structures and documentation.
- **Assessment of the processes and data consolidation**
  Reviewing the management reporting processes for CR reporting and assessing the consolidation process of data at Group level.

CONCLUSION

Based on our work described in this report, nothing has come to our attention that causes us to believe that the data and information outlined in the subject matter as defined above and disclosed in the CR reporting has not been prepared in accordance with Novartis Group internal policies and procedures.

PricewaterhouseCoopers AG

Peter M. Kartscher Raphael Rutishauser

Basel, January 22, 2013

CORPORATE GOVERNANCE REPORT

Novartis strives to create sustainable value. Our corporate governance framework is designed to support this. While it complies with all applicable laws and implements best corporate governance standards, it is tailor-made for Novartis.

CONTENTS

INTRODUCTION

The corporate governance framework of Novartis reflects a system of checks and balances between the powers of the shareholders, the Board of Directors and the management with the goal to safeguard the interests of Novartis and its shareholders while creating sustainable value.

Since the creation of Novartis in 1996, the Board of Directors has continuously improved the corporate governance framework of Novartis by proactively implementing emerging best corporate governance standards long before these were embedded in the Swiss Code of Best Practice for Corporate Governance ("the Swiss Code") or in the law.

In 1999, Novartis established the new position of Lead Director as a check and balance following the election of Chief Executive Officer Daniel Vasella, M.D., to the additional post of Chairman. Moreover, three new Board committees – the Compensation Committee, the Audit and Compliance Committee and the Corporate Governance and Nomination Committee – were created, composed exclusively of independent Board members.

In 2002, five years before legislation came into force in 2007, requiring companies to disclose the total compensation of their executive management group as well as the highest compensation attributed to a member of the executive management, Novartis had already implemented even more rigorous disclosure standards by reporting the individual annual compensation of all members of the Executive Committee.

In 2004, two years earlier than required for non-US corporations, Novartis complied with the challenging certification requirements under the US Sarbanes-Oxley Act, in particular Section 404 of this Act.

In 2009, the Board of Directors established a new Risk Committee that oversees the Group's enterprise risk management, strengthening the Board of Directors' supervisory function over management in this critical area. While fostering a culture of risk-adjusted decision making, the Risk Committee ensures that reasonable risk-taking and innovation are not constrained.

In 2010, the Chairman and CEO functions were separated. In addition several emerging best corporate governance standards were proactively implemented, including the introduction of a "say-on-pay" shareholder vote, and making changes to the executive compensation system to further strengthen the alignment of incentives with the long-term success of Novartis and a number of new disclosures, including on qualifications of Board members.

In 2011, the first "say-on-pay" vote was held, where the shareholders endorsed the compensation system of Novartis.

Novartis evaluates emerging best governance standards and adopts those that are found to be appropriate for Novartis. These standards are then tailored to Novartis, its business, management, stakeholders and shareholders with a view to create a corporate governance regime that supports the creation of sustainable value. This cannot be achieved by implementing corporate governance standards "as is" ("one size fits all approach") and becomes impossible if corporate governance standards (embedded in corporate governance codes) are converted into binding, "one size fits all" rules as is currently contemplated in Switzerland.

In Switzerland, there will be a popular vote on March 3, 2013, on the so-called "Minder Initiative." The Swiss voters will de facto have to choose between the Minder Initiative and the indirect counter-proposal to this initiative proposed by Parliament. The latter would likely enter into force, if the Minder Initiative were defeated by the voters. Both proposals include binding shareholder votes on the compensation system and on Board and executive compensation, a ban or binding shareholder approval of certain extraordinary payments (such as "payments in advance" or "golden parachutes"), yearly re-election of all board members, and election of the Chairman by the shareholders.

However, while the Minder Initiative (that claims to strengthen shareholder rights) limits shareholder rights by mandatory rules that the shareholders cannot change, the indirect counter-proposal, while also shifting rights from the boards to the shareholders, does not patronize the shareholders as the Minder Initiative does, as it allows, for example, the shareholders to decide whether their vote on executive compensation shall be binding or non-binding or whether they want to elect the Chairman or not. Moreover, it does not contain certain additional rules as proposed under the Minder Initiative, such as an obligation of all pension plans to vote all their shares (which in practice would almost be impossible to do, except if pension plans "blindly" followed the voting recommendation of proxy advisory firms, making such firm de facto "super-shareholders"), and criminal sanctions (imprisonment of up to three years) for violations of the Minder rules. Therefore, the indirect counter-proposal is the better choice for shareholders. It offers them the same additional rights as the Minder Initiative but does not limit their choices. This also applies to Switzerland as the Minder Initiative would substantially damage the international competitiveness of Switzerland and of Swiss based companies. For example: A binding shareholder vote on executive compensation would make it difficult for Swiss based companies to hire top managers, who would not know when they sign an employment contract whether such contract could be honored by their employer. Moreover, while the indirect counter-proposal could be implemented rapidly, the word-

ing of the Minder Initiative is too sketchy and imprecise to allow a rapid implementation.

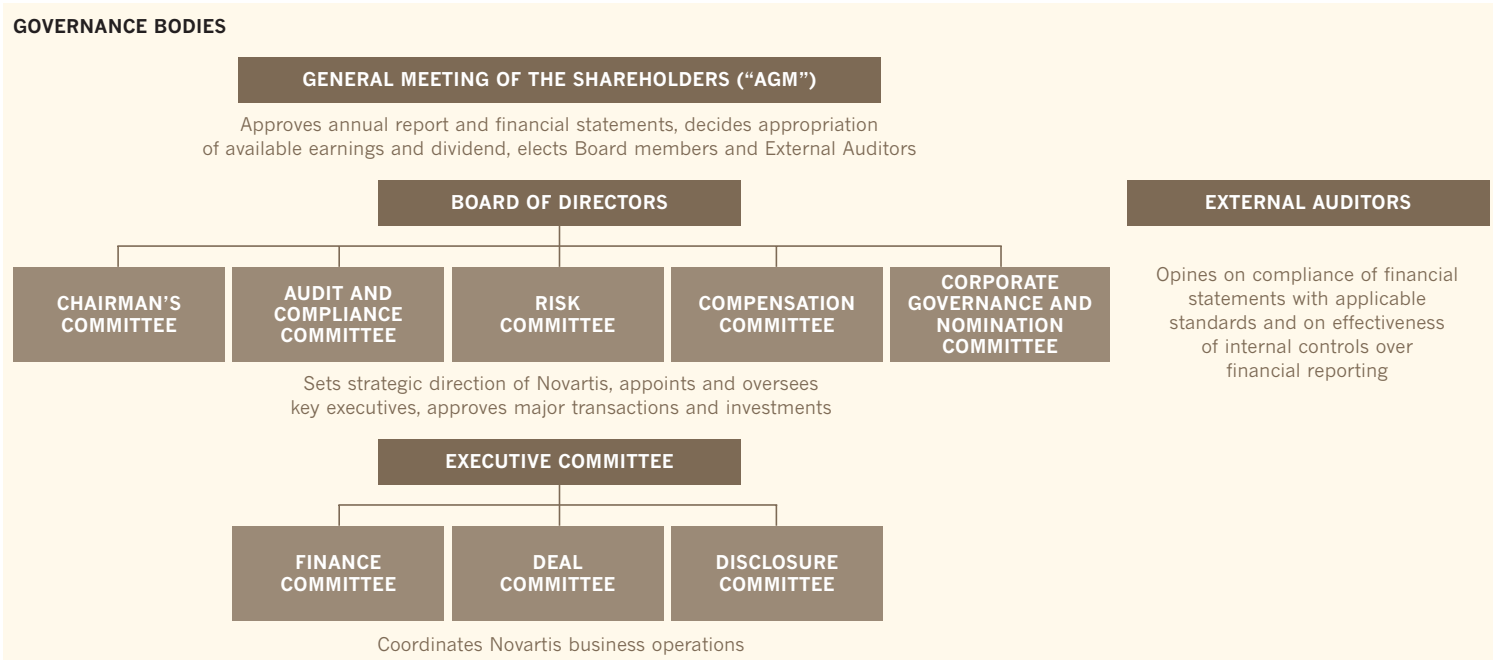
Outside of Switzerland, we note an encouraging development in that regulators start to acknowledge and seem to become willing to regulate many corporate governance issues that have been highlighted by issuers for a long time but did not make it "on the corporate governance agenda" yet: The US Securities Exchange Commission in its "Concept Release on the U.S. Proxy System" and, the European Commission in its green paper entitled "The EU Corporate Governance Framework" have noted a number of such issues, including deficiencies in the proxy system, potential conflicts of interest and a lack of accuracy and transparency of proxy advisory firms, and what the European Commission called "inappropriate short-termism among investors."

On that last point, we note that in July 2012 John Kay, an economics professor at the London School of Economics, issued a report on the UK equity markets and long-term decision making, which had been commissioned by the UK Government. Kay's principal conclusion is that institutional investors focus too much on short-term profits. This may lead investors to not support corporate strategies designed to achieve long-term growth and to support activist hedge funds that want to pressure corporations in taking actions to increase short-term profits to the detriment of the long-term prospects of the company.

Kay proposes, among other points, that incentives of asset managers should encourage them to hold portfolios judged on the basis of the long-term absolute performance of companies, that misaligned incentives in the remuneration practices of both company executives and asset managers should be eliminated, that investment costs and stock lending practices should be disclosed, that the duty of Board members is directed to their company and not to its share price, and that companies should aim to develop relationships with investors rather than with "the market."

At the heart of good corporate governance lies a strong board of directors, which represents the interests of the shareholders and other stakeholders, and the professionalism and integrity of management, creating the foundation for sustainable value. While the size, composition and structure of the board of directors are easy to describe and can be easily checked from the outside, it is difficult to demonstrate that the core processes, like information flow and decision making, are state-of-the-art. It is even more difficult, if not impossible, to describe the prevailing board culture, although the latter is essential for its effective function. Novartis aims to foster an atmosphere in which Board members can pose challenging questions, voice dissenting views and secure access to independent information through extensive contacts with senior Novartis executives – inside and outside the boardroom. Diversity of a board of directors is a critical success factor for its work. The Novartis Board of Directors today is diverse in terms of education, experience, geographical origin and interpersonal skills.

SUMMARY OF OUR CORPORATE GOVERNANCE REGIME



LEADERSHIP STRUCTURE

Separate Chairman and CEO

BOARD GOVERNANCE

STRUCTURE

Independence: All Board members except Dr. Vasella, are independent. Dr. Vasella will be independent as from February 1, 2013.
Board Committees: The Board has delegated certain of its duties to five Board committees:
– Chairman's Committee
– Audit and Compliance Committee
– Corporate Governance and Nomination Committee
– Compensation Committee
– Risk Committee

COMPOSITION

The Novartis Board of Directors is diverse in terms of education, experience, geographical origin and interpersonal skills. The biographies of the Board members (pages 105 – 108) set out their particular qualifications.

PROCESSES

The processes of the Board have a decisive influence on the effectiveness of the Board. The Board has implemented best practices for all such processes. Important elements include the agenda of Board meetings (making sure that the Board deals with all important topics), information of the Board (ensuring that the Board receives sufficient information from management to perform its supervisory duty and to make decisions that are reserved for the Board), and Board room behavior (ensuring an efficient and balanced decision making process).

SHAREHOLDER RIGHTS

Each share registered entitles the holder to one vote at General Meetings. The General Meeting passes resolutions and elections with the absolute majority of the votes represented at the meeting: The approval of two-thirds of the votes represented at the meeting is required by law for certain important resolutions.

Shareholders with 10% of the share capital may request an extraordinary General Meeting of shareholders and shareholders having shares with an aggregate nominal value of CHF 1 million can put items on the agenda of a General Meeting of shareholders.

Shareholders have the right to receive dividends, appoint proxies, and hold such other rights as are granted under Swiss Law.

Only shareholders registered in the Novartis share register may exercise their voting rights. The registration does not affect the tradability of Novartis shares.

Shareholders with shares in excess of 2% of the registered share capital that want to vote also those shares exceeding the 2% threshold need an approval from the Board. The purpose of this approval is to prevent that a minority shareholder can dominate the General Meeting to the disadvantage of the majority of the shareholders. This is necessary given that many shareholder do not register their shares and can therefore not vote their shares, and because shareholder representation at General Meetings has traditionally been low in Switzerland.

OUR CORPORATE GOVERNANCE FRAMEWORK

LAWS AND REGULATIONS

Novartis is subject to the laws of Switzerland, in particular Swiss company and securities laws, and to the securities laws of the United States as applicable to foreign private issuers of securities.

In addition, Novartis is subject to the rules of the Swiss Stock Exchange (SIX Swiss Exchange), including the Directive on Information relating to Corporate Governance.

Novartis is also subject to the rules of the New York Stock Exchange (NYSE) as applicable to foreign private issuers of securities. The NYSE requires Novartis to describe any material ways in which its corporate governance differs from that of domestic US companies listed on the NYSE. These differences are:

- shareholders of Novartis do not receive written reports from committees of the Board of Directors;
- the external auditors are appointed by the shareholders at the Annual General Meeting, as opposed to being appointed by the Audit and Compliance Committee;
- while the shareholders cannot vote on all equity-compensation plans, they are entitled to hold a consultative vote on the compensation system of Novartis. The vote takes place before every significant change to the compensation system, but at least every third Annual General Meeting;
- the Board of Directors has set up a separate Risk Committee that is responsible for risk oversight, as opposed to delegating this responsibility to the Audit and Compliance Committee;
- the Chairman of the Board of Directors and the Audit and Compliance Committee share responsibility for and authority to supervise the internal audit function; and
- the full Board of Directors has responsibility for setting the objectives relevant to the compensation of the Chief Executive Officer, and for the evaluation of the performance of the Chief Executive Officer.

SWISS CODE OF BEST PRACTICE FOR CORPORATE GOVERNANCE

Novartis applies the Swiss Code of Best Practice for Corporate Governance.

NOVARTIS CORPORATE GOVERNANCE STANDARDS

Novartis has incorporated the corporate governance standards described above into the Articles of Incorporation and the Regulations of the Board of Directors, its Committees and the Executive Committee (www.novartis.com/corporate-governance).

The Corporate Governance and Nomination Committee regularly reviews these standards and principles in the light of prevailing best practices and makes recommendations for improvements of the corporate governance framework of Novartis for consideration by the full Board of Directors.

Additional corporate governance information can be found on the Novartis website: http://www.novartis.com/corporate-governance

Printed copies of the Novartis Articles of Incorporation, Regulations of the Board and Charters of Board Committees can be obtained by writing to: Novartis AG, Attn: Corporate Secretary, Lichtstrasse 35, CH-4056 Basel, Switzerland.

OUR SHAREHOLDERS

SHARES

SHARE CAPITAL OF NOVARTIS AG

The share capital of Novartis AG is CHF 1 353 096 500 fully paid-in and divided into 2 706 193 000 registered shares, each with a nominal value of CHF 0.50. Novartis has neither authorized nor conditional capital. There are no preferential voting shares; all shares have equal voting rights. No participation certificates, non-voting equity securities (Genussscheine) or profit-sharing certificates have been issued.

Novartis shares are listed and traded on the SIX Swiss Exchange (Valor No. 001200526, ISIN CH0012005267, symbol: NOVN) as well as on the NYSE in the form of American Depositary Receipts (ADRs) representing Novartis American Depositary Shares (ADSs) (Valor No. 567514, ISIN US66987V1098, symbol: NVS).

The holder of an ADS has the rights enumerated in the Deposit Agreement (such as the right to vote and to receive a dividend). The ADS depositary of Novartis, JPMorgan Chase Bank, New York, holding the Novartis shares underlying the ADSs, is registered as shareholder in the share register of Novartis. An ADS is not a Novartis share and an ADS holder is not a Novartis shareholder. ADS holders exercise their voting rights by instructing the depositary to exercise their voting rights. Each ADS represents one Novartis share.

SHARE REPURCHASE PROGRAMS

Novartis began repurchasing its shares in 1999. Since then, five share repurchase programs have been completed with the repurchase of shares worth CHF 19 billion. Shares repurchased under the first program were not cancelled. However, shares repurchased under the other four programs were cancelled. At the Annual General Meeting in February 2008, shareholders authorized the Board of Directors to launch a sixth program to repurchase shares up to a maximum amount of CHF 10 billion via a second trading line on the SIX Swiss Exchange. In 2008, a total of six million shares were repurchased at an average price of CHF 49.42 per share and cancelled. The share repurchase program was suspended in April 2008 in favor of debt repayment. In December 2010, the Board of Directors announced the reactivation of the share repurchase program to minimize dilution to existing Novartis shareholders in connection with the proposed merger of Alcon, Inc. into Novartis. In 2010, no shares were repurchased under the share repurchase program. In 2011, 39 430 000 shares were repurchased under the share repurchase program. In 2012, no shares were repurchased under the share repurchase program.

CHANGES IN SHARE CAPITAL

During the last three years there were the following changes to the share capital of Novartis:

In 2011, for the purpose of completing the merger of Alcon, Inc. into Novartis AG, the share capital was increased by CHF 54 million, from CHF 1 318 811 500 to CHF 1 372 811 500, through the issuance of 108 000 000 fully paid-in registered shares with a nominal value of CHF 0.50 each.

In 2012, Novartis reduced its share capital by CHF 19.715 million, from CHF 1 372 811 500 to CHF 1 353 096 500 by cancelling 39.43 million shares repurchased on the second trading line during 2011.

CAPITAL CHANGES

	Number of shares			
Year	As of Jan 1	Changes in shares	As of Dec 31	Changes in CHF
2010	2 637 623 000		2 637 623 000	
2011	2 637 623 000	108 000 000	2 745 623 000	54 000 000
2012	2 745 623 000	– 39 430 000	2 706 193 000	– 19 715 000

A table with additional information on changes in the Novartis share capital can be found in Note 6 to the Financial Statements of Novartis AG.

CONVERTIBLE OR EXCHANGEABLE SECURITIES

Novartis has not issued convertible or exchangeable bonds, warrants, options or other securities granting rights to Novartis shares, other than options granted to associates as an element of compensation.

SHAREHOLDINGS

SIGNIFICANT SHAREHOLDERS

According to the share register, as of December 31, 2012, the following registered shareholders (including nominees and the ADS depositary) held more than 2% of the total share capital of Novartis with the right to vote these shares:[1]

- Shareholders: Novartis Foundation for Employee Participation, with its registered office in Basel, Switzerland, holding 4.0%; and Emasan AG, with its registered office in Basel, Switzerland, holding 3.3%;
- Nominees: JPMorgan Chase Bank, New York, holding 11.4%; Nortrust Nominees, London, holding 3.3%; and The Bank of New York Mellon, New York, holding 5.0% through its nominees, Mellon Bank, Everett, (3.3%) and The Bank of New York Mellon, Brussels, Belgium, (1.7%); and
- ADS depositary: JPMorgan Chase Bank, New York, holding 11.7%.

[1] Excluding 4.1% of the share capital held by Novartis AG, together with Novartis affiliates, as treasury shares.

According to a disclosure notification filed with Novartis AG, Norges Bank (Central Bank of Norway), Oslo, Norway, held 2.3% of the share capital of Novartis AG as of December 31, 2012.

According to disclosure notifications filed with Novartis AG and the SIX Swiss Exchange, each of the following shareholders held between 3% and 5% of the share capital of Novartis AG as of December 31, 2012:

- Capital Group Companies, Inc., Los Angeles, USA
- BlackRock, Inc., New York, USA

Disclosure notifications pertaining to shareholdings in Novartis AG that were filed with Novartis AG and the SIX Swiss Exchange are published on the latter's electronic publication platform, and can be accessed via the database search page: http://www.six-exchange-regulation.com/obligations/disclosure/major_shareholders_en.html

Novartis has not entered into any agreement with any shareholder regarding the voting or holding of Novartis shares.

CROSS SHAREHOLDINGS

Novartis has no cross shareholdings in excess of 5% of capital or voting rights with any other company.

DISTRIBUTION OF NOVARTIS SHARES

The information in the following tables relates only to registered shareholders and does not include holders of unregistered shares. Also, the information provided in the tables below cannot be assumed to be representative of the entire Novartis investor base since nominees and JPMorgan Chase Bank, as ADS depositary, are registered as shareholders for a large number of beneficial owners.

As of December 31, 2012, Novartis had approximately 161 000 registered shareholders.

The following table provides information about the distribution of registered shareholders by number of shares held:

NUMBER OF SHARES HELD

As of December 31, 2012	Number of registered shareholders	% of registered share capital
1–100	20 133	0.05
101–1 000	95 483	1.58
1 001–10 000	40 581	4.23
10 001–100 000	3 740	3.57
100 001–1 000 000	488	5.23
1 000 001–5 000 000	74	6.06
5 000 001 or more[1]	34	54.01
Total registered shareholders/shares	160 533	74.73
Unregistered shares		25.27
Total		**100.00**

[1] Including significant registered shareholders as listed above

The following table provides information about distribution of registered shareholders by type:

REGISTERED SHAREHOLDERS BY TYPE

As of December 31, 2012	Shareholders in %	Shares in %
Individual shareholders	96.07	12.08
Legal entities	3.84	37.26
Nominees, fiduciaries and ADS depositary	0.09	50.66
Total	**100.00**	**100.00**

The following table provides information about registered shareholders by country:

REGISTERED SHAREHOLDERS BY COUNTRY

As of December 31, 2012	Shareholders in %	Shares in %
France	2.84	1.31
Germany	4.56	3.55
Switzerland[1]	89.15	42.13
United Kingdom	0.51	2.75
United States	0.32	46.24
Other countries	2.62	4.02
Total	**100.00**	**100.00**

[1] Excluding 4.1% of the share capital held by Novartis AG, together with Novartis affiliates, as treasury shares

SHAREHOLDER RIGHTS

RIGHT TO VOTE ("ONE SHARE, ONE VOTE")

Each share registered with the right to vote entitles the holder to one vote at General Meetings.

ADS holders may vote by instructing JPMorgan Chase Bank, the ADS depositary, to exercise the voting rights attached to the registered shares underlying the ADSs. JPMorgan Chase Bank exercises the voting rights for registered shares underlying ADSs for which no voting instructions have been given by providing a discretionary proxy to the independent proxy (unabhängiger Stimmrechtsvertreter) appointed by Novartis pursuant to Swiss law.

RESOLUTIONS AND ELECTIONS AT GENERAL MEETINGS

The General Meeting passes resolutions and elections with the absolute majority of the votes represented at the meeting. However, under the Articles of Incorporation (www.novartis.com/corporate-governance) the approval of two-thirds of the votes represented at the meeting is required for:

- An alteration of the purpose of Novartis AG;
- The creation of shares with increased voting powers;
- An implementation of restrictions on the transfer of registered shares and the removal of such restrictions;
- An authorized or conditional increase of the share capital;
- An increase of the share capital out of equity, by contribution in kind, for the purpose of an acquisition of property, or the grant of special rights;
- A restriction or suspension of rights or options to subscribe;
- A change of location of the registered office of Novartis AG; or
- The dissolution of Novartis AG.

In addition, the law provides for a special quorum also for other resolutions, such as, for example, for a merger or spin-off.

OTHER SHAREHOLDER RIGHTS

Shareholders representing at least 10% of the share capital may request that an extraordinary General Meeting of shareholders be convened. Shareholders representing shares with an aggregate nominal value of at least CHF 1 million may request that an item be included in the agenda of a General Meeting of shareholders. Such requests must be made in writing at least 45 days before the date of the General Meeting, specify the item to be included in the agenda and contain the proposal on which the shareholder requests a vote.

Shareholders have the right to receive dividends, appoint another shareholder, the corporate proxy, the independent proxy or a custody proxy as proxy and hold such other rights as are granted under Swiss Law.

SHAREHOLDER REGISTRATION

No restrictions apply on the transferability of Novartis shares. However, only shareholders registered in the Novartis share register may exercise their voting rights. In order to be registered, a shareholder must declare that he or she acquired the shares in his or her own name and for his or her own account. The Articles of Incorporation provide that the Board of Directors may register nominees with the right to vote. For restrictions on registration of nominees, please see below.

The Articles of Incorporation provide that no shareholder shall be registered with the right to vote for more than 2% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction. Exemptions are in force for the registered Significant Shareholders listed under – Our Shareholders – Shareholdings – Significant Shareholders. In 2012, an exemption was requested and granted to Norges Bank (Central Bank of Norway), Oslo, Norway.

The same restrictions apply to holders of ADSs as those holding Novartis shares.

Given that shareholder representation at General Meetings has traditionally been low in Switzerland, Novartis considers the restriction on registration necessary to prevent a minority shareholder from dominating a General Meeting.

The Articles of Incorporation provide that no nominee shall be registered with the right to vote for more than 0.5% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction if the nominee discloses the names, addresses and the number of shares of the persons for whose account it holds 0.5% or more of the registered share capital. Exemptions are in force for the nominees listed under – Our Shareholders – Shareholdings – Significant Shareholders.

The same restrictions apply to holders of ADSs as those holding Novartis shares.

The restrictions on registration contained in the Articles of Incorporation may only be removed by a resolution of the General Meeting of shareholders, with approval of at least two-thirds of the votes represented at the meeting.

Shareholders, ADS holders or nominees that are linked to each other or act in concert to circumvent the restrictions on registration are treated as one person or nominee for the purposes of the restrictions on registration.

NO RESTRICTION ON TRADING OF SHARES

The registration of shareholders in the Novartis share register or in the ADS register kept by JPMorgan Chase Bank does not affect the tradability of Novartis shares or ADSs. No restrictions are imposed by Novartis or JPMorgan Chase Bank on the trading of registered Novartis shares or ADSs. Registered Novartis shareholders or ADS holders may, therefore, purchase or sell their Novartis shares or ADSs at any time, including prior to a General Meeting regardless of the record date. The record date serves only to determine the right to vote at a General Meeting of Novartis.

CHANGE-OF-CONTROL PROVISIONS

NO OPTING UP, NO OPTING OUT

The Swiss Stock Exchange Act provides that anyone who, directly, indirectly or acting in concert with third parties, acquires equity securities exceeding 33 1/3% of the voting rights of a company – whether or not such rights are exercisable – is required to make an offer to acquire all listed equity securities of that company. A company may raise this threshold to 49% of the voting rights ("opting up") or may, under certain circumstances, waive the threshold ("opting out"). Novartis has not adopted any such measures.

CHANGE-OF-CONTROL CLAUSES

There are no change-of-control clauses (including no "golden parachutes," special provisions on the cancellation of contractual arrangements, agreements concerning special notice periods or long-term contracts exceeding 12 months, waivers of lock-up periods for options, shorter vesting periods, and no additional contributions to pension funds) benefiting Board members. With respect to members of the Executive Committee, see below under – Our Management – Contracts with Members of the Executive Committee.

OUR BOARD OF DIRECTORS

COMPOSITION OF THE BOARD OF DIRECTORS AND ITS COMMITTEES

ELECTION AND TERM OF OFFICE

All Board members are elected individually.

Board members are elected to terms of office of three years or less by shareholders at General Meetings. The terms of office among Board members are to be coordinated so that approximately one-third of all Board members are subject each year to re-election or election. Under Swiss law, a General Meeting of shareholders is entitled to remove any Board member at any time, regardless of his or her remaining term of office.

The average tenure of Board members is eight years and the average age is 62. A Board member must retire after reaching age 70. Under special circumstances, shareholders may grant an exemption from this rule and re-elect a Board member for additional terms of office of no more than three years at a time.

Name	Nationality	Year of birth	First election at AGM	Last election at AGM	End of current Term
Daniel Vasella, M.D.	CH	1953	1996	2010	2013
Ulrich Lehner, Ph.D.	D	1946	2002	2011	2014
Dimitri Azar, M.D.	US	1959	2012	-	2015
William Brody, M.D., Ph.D.	US	1944	2009	2012	2014
Srikant Datar, Ph.D.	US	1953	2003	2012	2015
Ann Fudge	US	1951	2008	2011	2014
Pierre Landolt, Ph.D.	CH	1947	1996	2011	2014
Enrico Vanni, Ph.D.	CH	1951	2011	2011	2014
Andreas von Planta, Ph.D.	CH	1955	2006	2012	2015
Dr. Ing. Wendelin Wiedeking	D	1952	2003	2012	2015
Marjorie M.T. Yang	CHN	1952	2007	2010	2013
Rolf M. Zinkernagel, M.D.	CH	1944	1999	2012	2014

BOARD MEMBER QUALIFICATIONS

The Corporate Governance and Nomination Committee determines the criteria for the selection of the Board members and Board committee members. Factors considered include skills and knowledge, diversity of viewpoints, professional backgrounds and expertise, business and other experience relevant to the business of Novartis, the ability and willingness to commit adequate time and effort to Board and committee responsibilities, the extent to which personality, background, expertise, knowledge and experience will interact with other Board members to build an effective and complementary Board, and whether existing board memberships or other positions held by a candidate could lead to a conflict of interest.

The biographies of the Board members (pages 105 – 108) set out the particular qualifications that led the Board of Directors to conclude that a Board member is qualified to serve on the Board of Directors, creating a Board that today is diverse in terms of background, qualifications, interests and skills.

BOARD DIVERSITY

Diversity of a Board of Directors is a critical success factor for its effectiveness and, thus, when the Corporate Governance and Nomination Committee identifies new Board member candidates for the purpose of proposing these to the shareholders for election, to maintain or even improve diversity of the Board is an important criteria. The Board's aspiration is to have a diverse Board in all aspects of diversity. This includes diversity in terms of geographic origin, background, gender, race, faith, education, experience, viewpoint, interests and technical and interpersonal skills.

This has resulted in the Novartis Board being diverse in the above aspects.

ROLE OF THE BOARD OF DIRECTORS AND THE BOARD COMMITTEES

The Board of Directors is responsible for the overall direction and supervision of the management and holds the ultimate decision-making authority for Novartis AG, except for those decisions reserved to the shareholders.

The Board of Directors has delegated certain responsibilities to five committees: Chairman's Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee as set out below (responsibilities described with the terms "overseeing" or "reviewing" are subject to final approval by the Board of Directors).

Responsibilities	Membership comprises	Number of meetings held in 2012/approximate average duration (hrs) of each meeting Attendance	Link
THE BOARD OF DIRECTORS		**9/8.5**	
The primary responsibilities of the Board of Directors include: – Setting the strategic direction of the Group; – Determining the organizational structure and governance of the Group; – Appointing, overseeing and dismissing key executives and planning their succession; – Determining and overseeing the financial planning, accounting, reporting and controlling; – Approving the annual financial statements and the corresponding financial results releases; and – Approving major transactions and investments.	**Daniel Vasella** [1] Ulrich Lehner Dimitri Azar [2] William Brody Srikant Datar Ann Fudge Pierre Landolt Enrico Vanni Andreas von Planta Wendelin Wiedeking Marjorie M.T. Yang Rolf M. Zinkernagel	9 9 7 9 9 9 8 9 9 9 7 9	Articles of Incorporation of Novartis AG Regulations of the Board of Directors, its Committees and the Executive Committee of Novartis AG (Board Regulations) http://www.novartis.com/corporate-governance
THE CHAIRMAN'S COMMITTEE		**5/2.5**	
The primary responsibilities of this committee include: – Commenting on significant matters before the Board of Directors makes a decision; – Recommending key executive appointments to the Board of Directors; – Dealing with Board matters arising in between Board meetings, including the taking of required preliminary actions; and – Approving transactions and investments as delegated by the Board of Directors.	**Daniel Vasella** [1] Srikant Datar Ulrich Lehner	5 5 5	Charter of the Chairman's Committee http://www.novartis.com/corporate-governance
THE AUDIT AND COMPLIANCE COMMITTEE		**6/3**	
The primary responsibilities of this committee include: – Overseeing the internal auditors; – Supervising the external auditors and selecting and nominating the external auditors for election by the meeting of the shareholders; – Overseeing the accounting policies, financial controls and compliance with accounting and internal control standards; – Approving quarterly financial statements and financial results releases; – Overseeing internal control and compliance processes and procedures; and – Overseeing compliance with laws and external and internal regulations. The Audit and Compliance Committee has the authority to retain external consultants and other advisors.	**Srikant Datar** [1,3] Ulrich Lehner [3] Enrico Vanni Andreas von Planta Wendelin Wiedeking	6 6 6 6 5	Charter of the Audit and Compliance Committee http://www.novartis.com/corporate-governance

[1] Chair
[2] Since February 2012
[3] Audit Committee Financial Expert as defined by the US Securities and Exchange Commission (SEC)

Responsibilities	Membership comprises	Number of meetings held in 2012/approximate average duration (hrs) of each meeting Attendance	Link
THE RISK COMMITTEE		**4/2**	
The primary responsibilities of this committee include: – Ensuring that Novartis has implemented an appropriate and effective risk management system and process; – Ensuring that all necessary steps are taken to foster a culture of risk-adjusted decision making without constraining reasonable risk-taking and innovation; – Approving guidelines and reviewing policies and processes; and – Reviewing with management, internal auditors and external auditors the identification, prioritization and management of the risks, the accountabilities and roles of the functions involved with risk management, the risk portfolio and the related actions implemented by management. The Risk Committee has the authority to retain external consultants and other advisors.	**Andreas von Planta** [1] Srikant Datar Ann Fudge Ulrich Lehner Wendelin Wiedeking	4 4 4 4 4	Charter of the Risk Committee http://www.novartis.com/corporate-governance
THE COMPENSATION COMMITTEE		**6/2.5**	
The primary responsibilities of this committee include: – Designing, reviewing and recommending to the Board compensation policies and programs; – Advising the Board on the compensation of the Board members; – Approving the employment terms of key executives; – Deciding on the variable compensation of the Chief Executive Officer, the members of the Executive Committee and other key executives for the past year; and – Deciding on the base salary and the total target compensation of the Chief Executive Officer, the members of the Executive Committee and other key executives for the coming year. The Compensation Committee has the authority to retain external consultants and other advisors.	**Enrico Vanni** [1] William Brody Srikant Datar Ulrich Lehner Marjorie M.T. Yang	6 6 6 6 4	Charter of the Compensation Committee http://www.novartis.com/corporate-governance
THE CORPORATE GOVERNANCE AND NOMINATION COMMITTEE		**3/2**	
The primary responsibilities of this committee include: – Designing, reviewing and recommending to the Board corporate governance principles; – Reviewing on a regular basis the Articles of Incorporation with a view to reinforcing shareholder rights; – Reviewing on a regular basis the composition and size of the Board and its committees; – Reviewing annually the independence status of each Board member; – Reviewing directorships and agreements of board members for conflicts of interest and dealing with conflicts of interest; – Identifying candidates for election as Board member; – Assessing existing Board members and recommending to the Board whether they should stand for re-election; – Preparing and reviewing the succession plan for the CEO; and – Developing and reviewing an orientation program for new Board members and an ongoing education plan for existing Board members. The Corporate Governance and Nomination Committee has the authority to retain external consultants and other advisors.	**Ulrich Lehner** [1] Ann Fudge Pierre Landolt Andreas von Planta Rolf M. Zinkernagel	3 3 3 3 3	Charter of the Corporate Governance and Nomination Committee http://www.novartis.com/corporate-governance

[1] Chair

THE FUNCTIONING OF THE BOARD OF DIRECTORS

The Novartis Board of Directors takes decisions as a whole, supported by its five Board committees (Chairman's Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee). Each Board committee has a written charter outlining its duties and responsibilities and is led by a Chair elected by the Board of Directors.

The Board of Directors and its Board committees meet regularly throughout the year. The Chairs set the agendas of their meetings. Any Board member may request a Board meeting, a meeting of a Board committee or the inclusion of an item on the agenda of such meetings. Board members are provided, in advance of meetings, with materials intended to prepare them to discuss the items on the agenda.

THE CHAIRMAN

The Chairman provides leadership to the Board of Directors in its governance role, oversees that the strategy agreed by the Board of Directors is implemented by the Chief Executive Officer and his reports, provides support and advice to the Chief Executive Officer, reviews the yearly objectives and prepares the performance evaluation of the Chief Executive Officer before approval by and feedback session with the Board of Directors, works closely with the Chief Executive Officer in nominating and evaluating members and permanent attendees of the Executive Committee and in establishing succession plans for key management positions, represents Novartis with stakeholders and oversees Internal Audit.

MEETINGS OF THE BOARD OF DIRECTORS

The Board of Directors has meetings with the members of the Executive Committee as well as private meetings without members of the Executive Committee.

Topics addressed in the meetings with the Executive Committee include strategy, business reviews and major projects, investments and transactions. Topics addressed in private meetings include performance evaluation of top management, succession planning and Board self-evaluation.

In 2012, there were nine meetings of the Board of Directors and three meetings of the independent Board members. Given that as of February 1, 2013 all Board members will be independent no meetings of the independent Board members, led by the Vice Chairman, will be held going forward.

INDEPENDENCE OF BOARD MEMBERS

The independence of Board members is a key corporate governance issue. Accordingly, Novartis established independence criteria that are intended to reflect international best-practice standards. These independence criteria (last revised on December 14, 2011) can be found on the Novartis website:
www.novartis.com/investors/governance-documents.shtml

The Corporate Governance and Nomination Committee annually submits to the Board of Directors a proposal concerning the determination of the independence of each Board member. For this assessment, the Committee considers all relevant facts and circumstances of which it is aware.

In its meeting of December 12, 2012, the Board of Directors determined that all of its members except Dr. Vasella are independent. Dr. Vasella will be independent as from February 1, 2013, when the three year look-back period for having been an employee of Novartis will end (Dr. Vasella was until January 31, 2010 also the Chief Executive Officer). The Board of Directors has delegated Rolf M. Zinkernagel, M.D., to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD), and both Dr. Zinkernagel, M.D. and William Brody, M.D. to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF). The Board of Directors concluded that these activities are supervisory and not consultatory in nature and do not affect Dr. Zinkernagel's or Dr. Brody's independence as a Board member.

RELATIONSHIP OF NON-EXECUTIVE BOARD MEMBERS WITH NOVARTIS

With the exception of Dr. Vasella none of the Board members is or was a member of the management of Novartis AG or of any other Novartis Group company in the three financial years preceding 2012.

There are no significant business relationships of any Board member with Novartis AG or with any other Novartis Group company.

PERFORMANCE AND EFFECTIVENESS EVALUATION OF THE BOARD

PROCESS

Every year the Board conducts an evaluation of its performance and effectiveness. The process is kicked-off by each Board member completing a questionnaire on the performance and effectiveness of the Board and of each Board committee of which he/she is a member. This is then the basis for a deep, qualitative review of the Board's performance. The review is led by the Chairman who holds individual discussions with each Board member, followed-up by discussions by the full Board and by each Board Committee. Identified gaps and shortcomings are recorded and related remediation actions are agreed.

On a regular basis this internal process is extended to cover individual Board member assessments and/or the process is conducted by an independent outside consultant.

CONTENT

The performance review examines performance and effectiveness, strength and weaknesses, individual and for the full Board and each Board committee. The review includes composition, structure, processes, tasks and governance of the Board and its committees, effectiveness of meetings, behavior, team dynamics and interactions, quality of briefing materials and presentations, follow-up actions on decisions, relationship to senior management, and the role and leadership of the Chairman. The list of performance criteria is customized for each committee, addressing their specific tasks and responsibilities.

INFORMATION AND CONTROL SYSTEMS OF THE BOARD OF DIRECTORS VIS-À-VIS MANAGEMENT

INFORMATION ON THE MANAGEMENT

The Board of Directors ensures that it receives sufficient information from the Executive Committee to perform its supervisory duty and to make decisions that are reserved for the Board of Directors. The authority of the Board of Directors to determine the compensation of the members of the Executive Committee is an important element to ensure the alignment of Executive Committee members with the interests of Novartis and its shareholders.

The Board of Directors obtains the information required to perform its duties through several means:

- the Chief Executive Officer informs the Board regularly about current developments;
- the minutes of Executive Committee meetings are made available to the Board members;
- meetings or teleconferences are held as required between Board members and the Chief Executive Officer;
- the Board of Directors regularly meets with all members of the Executive Committee;
- the Board of Directors is updated in detail by each Division Head on a quarterly basis;
- by invitation, other members of management are invited to attend Board meetings to report on areas of the business within their responsibility; and
- Board members are entitled to request information from members of the Executive Committee or any other Novartis associate, and may also visit any Novartis site.

BOARD COMMITTEES

Board committees regularly meet with management and, at times, outside consultants to review the business, better understand applicable laws and policies affecting the Group and support the Board of Directors and the management in meeting the requirements and expectations of stakeholders and shareholders.

In particular, the Chief Financial Officer, the Group General Counsel and representatives of the external auditors are invited to meetings of the Audit and Compliance Committee. Furthermore, the Heads of Internal Audit, Financial Reporting and Accounting, Compliance, Quality, as well as the Business Practices Officers, report on a regular basis to the Audit and Compliance Committee.

The Audit and Compliance Committee reviews financial reporting processes on behalf of the Board of Directors. For each quarterly and annual release of financial information, the Disclosure Review Committee reviews the release for accuracy and completeness of disclosures. The Disclosure Review Committee is chaired by the Chief Financial Officer and is attended by the Group General Counsel, the Heads of the Divisions, the Heads of Finance of the Divisions and the Heads of the following Corporate Functions: Treasury, Financial Reporting and Accounting, Internal Audit and Investor Relations. Decisions made by the Disclosure Review Committee are reviewed by the Audit and Compliance Committee before publication of the quarterly and annual releases.

The Risk Committee oversees the risk management system and processes, as well as reviews the risk portfolio of the Group to ensure appropriate and professional management of the risks. For this purpose the Corporate Risk Management function and the risk owners of the Divisions report on a regular basis to the Risk Committee. The Group General Counsel and the Head of Internal Audit are also invited to the meetings.

NOVARTIS MANAGEMENT INFORMATION SYSTEM

Novartis produces comprehensive consolidated financial statements on a monthly basis for the total Group and its divisions. These are typically available within ten days of the end of the month and include the following:

- consolidated income statement of the month, quarter-to-date and year-to-date in accordance with International Financial Reporting Standards (IFRS), as well as adjustments to arrive at Core results as defined by Novartis. The IFRS and Core figures are compared to the prior year period and targets in both USD and on a constant currency basis;
- consolidated balance sheet as of the month end in accordance with IFRS in USD;
- consolidated cash flow on a monthly, quarter-to-date and year-to-date basis in accordance with IFRS in USD; and
- supplementary data on a monthly, quarterly and year-to-date basis such as free cash flow and gross and net liquidity, headcount, personnel costs, working capital, earnings per share and economic value added as defined by Novartis and on a USD basis where applicable.

The above information is made available to the members of the Board on a monthly basis. An analysis of the key deviations from prior year or target is also provided.

The Board also receives on a quarterly basis an outlook of the full year results in accordance with IFRS and Core, together with related commentary prior to the release of the quarterly results.

On an annual basis, in the fourth quarter of the year, the Board receives and approves the operating and financial targets for the following year.

In the middle of the year, the Board also reviews and approves the Strategic Plan for the next five years and the consolidated income statement in USD in accordance with IFRS and Core (as defined by Novartis) contained in the Plan.

The Board does not have direct access to Novartis' financial and management reporting systems but can at any time request more detailed financial information on any aspect that is presented to it.

INTERNAL AUDIT

The Internal Audit function carries out operational and system audits in accordance with an audit plan approved by the Audit and Compliance Committee; assists organizational units in the accomplishment of objectives by providing an independent approach to the evaluation, improvement and effectiveness of their internal control framework; prepares reports regarding the audits it has performed; and reports actual or suspected irregularities to the Audit and Compliance Committee and the Chairman. The Audit and Compliance Committee regularly reviews the scope of Internal Audit, the audit plans and the results of the internal audits.

RISK MANAGEMENT

The Corporate Risk Management function reports to the independent Risk Committee of the Board of Directors. The Compensation Committee works closely with the Risk Committee to ensure that the compensation system does not lead to excessive risk-taking by management (for details see our Compensation Report).

Organizational and process measures have been designed to identify and mitigate risks at an early stage. Organizationally, the individual divisions are responsible for risk and risk mitigation, with specialized corporate functions, such as Group Finance, Group Quality Operations, Corporate Health, Safety, Environment and Business Continuity, providing support and controlling the effectiveness of risk management by the Divisions in these respective areas.

RELATIONS WITH SHAREHOLDERS

Communication with shareholders allows the shareholders to be better informed on Novartis' strategy, business operations and governance, and the Board to learn about expectations and concerns of the shareholders and to address these.

The CEO, with the investor relations team and supported by the Chairman, is responsible for ensuring effective communication with shareholders.

Novartis communicates with its shareholders through the Annual General Meeting, meetings with groups of shareholders or with individual shareholders, and through written or electronic communication with shareholders.

At the Annual General Meeting the Chairman and the Vice-Chairman, the members of the Executive Committee and representatives of the external auditors are present and can answer questions of shareholders. Meetings with shareholders may be attended by the Chairman, CEO, CFO, members of the Executive Committee and other members of senior management.

Topics discussed with shareholders include strategy, business performance and corporate governance.

From left to right: Ulrich Lehner, Dimitri Azar, Pierre Landolt, Ann Fudge, Wendelin Wiedeking, Andreas von Planta, Srikant Datar, Daniel Vasella, Rolf M. Zinkernagel, Enrico Vanni, Marjorie Mun Tak Yang, William Brody

BOARD OF DIRECTORS

MEMBERS

Daniel Vasella, M.D.
Chairman
Swiss, age 59

Ulrich Lehner, Ph.D.
Vice Chairman
German, age 66

Dimitri Azar, M.D.
American, age 53

William Brody, M.D., Ph.D.
American, age 68

Srikant Datar, Ph.D.
American, age 59

Ann Fudge
American, age 61

Pierre Landolt, Ph.D.
Swiss, age 65

Enrico Vanni, Ph.D.
Swiss, age 61

Andreas von Planta, Ph.D.
Swiss, age 57

Dr. Ing. Wendelin Wiedeking
German, age 60

Marjorie Mun Tak Yang
Chinese, age 60

Rolf M. Zinkernagel, M.D.
Swiss, age 68

HONORARY CHAIRMAN

Alex Krauer, Ph.D.

CORPORATE SECRETARY

Charlotte Pamer-Wieser, Ph.D.

Daniel Vasella, M.D.
Swiss, age 59

Function at Novartis AG Daniel Vasella, M.D., is Chairman of the Board of Directors for Novartis AG. He served as Chief Executive Officer (CEO) and executive member of the Board of Directors for 14 years following the merger that created Novartis in 1996. Dr. Vasella was appointed Chairman in April 1999.

Other activities Dr. Vasella is a member of the boards of directors of US-based PepsiCo Inc. and American Express Co. He is also a member of the International Board of Governors of the Peres Center for Peace in Israel, the International Business Leaders Advisory Council for the Mayor of Shanghai, and is a foreign honorary member of the American Academy of Arts and Sciences. He further is a member of the board of trustees of the Carnegie Endowment for International Peace. In addition, Dr. Vasella serves as a member of several industry associations and educational institutions.

Professional background Before the Novartis merger, Dr. Vasella was CEO of Sandoz Pharma Ltd. and a member of the Sandoz Group Executive Committee. From 1988 to 1992, he was with Sandoz Pharmaceuticals Corporation in the United States, prior to which he held a number of medical positions in Switzerland. He graduated with an M.D. from the University of Bern in Switzerland and completed executive training at the Harvard Business School in the United States. He also was awarded an honorary doctorate by the University of Basel, Switzerland.

Key knowledge/experience *Leadership, Biomedical Science and Global Marketing experience* – former CEO of Novartis; advisory panel member for international organizations. *Industry experience* – board member for global consumer goods company and global financial services company.

Ulrich Lehner, Ph.D.
German, age 66

Function at Novartis AG Ulrich Lehner, Ph.D., has been a member of the Board of Directors since 2002. He qualifies as an independent Non-Executive Director. He serves as Vice Chairman, and Chairman of the Corporate Governance and Nomination Committee. He is also a member of the Audit and Compliance Committee, the Risk Committee, the Chairman's Committee, and the Compensation Committee. The Board of Directors has appointed him as Audit Committee Financial Expert.

Other activities Mr. Lehner is a member of the shareholders' committee of Henkel AG & Co. KGaA, chairman of the supervisory board of Deutsche Telekom AG, and serves as a member of the supervisory boards of E.ON AG, ThyssenKrupp AG, Porsche Automobil Holding SE and Henkel Management AG, all in Germany. He is also a member of the shareholders' committee of Dr. August Oetker KG and Krombacher Brauerei, both in Germany.

Professional background Mr. Lehner graduated in business administration and mechanical engineering from the Darmstadt University of Technology, Germany, in 1975. From 1975 to 1981, he was an auditor with KPMG Deutsche Treuhand-Gesellschaft AG in Duesseldorf. In 1981, he joined Henkel KGaA. After heading the controlling department of Fried. Krupp GmbH in Germany from 1983 to 1986, Mr. Lehner returned to Henkel as finance director. From 1991 to 1994, he headed Henkel Asia-Pacific Ltd. in Hong Kong, and from 1995 to 2000, he served as executive vice president, finance/logistics, of Henkel KGaA. From 2000 to 2008, Mr. Lehner served as chairman of the management board of Henkel KGaA.

Key knowledge/experience *Leadership and Global experience* – chairman of supervisory board of global telecommunication company; former chairman of the management board of global consumer goods company. *Industry experience* – member of supervisory boards of global energy, automotive and manufacturing technology companies.

Dimitri Azar, M.D.
American, age 53

Function at Novartis AG Dimitri Azar, M.D., has been a member of the Board of Directors since February 2012. He qualifies as an independent Non-Executive Director.

Other activities Dr. Azar is dean of the College of Medicine and professor of ophthalmology, bioengineering and pharmacology at the University of Illinois at Chicago in the United States, where he formerly was head of the Department of Ophthalmology and Visual Sciences. He sits on the board of trustees of the Chicago Ophthalmological Society and the Association of Research in Vision and Ophthalmology. Dr. Azar is a member of the American Ophthalmological Society and holds committee positions with the American Academy of Ophthalmology.

Professional background Dr. Azar began his career at the American University Medical Center, Beirut, Lebanon, and completed his fellowship and residency training at the Massachusetts Eye and Ear Infirmary at Harvard Medical School in the United States. His research on matrix-metalloproteinases in corneal wound healing and angiogenesis has been funded by the National Institutes of Health since 1993. Dr. Azar practiced at the Wilmer Ophthalmologic Institute at The Johns Hopkins Hospital School of Medicine, then returned to the Massachusetts Eye and Ear Infirmary as director of the cornea and external disease. He became professor of ophthalmology with tenure at Harvard Medical School in 2003. Dr. Azar holds an Executive Master of Business Administration from the University of Chicago, Booth School of Business.

Key knowledge/experience *Leadership, Healthcare and Education experience* – dean and professor of leading US university medical school. *Biomedical Science experience* – federally funded clinician-scientist and research fellowship recipient.

William Brody, M.D., Ph.D.
American, age 68

Function at Novartis AG William Brody, M.D., Ph.D., has been a member of the Board of Directors since 2009. He qualifies as an independent Non-Executive Director. He is a member of the Compensation Committee.

Other activities Dr. Brody is president of the Salk Institute for Biological Studies, La Jolla, California, United States. He is also a member of the boards of directors of the US-based International Business Machines Corp. and Kool Smiles Inc., and the mutual funds boards of T. Rowe Price. He is a member of numerous professional associations, and also serves on the advisory boards of various government and nonprofit organizations.

Professional background Dr. Brody earned his bachelor's and master's degrees in electrical engineering from the Massachusetts Institute of Technology before completing his M.D. and Ph.D. at Stanford University, all in the United States. Following training in cardiovascular surgery and radiology he held various academic positions, including professor for radiology and electrical engineering at Stanford University, and director of the department of radiology at The Johns Hopkins University. From 1996 to 2009, he was president of The Johns Hopkins University, and since 2009, president of the Salk Institute for Biological Studies in the United States. He is a member of the US National Academy of Engineering and the Institute of Medicine.

Key knowledge/experience *Leadership, Biomedical Science, Healthcare and Education experience* – president of leading US scientific research institution; former president of leading US university. *Global, Engineering and Technology experience* – former board member of global technology company.

Srikant Datar, Ph.D.
American, age 59

Function at Novartis AG Srikant Datar, Ph.D., has been a member of the Board of Directors since 2003. He qualifies as an independent Non-Executive Director. He is Chairman of the Audit and Compliance Committee, and a member of the Chairman's Committee, the Risk Committee and the Compensation Committee. The Board of Directors has appointed him as Audit Committee Financial Expert.

Other activities Mr. Datar is Arthur Lowes Dickinson Professor at the Graduate School of Business Administration at Harvard University. He is also a member of the boards of directors of ICF International Inc. and Stryker Corp., both in the United States, and of HCL Technologies in India.

Professional background Mr. Datar graduated with distinction in mathematics and economics from the University of Bombay, India, in 1973. He is a Chartered Accountant, and holds two master's degrees and a doctorate from Stanford University. Mr. Datar has worked as an accountant and planner in industry, and as a professor at Carnegie Mellon University, Stanford University and Harvard University, all in the United States. His research interests are in the areas of cost management, measurement of productivity, new product development, time-based competition, incentives, and performance evaluation. He is the author of many scientific publications, and has received several academic awards and honors. Mr. Datar has advised and worked with numerous companies in research, development and training.

Key knowledge/experience *Leadership and Education experience* – former senior associate dean and current professor of leading US university. *Global and Industry experience* – board member of global professional services firm; board member of global leading medical technology company; board member of Indian high-tech company.

Ann Fudge
American, age 61

Function at Novartis AG Ann Fudge has been a member of the Board of Directors since 2008. She qualifies as an independent Non-Executive Director. She is a member of the Corporate Governance and Nomination Committee, and the Risk Committee.

Other activities Ms. Fudge serves on the boards of directors of General Electric Co. in the United States; Unilever NV, London and Rotterdam, Netherlands; and Infosys Ltd., India. She is a trustee of the New York-based Rockefeller Foundation, and is chairman of the US Programs Advisory Panel of the Bill & Melinda Gates Foundation. Ms. Fudge is further a member of the Harvard University Corporation Committee on Finance. She is also on the board of the Council on Foreign Relations.

Professional background Ms. Fudge received her bachelor's degree from Simmons College and her Masters of Business Administration from Harvard University Graduate School of Business in the United States. She is former chairman and CEO of Young & Rubicam Brands, New York. Before that, she served as president of the Beverages, Desserts and Post Division of Kraft Foods Inc., Northfield, Illinois.

Key knowledge/experience *Leadership and Marketing experience* – former chairman and CEO of global marketing communications company; former president of leading consumer products business unit. *Global and Industry experience* – board member of global technology company and global consumer goods company.

Pierre Landolt, Ph.D.
Swiss, age 65

Function at Novartis AG Pierre Landolt, Ph.D., has been a member of the Board of Directors since 1996. He qualifies as an independent Non-Executive Director. He is a member of the Corporate Governance and Nomination Committee.

Other activities Mr. Landolt is currently chairman of the Sandoz Family Foundation and oversees the development of the foundation in several investment fields. He is also a partner with unlimited liabilities of the Swiss private bank Landolt & Cie. In Switzerland, he is chairman of Emasan AG and Vaucher Manufacture Fleurier SA, and vice chairman of Parmigiani Fleurier SA. He is a member of the board of EcoCarbone SAS, France, and Amazentis SA, Switzerland. He is also vice chairman of the Montreux Jazz Festival Foundation. In Brazil, Mr. Landolt serves as president of the Instituto Fazenda Tamanduá, the Instituto Estrela de Fomento ao Microcrédito, AxialPar Ltda. and Moco Agropecuaria Ltda.

Professional background Mr. Landolt graduated with a bachelor's degree in law from the University of Paris–Assas. From 1974 to 1976 he worked for Sandoz Brazil. In 1977 he acquired an agricultural estate in the semi-arid Northeast Region of Brazil, and over several years converted it into a model farm in organic and biodynamic production. Since 1997 Mr. Landolt has been associate and chairman of AxialPar Ltda, Brazil, an investment company focused on sustainable development. In 2000 he co-founded EcoCarbone SAS, a company active in the design and development of carbon-sequestration processes. In 2007 he co-founded Amazentis SA, a startup company active in the convergence space of medication and nutrition.

Key knowledge/experience *Banking and Industry experience; International and Emerging Market experience* – partner of private bank; chairman and vice chairman of luxury goods companies. *Leadership and Global experience* – President of large family investment holding; board member of global agribusiness company.

Enrico Vanni, Ph.D.
Swiss, age 61

Function at Novartis AG Enrico Vanni, Ph.D., has been a member of the Board of Directors since 2011. He qualifies as an independent Non-Executive Director. He is Chairman of the Compensation Committee, and a member of the Audit and Compliance Committee.

Other activities Since his retirement as director of McKinsey & Company in 2007, Mr. Vanni has been an independent consultant. He is currently a member of several boards of directors, in industries from healthcare to private banking, for nonlisted companies including Eclosion[2], Denzler & Partners SA and Banque Privée BCP (Suisse) SA, all based in Switzerland.

Professional background Mr. Vanni holds an engineering degree in chemistry from the Federal Polytechnic School of Lausanne, Switzerland, a Ph.D. in chemistry from the University of Lausanne, as well as a Master of Business Administration from INSEAD in Fontainebleau, France. He began his career as a research engineer at International Business Machines Corp. in California, United States, and joined McKinsey & Company in Zurich in 1980. He managed the Geneva office for McKinsey from 1988 to 2004, and consulted for companies in the pharmaceutical, consumer and finance sectors. He led McKinsey's European pharmaceutical practice and served as member of the partner review committee of the firm prior to his retirement in 2007. As an independent consultant, Mr. Vanni has continued to support leaders of pharmaceutical and biotechnology companies on core strategic challenges facing the healthcare industry.

Key knowledge/experience *Global industry experience* – senior consultant of global pharmaceutical/biotech companies, consumer goods and financial institutions. *Science experience* – research engineer in technology company and management of projects in global pharmaceutical R&D. *Leadership experience* – office management of global consultant company and leadership of its European pharmaceutical practice.

Andreas von Planta, Ph.D.
Swiss, age 57

Function at Novartis AG Andreas von Planta, Ph.D., has been a member of the Board of Directors since 2006. He qualifies as an independent Non-Executive Director. He is Chairman of the Risk Committee, and is a member of the Audit and Compliance Committee as well as the Corporate Governance and Nomination Committee.

Other activities Mr. von Planta is chairman of the Schweizerische National-Versicherungs-Gesellschaft AG and a board member of Holcim Ltd., both in Switzerland. He is also a board member of various Swiss subsidiaries of foreign companies and other nonlisted Swiss companies. He is a member of the Board of Editors of the "Swiss Review of Business Law" and is a former chairman of the Geneva Association of Business Law. Mr. von Planta is chairman of the regulatory board of the SIX Swiss Exchange AG.

Professional background Mr. von Planta holds lic. iur. and Ph.D. degrees from the University of Basel, Switzerland, and an LL.M. from Columbia University School of Law, New York, United States. He passed his bar examinations in Basel in 1982. Since 1983 he has lived in Geneva and worked for the law firm Lenz & Staehelin, where he became a partner in 1988. His areas of specialization include corporate law, corporate governance, corporate finance, company reorganizations, and mergers and acquisitions.

Key knowledge/experience *Leadership and Global experience* – chairman of insurance company; board member of global construction materials manufacturer. *Industry experience* – partner of leading Swiss law firm.

Dr. Ing. Wendelin Wiedeking
German, age 60

Function at Novartis AG Dr. Ing. Wendelin Wiedeking has been a member of the Board of Directors since 2003. He qualifies as an independent Non-Executive Director. He is a member of the Audit and Compliance Committee and of the Risk Committee.

Other activities Mr. Wiedeking was chairman of the executive board of Porsche Automobil Holding SE and of Dr. Ing. h.c. F. Porsche AG, both in Germany, until July 2009. Since then he has been an entrepreneur.

Professional background Mr. Wiedeking graduated in mechanical engineering in 1978 and worked as a scientific assistant in the machine tool laboratory of the Rhine-Westphalian College of Advanced Technology in Germany. His professional career began in 1983 in Germany as director's assistant in the production and materials management area of Dr. Ing. h.c. F. Porsche AG in Stuttgart-Zuffenhausen. In 1988, he moved to Glyco Metall-Werke KG in Wiesbaden as division manager, where he advanced by 1990 to the position of CEO and chairman of the board of management of Glyco AG. In 1991, he returned to Dr. Ing. h.c. F. Porsche AG as production director. A year later, the supervisory board appointed him spokesman of the executive board (CEO), then chairman in 1993.

Key knowledge/experience *Leadership, Global and Industry experience* – former chairman and CEO of global automotive company. *Engineering and Technology experience* – former chairman and CEO of manufacturing supply company.

Marjorie Mun Tak Yang
Chinese, age 60

Function at Novartis AG Marjorie Mun Tak Yang has been a member of the Board of Directors since 2008. She qualifies as an independent Non-Executive Director. She is a member of the Compensation Committee.

Other activities Ms. Yang is chairman of the Esquel Group, Hong Kong, China. She is a member of the Executive Council of the Hong Kong Special Administrative Region. In China, she is a member of the National Committee of the Chinese People's Political Consultative Conference. She currently serves on the boards of Swire Pacific Ltd., and The Hong Kong and Shanghai Banking Corp. Ltd. in Hong Kong, and on the boards of a number of nonlisted companies. In January 2010 she was appointed as Chairman of the Council of the Hong Kong Polytechnic University. She also serves on the advisory boards of Harvard Business School, and Tsinghua School of Economics and Management, in the United States and China, respectively. From 2001 to 2011, Ms. Yang was a member of the MIT Corporation.

Professional background Ms. Yang graduated with a bachelor's degree in mathematics from Massachusetts Institute of Technology and holds a master's degree from Harvard Business School, both in the United States. From 1976 to 1978, she was an associate in Corporate Finance, Mergers and Acquisitions, with the First Boston Corp. in New York, United States. In 1979, she returned to Hong Kong and became a founding member of Esquel Group. She was appointed chairman of the Group in 1995.

Key knowledge/experience *Leadership, Global and Industry experience* – chairman of global textile manufacturing company. *Education and Science experience* – trustee of leading US research university; leadership roles at multiple universities.

Rolf M. Zinkernagel, M.D.
Swiss, age 68

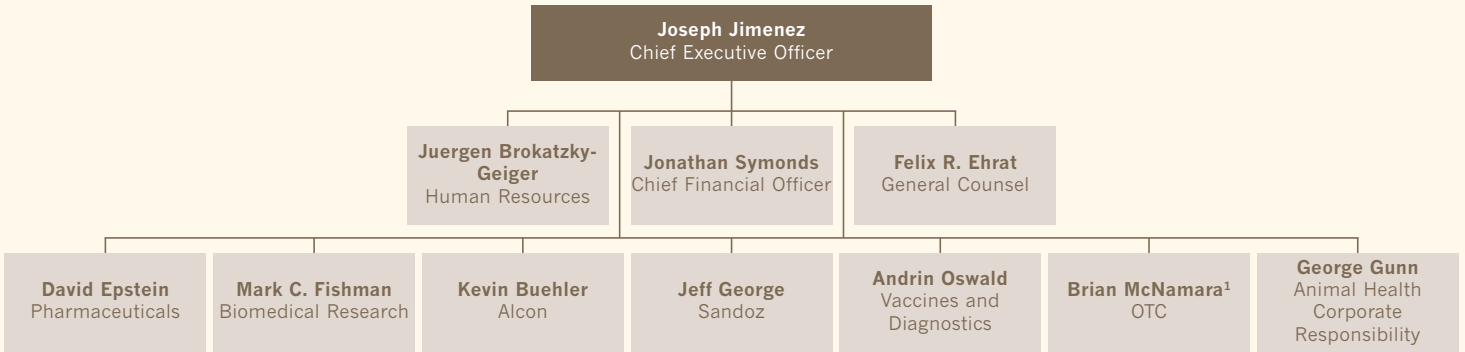
Function at Novartis AG Rolf M. Zinkernagel, M.D., has been a member of the Board of Directors since 1999. He qualifies as an independent Non-Executive Director. He is a member of the Corporate Governance and Nomination Committee.

Other activities Dr. Zinkernagel was vice president of the International Union of Immunological Societies until 2010. He is a member of the scientific advisory boards of Bio-Alliance AG, Germany; Aravis General Partner Ltd., Cayman Islands and Switzerland; Telormedix, Switzerland; X-Biotech, Canada; Novimmune, Switzerland; Cancevir, Switzerland; MannKind, United States; and the Biomedical Sciences International Advisory Council, Singapore. Dr. Zinkernagel is also a science consultant to Chilka Ltd., Cayman Islands; Ganymed, Germany; and Zhen-Ao Group, China.

Professional background Dr. Zinkernagel graduated from the University of Basel, Switzerland, with an M.D. in 1970. From 1992 to 2008, he was a professor and director of the Institute of Experimental Immunology at the University of Zurich, and after retirement in 2008 continues to be active at the University of Zurich. Dr. Zinkernagel has received many awards and prizes for his work and contribution to science, notably the Nobel Prize in medicine, which he was awarded in 1996.

Key knowledge/experience *Biomedical Science and Education experience* – former professor and director at leading Swiss university. *Leadership and Global experience* – member of scientific advisory boards of numerous global biotech companies; member of major international research councils.

COMPOSITION OF THE EXECUTIVE COMMITTEE



[1]Permanent attendee until December 31, 2012, full member as per January 1, 2013

COMPOSITION OF THE EXECUTIVE COMMITTEE

The Executive Committee is headed by the Chief Executive Officer. The members of the Executive Committee are appointed by the Board of Directors. The Chairman may appoint or remove non-voting Permanent Attendees to attend the meetings of the Executive Committee. As of December 31, 2012, there was 1 Permanent Attendee attending meetings of the Executive Committee.

The organizational structure and the details of the responsibility of the Executive Committee are set forth in the Board Regulations (www.novartis.com/corporate-governance).

The Board of Directors has not concluded any contracts with third parties to manage the business.

ROLE AND FUNCTIONING OF THE EXECUTIVE COMMITTEE

The Board of Directors has delegated to the Executive Committee the coordination of the Group's business operations. This includes:

- Developing policies, strategies and strategic plans for approval by the Board of Directors and implementing those approved by the Board of Directors;
- Submitting to the Board of Directors and its committees proposed changes in management positions of material significance, investments, financial measures, acquisitions or divestitures, contracts of material significance and budgets;
- Preparing and submitting quarterly and annual reports to the Board of Directors or its committees;
- Informing the Board of Directors of all matters of fundamental significance to the businesses;
- Recruiting, appointing and promoting senior management;
- Ensuring the efficient operation of the Group and achievement of optimized results;
- Promoting an active internal and external communications policy; and
- Dealing with any other matters as are delegated by the Board of Directors to the Executive Committee.

THE CHIEF EXECUTIVE OFFICER

In addition to other duties that may be assigned by the Board of Directors, the Chief Executive Officer, supported by the Executive Committee, is responsible overall for the management and performance of the business, leads the Executive Committee, builds and maintains an effective executive team and represents Novartis with major customers, financial analysts, investors and with the media.

CONTRACTS WITH MEMBERS OF THE EXECUTIVE COMMITTEE

In accordance with good corporate governance, employment contracts with members of the Executive Committee do not contain unusually long notice periods, change-of-control clauses (including no "golden parachutes," special provisions on the cancellation of contractual arrangements, agreements concerning special notice periods or long-term contracts exceeding 12 months, waivers of lock-up periods for options, shorter vesting periods, and no additional contributions to pension funds) or severance payments.

From left to right: Juergen Brokatzky-Geiger, Mark C. Fishman, Jeff George, Andrin Oswald, George Gunn, Joseph Jimenez, Felix R. Ehrat, Kevin Buehler, Brian McNamara, David Epstein, Jonathan Symonds

EXECUTIVE COMMITTEE

MEMBERS

Joseph Jimenez
American, age 53

Juergen Brokatzky-Geiger, Ph.D.
German, age 60

Kevin Buehler
American, age 55

Felix R. Ehrat, Ph.D.
Swiss, age 55

David Epstein
American, age 51

Mark C. Fishman, M.D.
American, age 61

Jeff George
American, age 39

George Gunn, MRCVS
British, age 62

Brian McNamara
American, age 46

Andrin Oswald, M.D.
Swiss, age 41

Jonathan Symonds
British, age 53

SECRETARY

Bruno Heynen

Joseph Jimenez
American, age 53

Joseph Jimenez has been Chief Executive Officer (CEO) of Novartis since 2010. Mr. Jimenez is responsible for leading the company's diversified healthcare portfolio of leading businesses in innovative pharmaceuticals, eye care, generics, vaccines and diagnostics, and OTC and animal health. Previously Mr. Jimenez served as Division Head, Novartis Pharmaceuticals. He led the transformation of the pharmaceutical portfolio to balance mass market and specialty products, and significantly increased the percentage of sales from newly launched products. Mr. Jimenez also worked to realign the division's commercial approach to focus on the individual needs of customers, and incorporated more technological tools to better connect with patients and customers. Mr. Jimenez joined Novartis in April 2007 as Division Head, Novartis Consumer Health. Previously, he served as president and CEO of the North America business for the H.J. Heinz Co., and as president and CEO of Heinz in Europe from 2002 to 2006. Prior to joining Novartis, he was a nonexecutive director of AstraZeneca PLC, United Kingdom, from 2002 to 2007. He was also an adviser for the private equity organization Blackstone Group in the United States. Mr. Jimenez is a member of the board of directors of Colgate-Palmolive Co., New York. He graduated in 1982 with a bachelor's degree from Stanford University and in 1984 with a Master of Business Administration from the University of California, Berkeley.

Juergen Brokatzky-Geiger, Ph.D.
German, age 60

Juergen Brokatzky-Geiger, Ph.D., has been Head of Human Resources of Novartis since 2003. He is a member of the Executive Committee of Novartis. Mr. Brokatzky-Geiger joined Ciba-Geigy Ltd. in 1983 as a Ph.D. chemist in the Pharmaceuticals Division in Switzerland. After a job rotation in the United States, he held positions of increasing responsibility in Research and Development (R&D), including Group Leader of Process R&D, Head of Process R&D, and Head of Process Development and Pilot Plant Operations. During the merger of Ciba-Geigy and Sandoz in 1996, Mr. Brokatzky-Geiger was appointed Integration Officer of Technical Operations. He later became the Head of Chemical and Analytical Development, and served as the Global Head of Technical R&D from 1999 to 2003. Mr. Brokatzky-Geiger is a member of the board of Bachem AG in Switzerland. He graduated with a Ph.D. in chemistry from the University of Freiburg, Germany, in 1982.

Kevin Buehler
American, age 55

Kevin Buehler has been Division Head, Alcon, since 2011. He is a member of the Executive Committee of Novartis. Mr. Buehler was president and CEO of Alcon Inc. from 2009 to 2011. He began his career with Alcon in 1984 as a regional sales manager in the Consumer Products Division, and held positions of increasing responsibility before being named director of sales and marketing. In 1996, he became director of Alcon's US Managed Care and Falcon Generic Pharmaceutical groups, and became vice president in 1998. The following year he returned to the US Consumer Products Division as vice president and general manager. Mr. Buehler moved to the International Division in 2002 as vice president and regional manager, Latin America and Caribbean. He was later named area vice president, Latin America, Canada, Australia and Far East. Mr. Buehler also served as senior vice president, global markets, and chief marketing officer. Prior to joining Alcon, he worked for The Gillette Co. and Snyder Drug Stores, both in the United States. Mr. Buehler holds a bachelor's degree from Carroll University in Waukesha, Wisconsin, in the United States, with concentrations in business administration and political science. He completed the Harvard Program for Management Development in 1993.

Felix R. Ehrat, Ph.D.
Swiss, age 55

Felix R. Ehrat, Ph.D., has been Group General Counsel since October 2011. He is a member of the Executive Committee of Novartis. Mr. Ehrat is a leading practitioner of corporate, banking, and mergers and acquisitions law, as well as an expert in corporate governance and arbitration. He started his career as an associate with Baer & Karrer Ltd. in Zurich in 1987, became partner in 1992, and advanced to senior partner (2003 to 2011) and executive chairman of the board (2007 to 2011) of the firm. Mr. Ehrat is chairman of Globalance Bank AG in Switzerland, and board member of several organizations in the cultural field. Previously, Mr. Ehrat was, among other things, chairman of Banca del Gottardo, and a board member of Julius Baer Holding AG, Austriamicrosystems AG, Charles Voegele Holding AG and Carlo Gavazzi Holding AG. Mr. Ehrat was admitted to the Zurich bar in 1985 and received his doctorate of law from the University of Zurich in 1990. In 1986, he completed an LL.M. at McGeorge School of Law in the United States. Some of his past memberships and positions include: the International Bar Association, where he was co-chair of the Committee on Corporate and M&A Law from 2007 to 2008; Association Internationale des Jeunes Avocats, where he was president from 1998 to 1999; and the Swiss Arbitration Association, the Zurich Bar Association, and the Swiss Bar Association.

David Epstein
American, age 51

David Epstein has been Division Head, Novartis Pharmaceuticals, since 2010. He is a member of the Executive Committee of Novartis. Prior to his current appointment, Mr. Epstein served as Head of Novartis Oncology for nearly 10 years. In addition, Mr. Epstein has led the Molecular Diagnostics Unit since its creation in 2008. Before joining Novartis, Mr. Epstein was an associate in the strategy practice of the consulting firm Booz Allen Hamilton Inc. in the United States. Mr. Epstein joined Sandoz, a predecessor company of Novartis, in 1989, and held various leadership positions of increasing responsibility for the company, including Chief Operating Officer of Novartis Pharmaceuticals Corporation in the United States and Head of Novartis Specialty Medicines. Mr. Epstein graduated with a bachelor's degree in pharmacy from The Ernest Mario School of Pharmacy at Rutgers, The State University of New Jersey, in 1984, and with a Master of Business Administration in finance and marketing from New York's Columbia University Graduate School of Business in 1987.

Mark C. Fishman, M.D.
American, age 61

Mark C. Fishman, M.D., has been President of the Novartis Institutes for BioMedical Research (NIBR) since 2002. He is a member of the Executive Committee of Novartis. Before joining Novartis in 2002, Dr. Fishman was chief of cardiology and director of the Cardiovascular Research Center at Massachusetts General Hospital, and was professor of medicine at Harvard Medical School, both in the United States. Dr. Fishman completed his internal medicine residency, chief residency and cardiology training at Massachusetts General Hospital. Dr. Fishman graduated with a bachelor's degree from Yale College in 1972 and an M.D. from Harvard Medical School in 1976. He has been honored with many awards and distinguished lectureships, and is a member of the Institute of Medicine of the National Academies and a Fellow of the American Academy of Arts and Sciences, both in the United States.

Jeff George
American, age 39

Jeff George has been Division Head, Sandoz, since 2008. He is a member of the Executive Committee of Novartis. Mr. George joined the Vaccines and Diagnostics Division of Novartis in 2007 as Head of Commercial Operations for Western and Eastern Europe. He then advanced to Head of Emerging Markets for the Middle East, Africa, Southeast Asia and CIS at Novartis Pharmaceuticals. Before joining Novartis, Mr. George was a Senior Director of Strategy and Business Development at Gap Inc., San Francisco, United States. From 2001 to 2004, he was an Engagement Manager with McKinsey & Company, also in San Francisco. Mr. George received a Master of Business Administration from Harvard University in 2001. He graduated in 1999 with a master's degree from The Johns Hopkins University's School of Advanced International Studies, where he studied international economics and emerging markets political economy. In 1996, he received his bachelor's degree in international relations from Carleton College in Northfield, Minnesota, in the United States.

George Gunn, MRCVS
British, age 62

George Gunn has been Division Head, Novartis Animal Health, and Head, Corporate Responsibility, since 2011. He is a member of the Executive Committee of Novartis. Before joining Novartis, Mr. Gunn was president of Pharmacia Animal Health, based in the United States. Previously, he spent more than 15 years in positions of increasing responsibility in healthcare companies. He worked as a veterinary surgeon for nine years before entering the industry. Mr. Gunn joined Novartis in 2003 as Head of Novartis Animal Health, North America. In 2004, he assumed his position as Head of the Animal Health Business Unit. In addition to this role, he was Division Head, Novartis Consumer Health, from 2008 to 2011. Mr. Gunn graduated with a bachelor of veterinary medicine and surgery degree from the Royal (Dick) School of Veterinary Studies in the United Kingdom in 1973. He graduated with a diploma in veterinary state medicine from the same school in 1978. In 2008, he received an honorary doctorate in veterinary medicine and surgery from the University of Edinburgh, Scotland.

Brian McNamara
American, age 46

Brian McNamara has been Division Head, Novartis OTC and a permanent attendee of the Executive Committee of Novartis since February 2012. As of January 1, 2013, he is a member of the Executive Committee of Novartis. Prior to this role, Mr. McNamara served as President, Americas Region, for Novartis OTC. Since joining Novartis OTC in 2004 as Senior Vice President and General Manager of Novartis OTC North America, Mr. McNamara has worked on a number of strategic initiatives. Mr. McNamara also served as President of Novartis OTC Europe from 2007 until 2010. Mr. McNamara began his career at Procter & Gamble Co., Cincinnati, United States, where he gained extensive experience in consumer and brand marketing, product supply, and customer leadership. Mr. McNamara has served on the board of directors and the executive committee of the Consumer Healthcare Products Association in the United States. He is also a former board member of the Association of the European Self-Medication Industry and chairman of its economic affairs committee. Mr. McNamara received a Master of Business Administration in Finance from the University of Cincinnati and a bachelor's degree in electrical engineering from Union College, both in the United States.

Andrin Oswald, M.D.
Swiss, age 41

Andrin Oswald, M.D., has been Division Head, Novartis Vaccines and Diagnostics, since 2008. He is a member of the Executive Committee of Novartis. Previously, Dr. Oswald was CEO of Speedel Holding AG and Global Head of Pharmaceutical Development Franchises in the Novartis Pharmaceuticals Division, both in Switzerland. Dr. Oswald joined Novartis in 2005 as Assistant to the Chairman and CEO. Before his appointment as Head of Development Franchises, he served as Head of the Country Pharmaceuticals Organization (CPO) and Country President for Novartis in South Korea. Dr. Oswald joined Novartis from McKinsey & Company, Switzerland, where he was an associate principal. Between 2002 and 2003, he was a delegate of the International Committee of the Red Cross (ICRC) to Nepal. He holds a doctorate in medicine from the University of Geneva.

Jonathan Symonds
British, age 53

Jonathan Symonds has been Chief Financial Officer (CFO) of Novartis since 2010. He is a member of the Executive Committee of Novartis. Before joining Novartis in 2009, Mr. Symonds was partner and managing director of Goldman Sachs Group Inc. in the United Kingdom. He also has eight years of experience as CFO of AstraZeneca PLC, and previously held positions as Group Finance Director at Zeneca and partner at KPMG. From 2004 to 2007, Mr. Symonds was a director of Diageo PLC and chairman of the audit committee. Other previous roles include director and audit committee chairman of Qinetiq PLC, chairman of the 100 Group of Finance Directors, joint chairman of the Business Tax Forum, board member of the Accounting Standards Board, and founder of the Oxford University Centre for Business Taxation Research, all in the United Kingdom. Mr. Symonds graduated with a first-class degree in business finance from the University of Hertfordshire, United Kingdom, in 1980, and became a Fellow of Chartered Accountants in 1982. He is a Commander of the British Empire (CBE).

OUR INDEPENDENT EXTERNAL AUDITORS

DURATION OF THE MANDATE AND TERMS OF OFFICE

Based on a recommendation by the Audit and Compliance Committee, the Board of Directors nominates an independent auditor for election at the Annual General Meeting. PricewaterhouseCoopers (PwC) assumed its existing auditing mandate for Novartis in 1996. Peter Kartscher, auditor in charge, and Michael P. Nelligan, global relationship partner, began serving in their respective roles in 2009. The Audit and Compliance Committee ensures that the auditor in charge is rotated at least every five years.

INFORMATION TO THE BOARD OF DIRECTORS AND THE AUDIT AND COMPLIANCE COMMITTEE

The independent auditor, PwC, is responsible for opining on whether the audited consolidated financial statements comply with International Financial Reporting Standards (IFRS) and Swiss law and whether the separate parent company financial statements of Novartis AG comply with Swiss law. Additionally, PwC is responsible for opining on the effectiveness of internal control over financial reporting.

The Audit and Compliance Committee, acting on behalf of the Board of Directors, is responsible for overseeing the activities of PwC. During 2012, the Audit and Compliance Committee held 6 meetings. At each of these meetings, PwC was invited to attend during the discussion of agenda items that dealt with accounting, financial reporting or auditing matters and any other matters relevant for their audit.

On an annual basis, PwC provides to the Audit and Compliance Committee the written disclosures required by Rule 3526, "Communications with Audit Committees Concerning Independence," of the Public Company Accounting Oversight Board (PCAOB), and the Audit and Compliance Committee and PwC discuss PwC's independence from Novartis and Novartis' management.

The Audit and Compliance Committee recommended to the Board of Directors, and the Board of Directors approved, inclusion of the audited financial statements in the Annual Report for the year ended December 31, 2012.

The Audit and Compliance Committee, on a regular basis, evaluates the performance of PwC and, once yearly, based on a performance evaluation, determines whether PwC should be proposed to the Annual General Meeting for election. Also, once yearly, the auditor in charge and the global relationship partner report to the Board of Directors on the activities of PwC during the current year and on the audit plan for the coming year and answer any questions or concerns Board members might have on the performance of PwC, or on the work PwC has conducted or is planning to conduct.

In order to assess the performance of PwC, the Audit and Compliance Committee requires a self-evaluation report from PwC, holds private meetings with the Chief Executive Officer, the Chief Financial Officer and with the Head of Internal Audit and, if necessary, obtains an independent external assessment. The Board of Directors also meets with the auditor in charge and the global relationship partner. Criteria applied for the performance assessment of PwC include technical and operational competence, independent and objective view, sufficient resources employed, focus on areas of significant risk to Novartis, willingness to probe and challenge, ability to provide effective, practical recommendations and open and effective communication and coordination with the Audit and Compliance Committee, the Internal Audit function and management.

PRE-APPROVAL OF AUDIT AND NON-AUDIT SERVICES

The Audit and Compliance Committee's pre-approval is required for all services provided by PwC. These services may include audit services, audit-related services, tax services and other services.

Pre-approval is detailed as to the particular services or categories of services, and is subject to a specific budget. PwC and management report, on a quarterly basis, to the Audit and Compliance Committee regarding the extent of services provided in accordance with this pre-approval and the fees for the services performed to date. The Audit and Compliance Committee may also pre-approve additional services on a case-by-case basis.

AUDITING AND ADDITIONAL FEES

PwC charged the following fees for professional services rendered for the 12-month periods ended December 31, 2012 and December 31, 2011:

	2012 USD thousands	2011 USD thousands
Audit Services	28 960	30 060
Audit-Related Services	2 300	2 480
Tax Services	500	1 550
Other Services	190	190
Total	**31 950**	**34 280**

Audit Services are defined as the standard audit work performed each year in order to issue opinions on the parent company and consolidated financial statements of the Group, to issue opinions relating to the effectiveness of the Group's internal controls over financial reporting, and to issue reports on local statutory financial statements. Also included are audit services that can only be provided by the Group auditor, such as auditing of non-recurring transactions and implementation of new accounting policies, audits of

accounting infrastructure system controls, pre-issuance reviews of quarterly financial results, consents and comfort letters and any other audit services required for SEC or other regulatory filings.

Audit-Related Services include those other assurance services provided by the independent auditor but not restricted to those that can only be provided by the auditor signing the audit report. They comprise amounts for services such as acquisition due diligence and related audits, audits of pension and benefit plans, IT infrastructure control assessments, contractual audits of third-party arrangements, assurance services on corporate citizenship reporting and compliance with corporate integrity agreements, and consultation regarding new accounting pronouncements.

Tax Services represent tax compliance, tax returns, assistance with historical tax matters and other tax-related services.

Other Services include training in the finance area, advice for process improvements, benchmarking studies, assessment of certain non-financial processes and license fees for use of accounting and other reporting guidance databases.

FURTHER INFORMATION

THE GROUP STRUCTURE OF NOVARTIS

NOVARTIS AG AND GROUP COMPANIES

Under Swiss company law, Novartis AG is organized as a corporation which has issued shares of common stock to investors. The registered office of Novartis AG is Lichtstrasse 35, CH-4056 Basel, Switzerland.

Business operations are conducted through Novartis Group companies. Novartis AG, a holding company, owns directly or indirectly all companies worldwide belonging to the Novartis Group. Except as described below, the shares of these companies are not publicly traded. The most important Novartis subsidiaries and associated companies are listed in Note 31 to the Group's consolidated financial statements.

DIVISIONS

The businesses of Novartis are divided on a worldwide basis into six operating divisions, Pharmaceuticals, Alcon (eye care), Vaccines and Diagnostics, Sandoz (generics), Over-the-Counter and Animal Health, and Corporate activities.

MAJORITY HOLDINGS IN PUBLICLY TRADED GROUP COMPANIES

Novartis AG holds 76% of Novartis India Limited, with its registered office in Mumbai, India, and listed on the Bombay Stock Exchange (ISIN INE234A01025, symbol: HCBA). The total market value of the 24% free float of Novartis India Limited was USD 92.6 million at December 31, 2012, using the quoted market share price at the year end. Applying this share price to all the shares of the company the market capitalization of the whole company was USD 392.5 million, and that of the shares owned by Novartis was USD 299.9 million.

SIGNIFICANT MINORITY HOLDINGS IN PUBLICLY TRADED COMPANIES

Novartis AG holds

- 33.3% of the bearer shares of Roche Holding AG, with its registered office in Basel, Switzerland, and listed on the SIX Swiss Exchange (Valor No. 1203211, ISIN CH0012032113, symbol: RO). The market value of the Group's interest in Roche Holding AG, as of December 31, 2012, was USD 10.9 billion. The total market value of Roche Holding AG was USD 173.9 billion. Novartis does not exercise control over Roche Holding AG, which is independently governed, managed and operated.
- 24.9% of Idenix Pharmaceuticals, Inc., with its registered office in Delaware, USA, and listed on NASDAQ (Valor No. 1630029, ISIN US45166R2040, symbol: IDIX). The total market value of the 75.1% free float of Idenix Pharmaceuticals, Inc. was USD 487.7 million at December 31, 2012, using the quoted market share price at the year end. Applying this share price to all the shares of the company the market capitalization of the whole company was USD 649.3 million and that of the shares owned by Novartis was USD 161.6 million. Novartis does not exercise control over Idenix Pharmaceuticals, Inc., which is independently governed, managed and operated.

INFORMATION OF OUR STAKEHOLDERS

INTRODUCTION

Novartis is committed to open and transparent communication with shareholders, financial analysts, customers, suppliers and other stakeholders. Novartis aims to disseminate material developments in its businesses in a broad and timely manner that complies with the rules of the SIX Swiss Exchange and the NYSE.

COMMUNICATIONS

Novartis publishes an Annual Report each year that provides information on the Group's results and operations. In addition to the Annual Report, Novartis prepares an annual report on Form 20-F that is filed with the SEC. Novartis discloses quarterly financial results in accordance with IFRS and issues press releases from time to time regarding developments in its businesses.

Novartis furnishes press releases relating to financial results and material events to the SEC via Form 6-K. An archive containing Annual Reports, annual reports on Form 20-F, and quarterly results releases, as well as related materials such as slide presentations and conference call webcasts, is on the Novartis Investor Relations website (www.novartis.com/investors). The archive is available on the Novartis website:
http://www.novartis.com/newsroom/media-releases/index.shtml

Information contained in reports and releases issued by Novartis is only correct and accurate at the time of release. Novartis does not update past releases to reflect subsequent events and advises against relying on them for current information.

INVESTOR RELATIONS PROGRAM

An Investor Relations team manages the Group's interaction with the international financial community. Several events are held each year to provide institutional investors and analysts various opportunities to learn more about Novartis.

Investor Relations is based at the Group's headquarters in Basel, Switzerland. A part of the team is located in New York to coordinate interaction with US investors. Information is available on the Novartis website: www.novartis.com/investors. Investors are also welcome to subscribe to a free e-mail service on this site.

WEBSITE INFORMATION

Topic	Information
Share Capital	
	Articles of Incorporation of Novartis AG http://www.novartis.com/corporate-governance Novartis key share data http://www.novartis.com/key-share-data
Shareholder Rights	
	Articles of Incorporation of Novartis AG http://www.novartis.com/corporate-governance Investor Relations information http://www.novartis.com/investors
Board Regulations	
	Board Regulations http://www.novartis.com/corporate-governance
Executive Committee	
	Executive Committee http://www.novartis.com/executive-committee
Novartis Code for Senior Financial Officers	
	Novartis Code of Ethical Conduct for CEO and Senior Financial Officers http://www.novartis.com/corporate-governance
Additional Information	
	Novartis Investor Relations http://www.novartis.com/investors

COMPENSATION REPORT

Novartis aspires to be an employer of choice and to attract and retain best-in-class talent around the world.

Our compensation plans are designed to support our position as a preeminent global healthcare company. They provide competitive compensation and benefits for world-class talent in a competitive market. They are aligned with our business performance objectives that are key to our sustained success while being transparent, coherent and consistent with our pay-for-performance philosophy. Our compensation system aims to encourage innovation and entrepreneurship and, at the same time, deter excessive risk-taking at the expense of the long-term condition of the Group.

The Compensation Report describes our compensation system and philosophy, and provides details on the compensation related to 2012 performance.

CONTENTS

MANAGEMENT SUMMARY

STAKEHOLDERS OUTREACH AND ENGAGEMENT

Novartis compensation policies and practices aim to create long-term value for the Group through its talented and dedicated associates.

Our Board and management reach out regularly to our stakeholders to gather feedback on our compensation system. This includes telephone and in-person discussions with individual and institutional investors and proxy advisors. In addition, we answer and take into consideration all written queries and comments. We regularly analyze market practices and take advice from the Compensation Committee's independent advisors.

With the benefit of this feedback, in 2012, the Compensation Committee undertook a strategic review of our compensation system, and is proposing several fundamental changes to the compensation structure for the CEO and the members of the Executive Committee from 2014 onwards. These changes have been approved by the Board and will be submitted to a consultative shareholder vote at the Annual General Meeting in 2013. Further details of the proposed changes are set out in a separate summary attached to the Notice of Annual General Meeting 2013.

In addition, based on the Compensation Committee's annual review of our compensation system, in 2012, we have decided with immediate effect to:

– Increase our level of disclosure regarding performance, in particular, for the CEO against his 2012 objectives.
– Further pursue the shift from the Equity Plan "Select" (our time-vesting long-term incentive program) to the Long-Term Performance Plan "LTPP" (our performance-vesting long-term incentive program) for members of the Executive Committee.
– Exclude the CEO and the members of the Executive Committee from receiving Special Share Awards that are granted on a discretionary basis and are not contingent on the achievement of future targets.

NOVARTIS PERFORMANCE IN 2012 AND CEO COMPENSATION

In 2012, overall net sales for the Group were maintained in line with the prior year in constant currencies (cc), despite global economic challenges and the loss of our exclusivity of *Diovan*. Core operating income was slightly below the prior year in cc. Strong new product launches helped rejuvenate our portfolio. Recently launched products accounted for 29% of Group net sales, including *Gilenya*, *Tasigna*, *Lucentis* and *Afinitor* in our Pharmaceuticals Division. Growth in emerging markets (i.e. 6% on average) contributed USD 13.8 billion to Group net sales.

The Pharmaceuticals Division exceeded its net sales goals and significantly surpassed its operating income targets, while Alcon, Sandoz and Animal Health performed in line with financial targets. Our OTC business and Vaccines and Diagnostics Division were below target, as both were impacted by quality issues and production bottlenecks.

The company continued to focus on driving growth through science-based innovation, which helped us maintain one of the industry's strongest pipelines: our Pharmaceutical R&D projects include 71 new compounds, which is among the highest in the industry. Sandoz had 12 first-to-files and further expanded its lead in differentiated products including biosimilars and dermatology. The Vaccines and Diagnostics Division received a positive opinion from the EMA's Committee for Medicinal Products for Human Use (CHMP) for *Bexsero* – our groundbreaking meningococcal disease vaccine.

The company took significant measures to improve production quality. Quality issues at a US production site affected the performance of OTC and Animal Health, which together make up our Consumer Health Division. Both businesses are expected to return to growth in 2013 amid continued improvement measures.

Overall, the company delivered solid financial results and, for the 16th consecutive year, we propose to raise the annual dividend. Adding the share price appreciation to the dividend, we delivered a total shareholder return of 11.8% in CHF (and 15% in USD for ADS holders) over 2012.

The Board of Directors assessed that, under the CEO's leadership and with its strong pipeline of innovative products, the company is strategically well-positioned to operate successfully in the evolving healthcare industry.

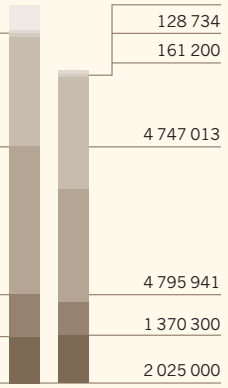
The Board of Directors determined that the CEO met most of the objectives that were set at the start of the year in challenging market conditions and fully acknowledged the breakthroughs in innovation and the efficiency gains. For more details on the 2012 CEO performance, see page 124.

Based on the assessment of both the company and individual performance, the Compensation Committee determined that the CEO earned an annual incentive payout of CHF 1.4 million and long-term incentive "Select" of CHF 4.8 million. In addition, based on the achievement of Novartis Economic Value Added over the last three years, the CEO earned 76 937 shares, representing a value of CHF 4.7 million. The CEO's total compensation for 2012 (i.e. base salary, variable compensation, pension and other benefits) was CHF 13.2 million. This represents a total reduction of 15.9% from 2011, or 9.8% excluding the value of the 2011 LSSP match (our leveraged share savings plan). The Compensation Committee determined that this was appropriate, given that the company's overall performance in 2012 was lower in certain areas than in 2011.

The CEO's total compensation for 2012 is set out in the table below.

CEO COMPENSATION FOR PERFORMANCE YEAR 2012 VERSUS PRIOR YEAR (MARKET VALUE, IN CHF)

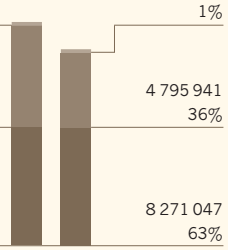
	2011	2012
Total	**15 722 386**	**13 228 188**
Future LSSP/ESOP match	1 056 033	0
Other benefits	106 889	128 734
Pension benefits	172 193	161 200
Long-Term Performance Plan	4 550 524	4 747 013
Equity Plan “Select”	6 160 047	4 795 941
Annual incentive	1 760 033	1 370 300
Base compensation	1 916 667	2 025 000



Novartis for reasons other than retirement, disability or death, his unvested long-term incentive compensation is forfeited, even in case of termination without cause. The chart below sets out the portion acquired immediately (“realized”) and the portion deferred and prospectively payable at a future date (“unrealized”).

CEO COMPENSATION REALIZED/UNREALIZED (MARKET VALUE, CHF)

	2011	2012
Pension	172 193 1%	161 200 1%
Unrealized	7 216 080 46%	4 795 941 36%
Realized	8 334 113 53%	8 271 047 63%



It is important to note that not all of the 2012 compensation is finally acquired. A significant portion is deferred and prospectively payable at a future date subject to performance at the end of the performance cycle and employment conditions. If the CEO leaves

The Compensation Committee has determined that the CEO’s annual base salary for 2013 is increased by 1.5% from 2012, in line with general salary increases for other Swiss associates.

KEY FEATURES OF OUR 2012 COMPENSATION SYSTEM FOR THE CEO AND THE MEMBERS OF THE EXECUTIVE COMMITTEE

PAY-FOR-PERFORMANCE

Compensation of executives is strongly linked to our performance. Our compensation programs are designed to pay our executives relative to Novartis performance, measured against stretched financial goals, individual performance and behavior, as well as share performance.

COMPETITIVE COMPENSATION

Regular benchmarking ensures that compensation opportunities offered to executives enable Novartis to attract and retain top talent. Generally, Novartis compensation programs aim at compensating associates at the median level of compensation, with upper quartile (>75th percentile) for sustained superior performance.

EQUITY OWNERSHIP

To align the interests of our management with our shareholders, we require our CEO and the members of the Executive Committee to hold a substantial value in company shares in relation to their annual compensation.

SAFEGUARDS

Our plans contain a number of features to ensure that business risks are appropriately managed, while delivering sustainable returns to shareholders. In particular, safeguards are maintained to limit circumstances in which inappropriate risks might be taken:

- Our incentive programs have an appropriate balance between short-term and long-term performance measures with different time horizons and pay out forms (cash and equity).
- All incentive plan payouts are capped at 200% of target.
- Our executive employment contracts include clawback clauses, and do not contain provisions for severance payments, or change-of-control clauses.
- Employment contracts for our CEO and the members of the Executive Committee provide a notice period of 12 months.
- The Compensation Committee reviews annually the performance of Novartis key executives against the Novartis Values and Behaviors and the performance of Novartis and its divisions.

SUMMARY OF COMPENSATION DELIVERY TO THE CEO AND THE MEMBERS OF THE EXECUTIVE COMMITTEE

Compensation element	Purpose	Performance measurement	Vesting	Target/Cap	Delivery
Base compensation	Provides a reasonable, competitive level of fixed compensation in recognition of the position and responsibilities held	–	-	–	Cash
Short-term incentive Annual incentive	Rewards performance against short-term (annual) individual and divisional or Group targets, and demonstrable progress against longer-term objectives	Business and Individual performance	-	Target: Up to 60% of base compensation Cap: 200% of target	Cash
Leverage Share Saving Plan "LSSP" / Employee Share Option Plan "ESOP"	Retains key executives within Novartis, while aligning with the long-term interests of our shareholders	–	LSSP:5-year time-vesting ESOP: 3-year time-vesting	–	Shares (LSSP: 1:1 / ESOP: 2:1 matching paid out if executive decides to invest the annual incentive in shares)
Long-term incentive Equity plan "Select"	Ties compensation directly to the long-term performance of our shares to further align with the interests of our shareholders	Business and Individual performance at grant	3-year time-vesting	Target: Up to 200% of base compensation Cap: 200% of target	Restricted shares, tradable options or Restricted Share Units (RSU)
Long-Term Performance Plan "LTPP"	Motivates commitment to longer-term objectives and sustained financial performance for our shareholders	Novartis Economic Value Added (NVA) at vesting	3-year performance-vesting	Target: Up to 175% of base compensation Cap: 200% of target	Shares

COMPENSATION OF EXECUTIVES AND OTHER ASSOCIATES

2012 CEO PERFORMANCE

INTRODUCTION

The CEO's individual objectives for 2012 were based on a balanced scorecard with a mix of quantitative and qualitative targets for the Group in four key areas; financial performance, innovation and growth, organizational health and customer satisfaction; and adherence to our values and behaviors. Below is a review of his 2012 performance in each area.

FINANCIAL PERFORMANCE

The CEO's objectives for 2012 included financial targets based on net sales, operating income, earnings per share and free cash flow. Overall performance for the Group in 2012 was in line with expectations set at the beginning of the year, with strong performance from the Pharmaceuticals Division, in particular, driving Group net sales in line with targets and the prior year in constant currencies (cc), and core operating income surpassing the target and only slightly below the prior year in cc. This is despite the loss of our exclusivity of *Diovan*, our largest product. Alcon, Animal Health and Sandoz performed in line with financial targets. Due to quality issues and production bottlenecks, goals set for our OTC business and Vaccines and Diagnostics Division were not met.

INNOVATION AND GROWTH

The CEO's objectives for 2012 included targets to extend our lead in innovation and accelerate growth, which are intended to deliver breakthroughs in areas of highest medical unmet need and help mitigate the effect of the loss of our exclusivity of *Diovan*. Overall performance for the Group in 2012 exceeded the goals set by the Board. Novartis invested more than USD 9 billion in research and development, significantly advancing our promising pipeline projects and securing 17 major approvals across our portfolio in 2012. The Novartis pharmaceuticals pipeline is expected to deliver a record number of near-term pivotal study readouts, filings and approvals which, together with recently launched products, is expected to drive sales growth. In 2012, our Pharmaceutical R&D projects include 71 new compounds, which is among the highest in the industry, and Sandoz had 12 first-to-files. Vaccines and Diagnostics received a positive opinion from the EMA's Committee for Medicinal Products for Human Use (CHMP) for *Bexsero*. Sales from recently launched products accounted for 29% of Group net sales, while continually improved growth in emerging markets contributed USD 13.8 billion to Group net sales.

ORGANIZATIONAL HEALTH

The CEO's objectives for 2012 included goals for strengthening quality control, driving productivity, developing people and enhancing the Group's reputation. In 2012, Novartis made a significant investment and strengthened measures toward achieving "quality beyond compliance." As a result, the vast majority of inspections by regulatory authorities were assessed as good or satisfactory. While

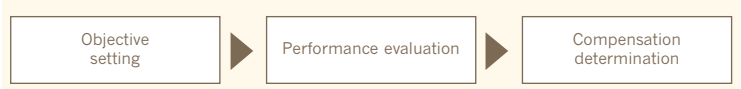
there is still work to do at our Consumer Health facility in Lincoln, Nebraska and at some of the Sandoz sites, our Broomfield, Colorado site, which was under an FDA warning letter, had a satisfactory re-inspection by the FDA and achieved compliance. Productivity measures helped us to achieve overall savings of around USD 2.8 billion in 2012 for the Group. We further deepened and broadened programs to strengthen our leadership, to develop talent and to renew our focus on employee engagement.

CUSTOMER SATISFACTION

In 2012, our "Customers First" initiative to improve cross-divisional collaboration and better serve our customers' needs delivered incremental sales of more than USD 0.8 billion, exceeding the objective.

PERFORMANCE EVALUATION SYSTEM AND COMPENSATION DETERMINATION

To foster a high performance culture, Novartis applies a uniform People Performance Management process worldwide, based on quantitative and qualitative criteria, including Novartis Values and Behaviors. Novartis associates, including the CEO and the members of the Executive Committee, are subject to a three-tier formal process.



OBJECTIVE SETTING

Objective setting for the CEO

At the beginning of each performance year, the Chairman meets with the CEO to discuss his objectives for the coming year following a balanced scorecard approach. The Board of Directors reviews and approves these objectives and ensures that they are in line with the Group's goals of fostering sustainable performance, balancing short- and long-term goals, and not rewarding inappropriate or excessive risk taking at the expense of the long-term condition of the Group.

The financial criteria for short-term performance appraisal of the CEO include growth objectives for net sales, operating income, net income, free cash flow, earnings per share as well as relevant market shares. For long-term performance appraisal, the financial criterion is the Novartis Economic Value Added (NVA). NVA is a measure of the Group's performance, taking into account Group operating income adjusted for interest, taxes and charge for the cost of capital or, more simply, the value created in excess of the expected return of the company's investors (i.e. the shareholders and debt holders). See also page 186 of the Financial Report for information regarding NVA calculation.

Objective setting for the members of the Executive Committee and associates

At the beginning of each performance year, the CEO and each of the executives directly reporting to him determine together the business objectives and respective metrics applicable to each of the divisional and global functional leaders. The CEO then presents the business objectives of the members of the Executive Committee to the Board of Directors.

In the same manner, each line manager and each associate directly reporting to her or him set the objective and metrics applicable to the next-level associate. As a principle, all written objectives are reviewed by two hierarchical levels, including the direct and the indirect supervisors.

Objectives are set each year at ambitious levels to motivate a high degree of business performance appropriately balancing the short- and long-term objectives.

Decisions and actions must be consistent with Novartis Values and Behaviors, which describe the desired conduct of associates and set boundaries and guidelines as an important building block for the culture of our Group. The Novartis Values and Behaviors focus on quality, innovation and integrity.

Novartis does not disclose specific business objectives for the upcoming years, as it would give our competitors insight into our key market strategies and areas that could be used against Novartis competitively by industry consultants or competitors targeting existing customers.

PERFORMANCE EVALUATION

Our performance management system and "pay-for-performance" principle have spurred a culture of meritocracy at Novartis. We believe that pay-for-performance is only sustainable when fair performance evaluation procedures ensure integrity and fairness. Performance evaluation is conducted at all levels of the organization.

The People Performance Management evaluation process consists of two reviews per year – a mid-year and a year-end review. During such formal meetings, associates and managers evaluate performance against the objectives set at the beginning of the year. In assessing performance, managers focus on results-oriented measures, as well as on how results were achieved. The "four eyes" principle ensures that associates' annual objectives and performance evaluations are reviewed separately by two levels of supervisors.

Our People Performance Management evaluation process is complemented with an annual Organization and Talent Review in which organizational needs and career aspirations of associates are discussed. The review includes the assessment of strengths, weaknesses and potential for personal growth. The Organization and Talent Review has become an integral tool for top management in succession planning, and the scope of the program has steadily expanded globally throughout the organization.

Because performance appraisals impact significant elements of reward, we review each year the consistency of performance ratings across the entire Group.

Process for performance evaluation of the CEO

At the end of a business year, the CEO prepares and presents to the Chairman and, later, to the Board of Directors the actual results against the previously agreed-upon objectives, taking into account the audited financial results as well as Novartis Values and Behaviors. On this basis, the Board of Directors discusses the performance of the CEO without him being present. It evaluates the extent to which targeted objectives have been achieved and, to the extent possible, compares these results with peer industry companies, taking into account general economic and financial criteria and industry developments. The Board of Directors later shares its assessment with the CEO. In addition, the Board of Directors assesses periodically the Group business performance and progress of the CEO against his objectives and incentive plan targets.

Process for performance evaluation of the members of the Executive Committee

In January, the Board of Directors meets with the CEO to review and discuss the performance and objectives of the members of the Executive Committee for the previous year, taking into account the financial results, the level of achievement of financial and non-financial objectives, as well as Novartis Values and Behaviors and the general economic and business environment. In addition to the year-end review, the mid-year performance of the CEO is reviewed by the Chairman while the results of the members of the Executive Committee are evaluated by the CEO and then discussed with the Chairman. As for the CEO, the Board of Directors assesses, periodically the Group or divisional business performance and progress of the members of the Executive Committee against their objectives.

COMPENSATION DETERMINATION

Compensation determination for the CEO

Based on the performance evaluation made by the Board of Directors, the Compensation Committee decides at its January meeting on the CEO's total compensation and the target compensation for the coming year without the presence of the CEO. In reaching its decision, the Compensation Committee takes into account other relevant factors, including available benchmark information and the advice of the Compensation Committee advisor.

Compensation determination for the members of the Executive Committee

In the presence of the CEO and based on his recommendations, the Compensation Committee decides on the variable compensation for the members of the Executive Committee and other selected key executives for the previous year. At the same meeting, the Compensation Committee decides on the target compensation for these executives for the coming year.

Compensation determination for other associates

Based on the year-end performance rating, line managers and next-level line managers determine the incentive awards for each associate under review, as well as the target compensation for the coming year. The Compensation Committee determines the grants for all equity compensation plans in aggregate.

EXECUTIVE COMPENSATION PROGRAM AND STRUCTURE

PHILOSOPHY AND COMPENSATION PRINCIPLES

Philosophy and goals

Since Novartis was created, management has forged a distinctive culture and inspired all associates with the shared aspiration of being one of the world's most respected healthcare companies. In order to realize this aspiration, Novartis must attract and retain the best-in-class talent worldwide and reward associates according to their performance.

Our compensation system aims to foster personal accountability based on clear individual and organizational objectives, and also underlines the importance of competence and integrity as drivers of sustainable business success. Consequently, compensation includes, in addition to a fixed base compensation, a significant variable compensation element. The size of the variable compensation element is based on Group or divisional results and on individual performance against a written set of objectives. Moreover, to further align our compensation programs with the interests of shareholders, a large proportion of variable compensation for executives is paid in the form of equity – Novartis shares (or similar equity instruments) or share options with a three-year vesting period.

The core principles of our compensation policy and people development have resulted in both sustained performance and superior leadership. Novartis has reported a strong performance year over year and, for the 16th consecutive year, propose to raise the annual dividend payout to shareholders.

Compensation principles

The compensation system for Novartis associates is based on the following five principles:

Principle I: Pay-for-Performance

Compensation of executives and associates is strongly linked to achievements of business and individual performance objectives. The objectives are set at ambitious levels each year to motivate a high degree of business performance with emphasis on short- and long-term quantifiable objectives.

Principle II: Competitive Compensation

Compensation at competitive levels are essential to attract and retain talented and diverse associates. Our target compensation levels reflect total compensation for comparable positions at relevant benchmark companies.

Principle III: Balanced Rewards to Create Sustainable Value

Shareholders expect their investment to deliver sustainable returns while ensuring that risks are appropriately managed. Novartis incentives underpin the long-term strategic planning that is essential to address the challenges of innovation and the long development and commercialization cycles that characterize our industry. We believe that the way in which we motivate and reward our associates encourages performance, loyalty and entrepreneurship, and creates sustainable value which is in the long-term interest of our shareholders, employees and communities.

Principle IV: Business Ethics

At Novartis, all associates are expected to achieve their business results through ethical practices, reflected also in our Code of Conduct. To ensure that these requirements are complied with, Novartis has implemented a number of safeguards, such as a stringent risk management policy and clawback provisions, for most compensation plans and for the majority of associates.

Principle V: Equity Ownership

Investors expect the leaders of the companies to act like owners. In the Board of Directors' view, that alignment works best when key executives have meaningful multiples of their base compensation invested in the equity of their company. Novartis grants equity compensation, which for the most senior executives represents a substantial portion of total compensation. Under this principle, Novartis sets share ownership guidelines for a number of key executives of the Group.

SETTING COMPENSATION LEVEL AND PERFORMANCE TARGETS FOR VARIABLE PAY

For Novartis to attract and retain key talent it is important to offer competitive compensation levels on a global basis. In line with the compensation philosophy of Novartis the CEO, a member of the Executive Committee, or an associate achieving their objectives is generally awarded a compensation level compared to the median level of the relevant benchmarks. In the event of under- or over-performance the actual compensation may be lower or higher than the benchmark median. In the event of exceptional and sustained performance actual compensation may be awarded at the top quartile of the market benchmarks of peer companies in order to encourage and reward superior performance.

The Compensation Committee reviews the compensation of the CEO and of the members of the Executive Committee annually and compares them to the relevant compensation level of similar positions at peer companies. For this purpose, Novartis uses benchmark data from well-known market data providers and other relevant data sources. In particular the mix of short-term and long-term incentives, the mix of cash and share-based compensation, the level of deferred compensation as well as current compensation policies are reviewed. Further, the data analysis conducted by the market data providers takes into account factors such as recent market trends and best practice in compensation. The Compensation Committee's independent advisor reviews and evaluates the data received, and provides additional insight and evaluation as appropriate.

The comparator companies consist of competitors in the healthcare industry which are operating on a global basis and have the same or similar business model, business size, international competition, and need for talent and skills.

BENCHMARK COMPARATOR COMPANIES

Abbott Laboratories	Eli Lilly and Company	Pfizer
Amgen	GlaxoSmithKline	Roche
AstraZeneca	Johnson & Johnson	Sanofi
Bristol-Myers Squibb	Merck & Co.	

Benchmark criteria (in USD billion)	Novartis[1]	Benchmark Peers Median[2]
Net sales/Revenue	56.7	44.2
Market capitalization	152.0	100.3
Operating income	11.5	10.3
Net income	9.6	6.8
Total assets	124.2	65.1

[1] As of December 31, 2012
[2] As at last reported quarter end
Source: S&P Research Insight, trailing four quarters

Compensation of the CEO and the members of the Executive Committee is benchmarked relative to the healthcare companies in the table above. For other executives, excluding the CEO and the members of the Executive Committee, compensation is benchmarked either relative to these healthcare companies or, for non-industry specific positions, to market data from companies outside of the healthcare industry with scope, size and complexity that approximate the size and nature of the Novartis business. This reflects the fact that competition for talent is not limited to only the healthcare industry.

ELEMENTS OF OUR COMPENSATION PROGRAMS

The primary elements of our compensation system are:
– Annual base compensation: A fixed annual salary
– Variable compensation: Rewards for individual and business performance
– Benefits: Including pension and healthcare benefits

COMPENSATION ELEMENTS

Annual Base Compensation (Salary)

The level of base compensation reflects each associate's key areas of responsibilities, job characteristics, seniority, experience and skill sets. It is paid in cash, typically monthly, and is set according to local practice, designed to provide our associates with fixed compensation to ensure a reasonable standard of living relative to that offered by our peer companies.

In general, base compensation is reviewed annually to ensure that competitive pay is maintained.

Variable Compensation

The goal of variable compensation is to reward Novartis associates according to their performance and in a manner consistent with the "pay-for-performance" principle.

At managerial levels, variable compensation is generally composed of annual cash incentive and an equity based long-term incentive. Novartis believes that variable compensation should specifically emphasize long-term incentives to align the interests of our associates with those of long-term shareholders. This also reflects the crucial importance of innovation and the long product development and commercialization cycles that characterize our industry. The amount of variable compensation is based on results and calculated as a percentage (0-200%) of target variable compensation.

VARIABLE COMPENSATION

Short-term incentive

The annual incentive ensures that associates focus on individual objectives and objectives defined by the business over a single financial year. These include objectives such as market share, innovation, and people management, which also positively influence the long-term performance. It rewards performance in the last 12 months in relation to these objectives and reinforces the "pay-for-performance" principle.

In principle, the annual incentive is paid in cash and is capped at 200% of target. However, a number of associates in certain countries and certain key executives worldwide are encouraged to invest their annual incentive in a share savings plan. Under the share savings plan, they will receive their annual incentive awards fully or partially in Novartis shares in lieu of cash. As a reward for their participation in the share savings plan, Novartis matches their investments in shares after a holding period of three or five years. As a rule, no shares are matched under these plans if an associate leaves Novartis prior to the expiration of the holding period for reasons other than retirement, disability or death. Thus, through the participation in the share savings plan our associates are incentivized to remain with Novartis for the long-term, while sharing in the future financial success of Novartis and further aligning with the long-term interests of our shareholders.

Novartis currently has three share savings plans:

– *Leveraged Share Savings Plan (LSSP)*: Worldwide 29 key executives were invited to participate in a leveraged share savings plan based on their performance in 2012. Instead of cash, their annual incentive was awarded in shares and subject to a holding period of five years. At the end of the holding period, Novartis will match the invested shares at a ratio of 1-to-1 (i.e. one share awarded for each invested share).
– *Employee Share Ownership Plan (ESOP):* In Switzerland, the ESOP is available to about 13 341 associates. Participants within this plan may choose to receive the incentive (i) 100% in shares, (ii) 50% in shares and 50% in cash or (iii) 100% in cash. After expiration of a three-year holding period of Novartis shares invested under the ESOP, each participant will receive one free matching share for every two Novartis shares invested. A total of 5 557 associates chose to receive shares under the ESOP for their performance in 2012.
– *United Kingdom Plan (ESOP UK)*: In the United Kingdom, 2 743 associates can invest up to 5% of their monthly salary in shares (up to a maximum of GBP 125) and also may be invited to invest all or part of their net annual incentive in shares. Two invested shares are matched with one share with a holding period of three years. During 2012, 1 576 associates elected to participate in this plan.

Associates may participate in only one of these plans in any given year.

Long-term incentive

The long-term incentive is designed to focus on our objective of long-term sustainable shareholder value creation and to support our "pay-for-performance" principle by using equity based compensation with a three year vesting period.

These long-term incentives awarded by Novartis aim at retaining our key talent, encouraging the realization of multi-year business objectives and aligning our associates with our shareholders' interests by tying the value realized to the change in the share price at vesting.

The equity based long-term incentive is subject to the achievement of predetermined performance objectives either at grant or at vesting.

Novartis offers two long-term incentive plans, the Equity Plan "Select" based on yearly results with a three-year vesting period and the Long-Term Performance Plan based on rolling three-year global performance objectives.

In exceptional cases, Novartis may also grant special share awards.

Novartis uses shares repurchased in the market to fulfill obligations to deliver shares as required by the variable compensation plans and special share awards, thus avoiding any dilution to shareholders.

Novartis does not have any approved conditional capital to obtain shares for delivery of our share awards.

Equity Plan "Select"

The Equity Plan "Select" is a global equity incentive plan under which eligible associates, including members of the Executive Committee, may annually be awarded a grant capped at 200% of target. The Equity Plan "Select" allows its participants to choose the form of their equity compensation in restricted shares (or, in some jurisdictions, RSUs[1]), tradable share options, or a combination of both, with a vesting period of three years.

Tradable share options expire on their 10th anniversary from grant date. Each tradable share option granted to associates entitles the holder to purchase after vesting (and before the 10th anniversary from grant date) one Novartis share at a stated exercise price that equals the closing market price of the underlying share at the grant date.

[1] In some jurisdictions, Restricted Share Units (RSU) are granted rather than shares. Each RSU is equivalent in value to one Novartis share and is converted into one share at the vesting date. RSUs do not carry any dividend or voting rights, except for the USA where employees receive a dividend equivalent during the vesting period for 2010 and 2011 grants. Each restricted share is entitled to voting rights and payment of dividends during the vesting period.

The terms of the tradable share options granted since 2009 are shown in the table below.

TERMS OF SHARE OPTIONS

Grant year	Exercise price (CHF/USD)	Vesting (years) (CH/other countries)	Term (years)
2013	61.70/66.07	3/3	10
2012	54.20/58.33	3/3	10
2011	54.70/57.07	2/3	10
2010	55.85/53.70	2/3	10
2009	53.65/46.42	2/3	10

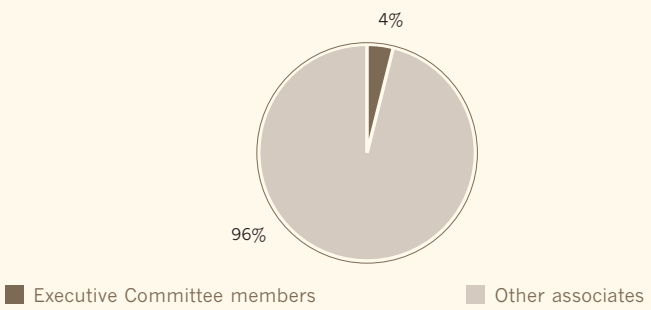
If a participant leaves Novartis for reasons other than retirement, disability or death, unvested shares, RSUs and share options are forfeited, unless determined otherwise by the Compensation Committee (for example, in connection with a reorganization or divestment).

A total of 12 352 participants received 0.8 million restricted shares, 6.0 million RSUs and 25.2 million tradable share options under the Novartis Equity Plan "Select" for their performance in 2012, representing a participation rate of about 10% of all full-time-equivalent associates worldwide.

As of December 31, 2012, 95.3 million share options granted to associates were outstanding, covered by an equal number of shares and corresponding to 3.9% of the total number of outstanding Novartis shares.

Approximately 4% of the total equity value awarded under the Equity Plan "Select" was granted to the members of the Executive Committee.

2012 EQUITY VALUE AWARDED UNDER THE EQUITY PLAN "SELECT"



Long-Term Performance Plan

The Long-Term Performance Plan (LTPP) is an equity plan for key executives designed to foster long-term commitment by aligning the incentives of key executives to the performance of Novartis. The LTPP is offered to selected executives, who are in key positions and have a significant impact on the long-term success of Novartis. It is capped at 200% of target. For members of the Executive Committee, LTPP represents between 20% and 44% of their total variable compensation at target. The rewards are based on rolling three year global performance objectives focused on the Novartis Economic Value Added (NVA) measured annually. The NVA is calculated based on Group operating income adjusted for interest, taxes and cost of capital charge. The performance realization of a plan cycle is obtained right after the end of the third plan year by adding together the annual NVA realizations of all plan years of the plan cycle. The performance ratio for a plan cycle is obtained by dividing the performance realization for the plan cycle with the performance target for the plan cycle, expressing the result as a percentage. The LTPP only allows a payout if the actual NVA exceeds predetermined target thresholds.

To support the alignment of interests of the members of the Executive Committee with those of the Group and of our shareholders, the Long-Term Performance Plan represents a substantial and increasing portion of their variable compensation targets.

On January 17, 2013, 132 key executives earned 456 712 shares under the Long-Term Performance Plan, based on NVA achievement that exceeded our target performance for the performance period 2010 to 2012.

LONG-TERM PERFORMANCE PLAN PARTICIPANTS HISTORY

Grant year = Target setting	Performance period	Award year = Payout in shares	Plan participants (number of key executives)
2013	2013–2015	2016	133
2012	2012–2014	2015	136
2011	2011–2013	2014	136
2010	**2010–2012**	**2013**	**132**
2009	2009–2011	2012	138

Special Share Awards

Selected associates may exceptionally receive special awards of restricted shares or RSUs. These Special Share Awards provide an opportunity to reward outstanding achievements or exceptional performance and aim at retaining key contributors. They are based on a formal internal selection process, in which the individual performance of each candidate is thoroughly assessed at several management levels. The CEO and the members of the Executive Committee are excluded from receiving this type of award.

In exceptional circumstances, special equity grants may be awarded to attract special expertise and new talent into the organization. These grants are consistent with market practice and the Novartis philosophy to attract, retain and motivate best-in-class talent around the world.

Restricted special awards generally have a five-year vesting period. If an associate leaves Novartis for reasons other than retirement, disability or death, unvested shares or RSUs are generally forfeited. Worldwide 787 associates at different levels in the organization were awarded a total of 0.8 million shares or RSUs in 2012.

Benefits

The primary purpose of pension and healthcare plans is to establish a level of security for associates and their dependents with respect to age, health, disability and death. The level of pension and healthcare benefits provided to associates is country-specific and influenced by local market practice and regulations, and is reviewed regularly.

The Group has a policy to change from defined-benefit (DB) pension plans to defined-contribution (DC) pension plans. All the major plans have now been aligned with our benefits strategy as far as reasonably practicable, with the exception of the Alcon DB pension plans, for which Novartis has established a global timeline for their conversion into DC pension plans.

Novartis may provide other benefits in a specific country according to local market practice and regulations, including length-of service awards and perquisites. Associates who have been transferred on an international assignment can also receive benefits in line with Novartis policies.

SUMMARY OF COMPENSATION SYSTEM

Compensation element	Compensation plan	Performance period at risk	Method of payments	Main drivers	Performance metrics: At award	Performance metrics: At vesting	Number of participants
Base compensation	Base salary	–	Cash	Position, experience, sustained performance	–	–	All associates
Variable compensation							
Short-term incentive	Annual incentive (including LSSP, ESOP, ESOP UK) [1]	12 months [1]	Cash and/or shares	Financial measures such as net sales, operating income, free cash flow, market share, innovation and ongoing efforts to optimize organizational effectiveness and productivity	Achievement of individual, business and financial annual objectives or achievement of milestones in individual objectives or long-term strategic plans, Novartis Values and Behaviors	–	16 113 [2]
Long-term incentive	Equity Plan "Select"	3 years	Restricted shares, tradable options or RSUs	Financial measures such as net sales, operating income, free cash flow, market share, innovation and ongoing efforts to optimize organizational effectiveness and productivity	Achievement of individual, business and financial annual objectives or achievement of milestones in individual objectives or long-term strategic plans, Novartis Values and Behaviors	Share price	12 352
	Long-Term Performance Plan	3 years	Shares	Achievement of long-term profit, measured through Novartis Economic Value Added (NVA) targets at Group level	–	Novartis Economic Value Added	132
	Special [3] Share Awards	5 years	Restricted shares or RSUs	Rewarding particular achievements or exceptional performance	Selective assessment	Share price	787
Benefits				Position, tenure, age, sustained performance	–	–	

[1] If the associate invests the annual incentive into a shares savings plan, any matching shares are subject to risk for the vesting/holding period of five years (LSSP, with a 1:1 matching) or three years (ESOP or ESOP UK, with a 2:1 matching).
[2] Number of particpants in LSSP, ESOP and ESOP UK.
[3] Executive Committee members are excluded from receiving this type of award.

TARGET INCENTIVE LEVELS AND PERFORMANCE MEASURES

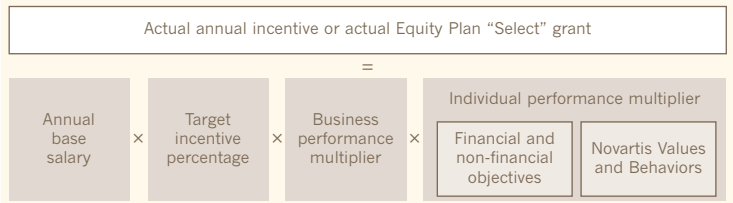
Annual Incentive and Equity Plan "Select"

Under both the annual incentive and Equity Plan "Select," Novartis defines a target incentive as a percentage of base compensation for each participating associate at the beginning of each performance period – traditionally the start of each calendar year. Depending on the role and the level of responsibility of the associates, target incentive percentages may reach up to 60% of base compensation for the annual incentive and 200% for the Equity Plan "Select."

The annual incentive and the Equity Plan "Select" are designed to drive the achievement of Novartis' stretched annual financial and operational business targets, as well as the delivery of personal objectives. No awards are granted for performance ratings below a certain threshold.

The Award Calculation Formula under both the annual incentive and the Equity Plan "Select" is the following:

ANNUAL INCENTIVE AND EQUITY PLAN "SELECT" CALCULATION FORMULA



Business and the individual performance multipliers may range from zero to 1.5, and thus have an equivalent weighting in the formula. However, payouts are subject to a cap at 200% of target.

Performance measures that comprise the business performance factor drive the achievement of stretched annual financial and operational targets at Group, divisional and regional levels. These targets are determined based on each executive's area of responsibility, at either Group, divisional or regional level, and may include targets based on net sales, operating income, free cash flow, market share, personnel cost or milestones in research and development. These financial and operational targets have been selected because they define in a balanced way how successful we are in meeting our strategic objectives and creating sustainable value to our shareholders.

The individual performance factor comprises two separate elements. The first element drives the achievement of individually set financial and non-financial objectives. Depending on functional responsibility, non-financial objectives typically include innovation; product launches; successful implementation of growth and productivity initiatives; process improvements; leadership and people management and successful acquisitions, disposals and licensing transactions. The second element ensures that performance is achieved in line with the highest standards in business conduct, as outlined in the Novartis Values and Behaviors. Our leaders are expected to exhibit role-model behavior on a daily basis, and to inspire other associates to do the same.

Once performance has been evaluated, a matrix determines the individual performance factor which is derived from the combination of the two ratings received.

Typically, the annual incentive is paid out in February following the realization of the yearly objectives. Performance under the Equity Plan "Select" is further determined by the development of the share price over the following three-year vesting period, and is contingent on continued employment with Novartis.

For those who have chosen to receive their annual incentive under the LSSP or ESOPs plans, as well as for those receiving awards under the Equity Plan "Select" the number of shares awarded is determined by dividing the actual incentive amount by the closing price of the shares on the grant date. In North America, if associates choose to receive part or all of their grant under the Equity Plan "Select" in tradable share options on American Depositary Shares (ADSs), the resulting number of tradable share options is determined by dividing the respective incentive amount by a value that equals 95% of the value of the options on ADSs as determined in accordance with International Financial Reporting Standards (IFRS). For associates in other countries, the divisor equals 90% of the IFRS value of options on shares.

Long-Term Performance Plan

LTPP drives the achievement of long-term shareholder value creation over rolling three year performance periods. The performance measure (NVA) is assessed annually and targets are set at the beginning of each year. Following the three-year performance period, achievement against the three annual targets is aggregated in order to determine the final payout.

Depending on the role and the level of responsibility of the associates, the target incentive percentages may reach up to 175% of base compensation for LTPP. If performance over the three year vesting period falls below a predetermined threshold of 90% of target, or if the participant leaves Novartis during the performance period for reasons other than retirement, disability or death, none of the award vests. A maximum of 200% of the target award may vest for outstanding performance.

At the beginning of every performance period, plan participants are granted RSUs, which are converted into Novartis shares after the performance period.

LONG-TERM PERFORMANCE PLAN PERIOD

At the end of the three-year performance period, the Compensation Committee adjusts the number of RSUs earned based on actual performance. RSUs are converted into unrestricted Novartis shares without an additional vesting period. In the United States, awards may also be delivered in cash under the US deferred compensation plan.

LONG-TERM PERFORMANCE PLAN PAYOUT

PROPOSED CHANGES TO THE COMPENSATION SYSTEM FOR THE CEO AND THE MEMBERS OF THE EXECUTIVE COMMITTEE FROM 2014

Our Board and management continually reach out to our stakeholders to gather feedback on our compensation system to see if there are ways we can better align with the interests of our shareholders and promote transparency.

Based on this, the Compensation Committee has undertaken a strategic review of the compensation system over the last 12 months and the Board of Directors has approved a number of changes to apply from 2014 onwards, subject to a consultative shareholder vote at the Annual General Meeting in 2013.

The overall design of the proposed program includes an annual incentive plan and two separate long-term incentive plans.

Further details of the proposed changes are set out in a separate summary attached to the Notice of Annual General Meeting 2013.

PROPOSED CHANGES TO THE COMPENSATION SYSTEM FOR THE CEO AND THE MEMBERS OF THE EXECUTIVE COMMITTEE FROM 2014 – KEY HIGHLIGHTS

As from January 2014, the following changes to the compensation programs for the CEO and the members of the Executive Committee would apply:

All variable compensation is performance-based and separate performance measures are used for short-term and long-term incentive plans.

The short-term incentive plan is based on an individual balanced scorecard of 1-year financial and non-financial performance measures, together with assessed values and behaviors. This incentive is paid half in cash and half in shares deferred for 3 years.

The two long-term incentive plans are based on different performance measures and are paid in shares after a 3-year performance period.

The Long-Term Performance Plan (LTPP) includes 3-year forward-looking financial and innovation measures, either at Group or divisional level, depending on the role and responsibilities held by the executive.

The Long-Term Relative Performance Plan (LTRPP) rewards for performance of the Group's Total Shareholder Return (TSR) measured over a 3-year period relative to a peer group of comparator companies as determined by the Board.

The new compensation programs for executives no longer contain discretionary or matching share awards or share options.

SUMMARY OF PROPOSED PROGRAM

Proposed program	Annual Base Salary	+	Annual incentive	+	LTPP	+	LTRPP
Performance measures			1-year targets on area of individual responsibility and assessed values and behaviors		3-year targets based on internal divisional or Group financial and innovation measures		3-year relative Group TSR against an external peer group
Delivery at end of performance period	Cash		50% cash immediately / 50% shares with 3-year time vesting		Shares subject to performance thresholds		Shares subject to a performance threshold

COMPENSATION OF MEMBERS OF THE EXECUTIVE COMMITTEE FOR 2012

The following compensation table discloses the compensation earned by the CEO and the members of the Executive Committee for performance in 2012. The following paragraphs describe the principles underlying the data in the table.

ALIGNMENT OF REPORTING AND PERFORMANCE

The compensation table synchronizes the reporting of annual compensation with the performance in the given year, i.e., all amounts awarded for performance in 2012, including the future LSSP/ESOP match, are disclosed in full.

DISCLOSURE STRUCTURE

The compensation table shows the compensation granted to the CEO and each member of the Executive Committee for performance in 2012 for all compensation elements – base compensation, variable compensation and benefits – as previously described.

The column "Future LSSP/ESOP match" reflects shares to be awarded in the future if the Executive Committee member remains with Novartis for at least three or five years, respectively.

VALUATION PRINCIPLES

In order to allow a comparison with other companies, the Compensation Committee decided to disclose shares, restricted shares, RSUs and ADS at their market value on the date of grant. Market value is the current quoted share price at which a director or an associate is granted a share, a restricted share or a restricted share unit at grant date. The market value of share options is calculated by using an option pricing valuation model as per grant date.

EXECUTIVE COMMITTEE MEMBER MARKET VALUE COMPENSATION FOR PERFORMANCE YEAR 2012 [1]

		Base compensation	Variable compensation					Benefits		Total		Total compensation
			Short-term incentive plans		Long-term incentive plans							
					Equity Plan "Select"		Long-Term Performance Plan	Pension benefits	Other benefits		Future LSSP/ESOP match [9]	Including future LSSP/ESOP match [10,11]
	Currency	Cash (Amount)	Cash (Amount)	Shares (Market value) [2]	Shares (Market value) [3]	Options (Market value) [4]	Shares (Market value) [5]	(Amount) [6]	(Amount) [7]	(Amount) [8]	Shares (Market value)	(Amount)
Joseph Jimenez (Chief Executive Officer)	CHF	2 025 000	1 370 300	0	4 795 941	0	4 747 013	161 200	128 734	13 228 188	0	13 228 188
Juergen Brokatzky-Geiger	CHF	708 750	0	625 330	1 250 536	0	731 145	148 594	10 084	3 474 439	625 330	4 099 769
Kevin Buehler [12]	USD	1 118 333	202 897	504 048	2 827 532	0	1 753 300	413 056	62 930	6 882 096	504 048	7 386 144
Felix R. Ehrat	CHF	743 333	0	750 149	1 500 112	0	432 702	158 498	0	3 584 794	750 149	4 334 943
David Epstein	USD	1 158 332	525 953	727 166	3 132 643	0	1 666 814	325 563	26 191	7 562 662	727 166	8 289 828
Mark C. Fishman	USD	990 000	23 265	966 736	3 960 038	0	1 547 029	242 832	118 319	7 848 219	966 736	8 814 955
Jeff George	CHF	791 667	220 000	220 022	880 027	0	636 250	111 932	55 412	2 915 310	110 011	3 025 321
George Gunn	CHF	862 500	716 300	0	1 193 710	0	1 213 762	108 382	0	4 094 654	0	4 094 654
Naomi Kelman (until February 29, 2012) [13]	USD	102 782	51 667	0	0	0	0	3 196	904 469	1 062 114	0	1 062 114
Andrin Oswald	CHF	791 667	0	304 058	608 054	0	636 250	118 132	38 520	2 496 681	304 058	2 800 739
Jonathan Symonds	CHF	916 667	0	621 011	1 552 557	0	1 377 021	161 817	17 135	4 646 208	621 011	5 267 219
Brian Mc Namara (as from March 1, 2012) [14]	USD	500 000	94 169	140 002	464 869	0	260 580	45 053	19 710	1 524 383	140 002	1 664 385
Total [15]	**CHF**	**10 466 057**	**3 148 166**	**4 711 715**	**21 513 910**	**0**	**14 673 602**	**1 933 597**	**1 310 446**	**57 757 493**	**4 601 704**	**62 359 197**

See note 12 to the Financial Statements of Novartis AG for 2011 data.

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not considered compensation.

[2] Participants elected to invest some or all of the value of their annual incentive in the Leveraged Share Savings Plan (LSSP) with a five-year vesting period or the Swiss Employee Share Ownership Plan (ESOP) with a three-year vesting period rather than to receive cash.

[3] Novartis shares granted under the Novartis Equity Plan "Select" have a three-year vesting period.

[4] Novartis share options granted under the Novartis Equity Plan "Select" are tradable. Share options granted outside North America will expire on January 17, 2023, have a three-year vesting period and have an exercise price of CHF 61.70 per share (the closing price of Novartis shares on the grant date of January 17, 2013). Based on the option pricing valuation model as per grant date, the value of the share options granted outside North America used in this table was CHF 4.28. Share options on ADSs granted to participants in North America will expire on January 17, 2023, have a three-year vesting period and an exercise price of USD 66.07 per ADS (the closing price of Novartis ADSs on the grant date of January 17, 2013). Based on the option pricing valuation model as per grant date, the value of the share options on ADSs granted to participants in North America used in this table was USD 4.37.

[5] Awarded based on the achievement of Novartis Economic Value Added (NVA) objectives over the performance period ended December 31, 2012.

[6] Service costs of pension and post-retirement healthcare benefits accumulated in 2012.

[7] Includes perquisites and other compensation valued at market price. Does not include cost allowances and tax-equalization payments regarding the international assignment of David Epstein, Jeff George and Andrin Oswald. Does not include an annual pension in payment for Kevin Buehler as a result of a change of control clause (USD 491 174). Does not include dividend equivalents paid in 2012 to Kevin Buehler (USD 529 387) for pre Alcon merger RSUs grants, to David Epstein (USD 138 011), Mark C. Fishman (USD 189 845) and Brian Mc Namara (USD 17 122) for RSUs grants made in or prior to 2010.

[8] The value of all equity grants included in this table has been calculated based on market value.

[9] Reflects shares to be awarded in the future under the share saving plans, either the five-year Leveraged Share Savings Plan (LSSP) or the three-year Swiss Employee Share Ownership Plan (ESOP). Participants will receive additional shares ("matching shares") after the expiration of either the five- or three-year vesting period.

[10] The values of the shares, RSUs and share options reflected in this table have been calculated based on market value. The closing share price on the grant date January 17, 2013 was CHF 61.70 per Novartis share and USD 66.07 per ADS.

[11] All amounts are gross amounts (i.e., before deduction of social security and income tax due by the executives). The employer social security contribution is not included.

[12] Excludes 35 153 performance shares awarded to Kevin Buehler, against the share price of USD 54.51 for performance prior to the Alcon merger.

[13] Naomi Kelman stepped down from the Executive Committee as per February 29, 2012. The base compensation and benefits information in the table reflects her pro rata compensation over the period from January 1, 2012 to February 29, 2012 (i.e. the period during which she was member of the Executive Committee). The other compensation ("Other benefits") includes the contractual compensation and benefits from March 1, 2012 to December 31, 2012 due in compensation for the twelve-month notice set forth in her employment contract. The other compensation ("Other benefits") does not include the fair market compensation (USD 1 263 223 related to the period between March 1, 2012 and December 31, 2012) for refraining to compete with any business of Novartis for twelve months following her departure. Ms. Kelman will receive this payment in 2013 partly in cash and partly in shares subject to her continued compliance with the non-compete terms. Of the 88 000 shares reported in the Annual Report 2011 as a Special Share Award, 70 500 shares have forfeited, while 17 500 shares contractually vested in 2012.

[14] The table reflects the compensation as Permanent Attendee to the Executive Committee from March 1, 2012 until December 31, 2012.

[15] Amounts in USD for Kevin Buehler, David Epstein, Mark C. Fishman, Naomi Kelman and Brian Mc Namara were converted at a rate of CHF 1.00 = USD 1.067, which is the same average exchange rate used in the Group's consolidated financial statements.

EXECUTIVE COMMITTEE MEMBER MARKET VALUE REALIZED/UNREALIZED COMPENSATION FOR PERFORMANCE YEAR 2012[1]

		Realized compensation						Unrealized compensation				Pension benefits		Total
		Base compensation	Short-term incentive plans	Long-Term Performance Plan	Other benefits			Equity Plan "Select"	Future LSSP/ESOP match					
	Currency	Cash (Amount)	Cash (Amount) and Shares (Market value)	Shares (Market value)	(Amount)	(Amount)	%[2]	Shares and Options (Market value)	Shares (Market value)	(Amount)	%[2]	(Amount)	%[2]	(Amount)
Joseph Jimenez (Chief Executive Officer)	CHF	2 025 000	1 370 300	4 747 013	128 734	**8 271 047**	**63%**	4 795 941	0	**4 795 941**	**36%**	**161 200**	**1%**	**13 228 188**
Juergen Brokatzky-Geiger	CHF	708 750	625 330	731 145	10 084	**2 075 309**	**51%**	1 250 536	625 330	**1 875 866**	**46%**	**148 594**	**3%**	**4 099 769**
Kevin Buehler	USD	1 118 333	706 945	1 753 300	62 930	**3 641 508**	**49%**	2 827 532	504 048	**3 331 580**	**45%**	**413 056**	**6%**	**7 386 144**
Felix R. Ehrat	CHF	743 333	750 149	432 702	0	**1 926 184**	**44%**	1 500 112	750 149	**2 250 261**	**52%**	**158 498**	**4%**	**4 334 943**
David Epstein	USD	1 158 332	1 253 119	1 666 814	26 191	**4 104 456**	**50%**	3 132 643	727 166	**3 859 809**	**47%**	**325 563**	**3%**	**8 289 828**
Mark C. Fishman	USD	990 000	990 001	1 547 029	118 319	**3 645 349**	**41%**	3 960 038	966 736	**4 926 774**	**56%**	**242 832**	**3%**	**8 814 955**
Jeff George	CHF	791 667	440 022	636 250	55 412	**1 923 351**	**64%**	880 027	110 011	**990 038**	**33%**	**111 932**	**3%**	**3 025 321**
George Gunn	CHF	862 500	716 300	1 213 762	0	**2 792 562**	**68%**	1 193 710	0	**1 193 710**	**29%**	**108 382**	**3%**	**4 094 654**
Naomi Kelman (until February 29, 2012)	USD	102 782	51 667	0	904 469	**1 058 918**	**100%**	0	0	**0**	**0%**	**3 196**	**0%**	**1 062 114**
Andrin Oswald	CHF	791 667	304 058	636 250	38 520	**1 770 495**	**63%**	608 054	304 058	**912 112**	**33%**	**118 132**	**4%**	**2 800 739**
Jonathan Symonds	CHF	916 667	621 011	1 377 021	17 135	**2 931 834**	**56%**	1 552 557	621 011	**2 173 568**	**41%**	**161 817**	**3%**	**5 267 219**
Brian Mc Namara (as from March 1, 2012)	USD	500 000	234 171	260 580	19 710	**1 014 461**	**61%**	464 869	140 002	**604 871**	**36%**	**45 053**	**3%**	**1 664 385**
Total	**CHF**	**10 466 057**	**7 859 881**	**14 673 602**	**1 310 446**	**34 309 986**	**55%**	**21 513 910**	**4 601 704**	**26 115 614**	**42%**	**1 933 597**	**3%**	**62 359 197**

[1] See also detailed information provided in the table "EXECUTIVE COMMITTEE MEMBER COMPENSATION FOR PERFORMANCE YEAR 2012 (Market value)" on the previous page.
[2] Percentage of total compensation.

Realized compensation is the portion that is earned and paid immediately.

Unrealized compensation is the portion that is deferred and prospectively payable at a future date, subject to performance and employment conditions at the end of the performance cycle.

EXECUTIVE COMMITTEE MEMBER – EQUITY AWARDS FOR PERFORMANCE YEAR 2012 (NUMBER OF EQUITY INSTRUMENTS)

	Variable compensation				
	Short-term incentive plans	Long-term incentive plans			
		Equity Plan "Select"		Long-Term Performance Plan	Future LSSP/ESOP match
	Shares (Number)[2]	Shares (Number)[3]	Options (Number)[3]	Shares (Number)	Shares (Number)
Joseph Jimenez (Chief Executive Officer)	0	77 730	0	76 937	0
Juergen Brokatzky-Geiger	10 135	20 268	0	11 850	10 135
Kevin Buehler	7 629	42 796	0	26 537	7 629
Felix R. Ehrat	12 158	24 313	0	7 013	12 158
David Epstein	11 006	47 414	0	25 228	11 006
Mark C. Fishman	14 632	59 937	0	23 415	14 632
Jeff George	3 566	14 263	0	10 312	1 783
George Gunn	0	19 347	0	19 672	0
Naomi Kelman (until February 29, 2012)	0	0	0	0	0
Andrin Oswald	4 928	9 855	0	10 312	4 928
Jonathan Symonds	10 065	25 163	0	22 318	10 065
Brian Mc Namara (as from March 1, 2012)[1]	2 119	7 036	0	3 944	2 119
Total	**76 238**	**348 122**	**0**	**237 538**	**74 455**

[1] The table reflects the compensation as Permanent Attendee to the Executive Committee from March 1, 2012 until December 31, 2012.
[2] These shares have a five-year vesting period under LSSP and a three-year vesting period under ESOP.
[3] These shares and the options awarded under the Equity Plan "Select" have a three-year vesting period.

As the table below shows, most executive compensation is variable and awarded under the long-term incentive plans. This ensures alignment with the interests of Novartis and its shareholders.

EXECUTIVE COMMITTEE MEMBER ACTUAL COMPENSATION MIX IN 2012 – BASE AND VARIABLE COMPENSATION [1]

		Variable (%)	
	Base salary	Annual incentive	Long-term incentive [2]
Joseph Jimenez	15.7%	10.6%	73.8%
Juergen Brokatzky-Geiger	21.4%	18.9%	59.8%
Kevin Buehler	17.5%	11.0%	71.5%
Felix R. Ehrat	21.7%	21.9%	56.4%
David Epstein	16.1%	17.4%	66.6%
Mark C. Fishman	13.2%	13.2%	73.6%
Jeff George	28.8%	16.0%	55.2%
George Gunn	21.6%	18.0%	60.4%
Andrin Oswald	33.8%	13.0%	53.2%
Jonathan Symonds	20.5%	13.9%	65.6%
Brian Mc Namara (as from March 1, 2012) [3]	34.3%	16.0%	49.7%
Total [4]	**19.2%**	**14.4%**	**66.4%**

[1] Excludes pension, other benefits and future LSSP/ESOP match.
[2] Long-term incentive includes Equity Plan "Select" and LTPP grants.
[3] Permanent Attendee to the Executive Committee.
[4] Excludes Naomi Kelman who stepped down from the Executive Committee as per February 29, 2012.

SHARES AND SHARE OPTIONS OWNED BY MEMBERS OF THE EXECUTIVE COMMITTEE

The following tables show the total number of vested and unvested Novartis shares (including share units but excluding unvested matching share units from leveraged share savings plans and unvested target units from the Long-Term Performance Plan) and the total number of share options owned by members of the Executive Committee as of January 17, 2013.

As of January 17, 2013, none of the members of the Executive Committee together with "persons closely linked" to them (see definition under "Share Ownership Requirements") owned 1% or more of the outstanding shares of Novartis, either directly or through share options.

As of December 31, 2012, all members of the Executive Committee who have served at least three years on the Executive Committee have met or exceeded their personal Novartis ownership requirements.

SHARES OWNED BY EXECUTIVE COMMITTEE MEMBERS

	Number of shares [1]
Joseph Jimenez	565 007
Juergen Brokatzky-Geiger	268 498
Kevin Buehler	502 859
Felix R. Ehrat	52 616
David Epstein	319 532
Mark C. Fishman	439 946
Jeff George	137 666
George Gunn	267 468
Andrin Oswald	150 810
Jonathan Symonds	202 375
Brian Mc Namara (as from March 1, 2012) [2]	41 160
Total [3]	**2 947 937**

[1] Includes holdings of "persons closely linked" to members of the Executive Committee (see definition under – Share and Share Options by Members of the Board of Directors).
[2] Permanent attendee to the Executive Committee.
[3] Excludes 97 906 shares owned as per February 29, 2012 by Naomi Kelman who stepped down from the Executive Committee at this date.

SHARE OPTIONS OWNED BY EXECUTIVE COMMITTEE MEMBERS

	Number of share options[1]						
	2013	2012	2011	2010	2009	Other	Total
Joseph Jimenez					552 076	157 266	709 342
Juergen Brokatzky-Geiger					75 705	255 452	331 157
Kevin Buehler						605 877[2]	605 877
Felix R. Ehrat							
David Epstein							
Mark C. Fishman						604 129	604 129
Jeff George			141 396	97 827	15 359	1 793	256 375
George Gunn						94 371	94 371
Andrin Oswald						5 633	5 633
Jonathan Symonds				54 348			54 348
Brian Mc Namara (as from March 1, 2012)[3]						88 005	88 005
Total[4]	**0**	**0**	**141 396**	**152 175**	**643 140**	**1 812 526**	**2 749 237**

[1] Share options disclosed for a specific year were granted in that year under the Novartis Equity Plan "Select." The column "Other" refers to share options granted in 2008 or earlier, to share options granted to these executives while they were not Executive Committee members (nor Permanent Attendees), and to share options bought on the market by the Executive Committee members or "persons closely linked" to them (see definition under – Share and Share Options Owned by Members of the Board of Directors).
[2] Consists of share settled appreciation rights resulting from conversion of Alcon equity into Novartis equity.
[3] Permanent Attendee to the Executive Committee.
[4] Excludes Naomi Kelman who stepped down from the Executive Committee as per February 29, 2012 and who was not awarded options.

LOANS TO MEMBERS OF THE EXECUTIVE COMMITTEE

No loans were granted to current or former members of the Executive Committee during 2012. No such loans were outstanding as of December 31, 2012.

OTHER PAYMENTS TO MEMBERS OF THE EXECUTIVE COMMITTEE

During 2012, no payments (or waivers of claims) other than those set out in the Executive Committee Member Compensation table (including its footnotes) were made to current members of the Executive Committee or to "persons closely linked" to them (see definition under "Compensation of the Board of Directors – Shares and Share Options Owned by Members of the Board of Directors").

PAYMENTS TO FORMER MEMBERS OF THE EXECUTIVE COMMITTEE

During 2012, no payments (or waivers of claims) were made to former members of the Executive Committee or to "persons closely linked" to them (see definition under "Compensation of the Board of Directors – Shares and Share Options Owned by Members of the Board of Directors"), except for an amount of CHF 1 156 414, which includes CHF 1 125 000 paid to a former member of the Executive Committee in relation to his obligation to refrain from activities that compete with any business of Novartis and an amount of CHF 31 414 as other benefits related to his Executive Committee tenure.

COMPENSATION GOVERNANCE

LEGAL FRAMEWORK

The Swiss Code of Obligations as well as the Corporate Governance Guidelines of the SIX Swiss Exchange require listed companies to disclose certain information about the compensation of members of the Board of Directors and members of the Executive Committee, their equity participation in the Group as well as loans made to them. This Annual Report fulfills that requirement. In addition, our Annual Report is in line with the principles of the Swiss Code of Best Practice for Corporate Governance of the Swiss Business Federation (economiesuisse).

DECISION-MAKING AUTHORITIES

Authority for decisions related to compensation are governed by the Articles of Incorporation, the Board Regulations and the Compensation Committee Charter, which are published on the Novartis website: www.novartis.com/corporate-governance. The main responsibilities of the Compensation Committee are shown under "Corporate Governance Report – Our Board of Directors – Role of the Board of Directors and the Board Committees."

The Compensation Committee serves as the supervisory and governing body for compensation policies and plans within Novartis and has overall responsibility for determining, reviewing and proposing compensation policies and plans for approval by the Board of Directors in line with the Compensation Committee Charter. The main discussion points and conclusions of each meeting of the Compensation Committee are summarized in a brief report to the next meeting of the full Board.

The Compensation Committee carefully analyzes and discusses on an ongoing basis (but at least annually) the trends and developments in the field of compensation and corporate governance as well as all compensation plans and levels with guidance from outside experts and consultants. The goal is to strengthen the interrelation between the compensation plans and the Group's performance. It also reviews the compensation system to ensure that it does not encourage inappropriate or excessive risk taking and instead encourages behaviors that support sustainable value creation.

The Compensation Committee is composed exclusively of members of the Board of Directors who meet the independence criteria set forth in our Board Regulations. In 2012, Enrico Vanni has been designated chairman of the Compensation Committee. Currently, the Compensation Committee has the following five members: Enrico Vanni (chair), William Brody, Srikant Datar, Ulrich Lehner and Marjorie M.T. Yang.

The Compensation Committee held six meetings in 2012.

COMPENSATION AUTHORIZATION LEVELS

Decision on	Recommendation	Authority
Compensation of Board members	Compensation Committee	Board of Directors
Compensation of the Chief Executive Officer	Chairman of the Board	Compensation Committee
Compensation of the Executive Committee members and other selected key executives	Chief Executive Officer	Compensation Committee
Special Share Awards	Chairman of the Board or Chief Executive Officer	Compensation Committee

The General Meeting holds a consultative vote on the Compensation System of Novartis. This vote takes place at least every third Annual General Meeting.

ROLE OF THE COMPENSATION COMMITTEE INDEPENDENT ADVISORS

The Compensation Committee used Frederic W. Cook & Co, Inc., as its independent external compensation advisor for 2012. The advisor to the Compensation Committee is hired directly by the Compensation Committee, is independent of management and does not perform any other consulting work for Novartis. The key task of the advisor is to assist the Compensation Committee in ensuring that the Novartis compensation policies and plans are competitive, correspond to market practice, and are in line with our compensation principles.

The Compensation Committee enters into a consulting agreement with its independent advisor on an annual basis. In determining whether or not to renew the engagement with the advisor, the Compensation Committee evaluates the quality of the consulting service and the benefits of rotating advisors. In addition, the Compensation Committee assesses on an annual basis the projected scope of work for the coming year.

The Compensation Committee determined that the advisor is free of any relationship that would impair professional and objective judgment and advice to the Compensation Committee, and has never been hired for work by the management of Novartis.

CLAWBACK

Any incentive compensation paid to senior executives, including members of the Executive Committee, is subject to "clawback." This means that Novartis may choose not to pay future incentive compensation or seek to recover incentive compensation where the payout has been proven to conflict with internal management standards (including company policies and Novartis Values and Behaviors), accounting policies or a violation of law.

SHARE OWNERSHIP REQUIREMENTS

In line with our equity ownership principle, key executives are required to own at least a certain multiple of their annual base salary in Novartis shares or share options. The CEO is required to own Novartis equity worth 5 times, the members of the Executive Committee 3 times, and other key executives, 1 to 2 times (position-specific) their respective base compensation within three years of hire or promotion. In the event of a substantial drop in the share price, the Board of Directors may, at its discretion, extend that time period.

CEO	5 x base salary
Members of the Executive Committee	3 x base salary
Selected key executives	1 x or 2 x base salary

The determination of equity amounts against the share ownership requirements includes vested and unvested shares or ADSs acquired under the Novartis compensation plans, as well as RSUs, with the exception of unvested matching RSUs from leveraged share savings plans and unvested RSUs from the Long-Term Performance Plan. In addition, it includes other shares as well as vested options on Novartis shares or ADSs that are owned directly or indirectly by "persons closely linked"[1].

The Compensation Committee reviews compliance with the share ownership guideline on an annual basis.

[1] "Persons closely linked" are (i) their spouse, (ii) their children below age 18, (iii) any legal entities that they own or otherwise control, and (iv) any legal or natural person who is acting as their fiduciary.

RISK MANAGEMENT

We believe that our compensation system encourages performance, loyalty and entrepreneurship, and creates sustainable value that is in the interest of Novartis and our shareholders. However, shareholders also expect that risks are appropriately managed. At Novartis, appropriate objective setting combined with proper incentive-plan design and rigorous safeguard measures allow our leaders and associates to focus on long-term value creation.

The goal of our compensation system is to encourage high performance and entrepreneurship, but not to reward inappropriate or excessive risk taking or short-term profit maximization at the expense of the long-term health of Novartis. The following characteristics of our compensation system foster a culture of entrepreneurial risk management:

- Novartis Values and Behaviors: Compliance and ethical conduct are integral factors considered in all regular performance reviews, setting clear behavioral boundaries.
- People Performance Management Process: A rigorous performance management system is in place based on agreed-upon objectives, values and behaviors reflecting compliance and meritocracy.
- Balanced Scorecard Approach to Performance-based Incentives: The annual and long-term incentive compensation plans are not overly focused on any single measure of performance. Instead, financial objectives include net sales, operating income, free cash flow as a percentage of sales, and Novartis Economic Value Added (NVA). Non-financial objectives emphasize the achievement of strategic and leadership objectives, and managing people, but also innovation as well as process and productivity improvement. Under the incentive plans, performance multipliers may not exceed 200% of target.
- Balanced Mix of Compensation Elements and Performance Measures: The target compensation mix is not overly weighted toward annual incentive awards but represents a combination of cash and long-term share-based compensation vesting over three years.
- Performance Period and Vesting Schedules: For long-term incentives, performance period and vesting schedules overlap, reducing the motivation to maximize performance in any one period. The equity awarded under the Equity Plan "Select" vests after a period of three years. The Long-Term Performance Plan is an equity plan based on a three-year performance period.
- Clawback: We implemented "clawback" provisions in individual employment contracts of all members of the Executive Committee as well as in most incentive plans, and award letters to associates (see – "Corporate Governance – Clawback," on p.141).
- No Severance Payments or Change-of-Control Clauses: Employment contracts for members of the Executive Committee provide a notice period of 12 months and contain no change-of-control clauses or severance provisions (i.e. agreements concerning special notice periods, longer-term contracts, "golden parachutes," waiver of lock-up periods for equities and bonds, shorter vesting periods and additional contributions to occupational pension schemes).
- Share Ownership Requirements: Members of the Executive Committee, as well as selected key executives are required to own a certain multiple of their annual base salary in Novartis shares or share options (see – "Corporate Governance – Share Ownership Requirements" on this page).

COMPENSATION OF THE BOARD OF DIRECTORS

PHILOSOPHY FOR THE BOARD OF DIRECTORS COMPENSATION

Today, the members of boards of directors of global companies face increasing responsibilities and have to deal with issues that require ever higher levels of expertise and engagement. As a global healthcare company, Novartis shareholders have elected members of the Board of Directors who bring these required skills. Novartis has set the compensation for the members of the Board of Directors at a level that allows for the attraction and retention of high-caliber individuals with global experience. The members of its Board of Directors do not receive variable compensation, underscoring their focus on long-term corporate strategy, supervision and governance.

COMPENSATION STRUCTURE

	Board compensation
Fixed compensation	Yes
Variable compensation	No

COMPENSATION OF THE MEMBERS OF THE BOARD OF DIRECTORS

DESCRIPTION

The Board of Directors determines the compensation of its members, other than the Chairman, each year, based on a proposal by the Compensation Committee and advice from its independent advisors.

The compensation of the Chairman is based on a contract, which provides Dr. Daniel Vasella with a fixed remuneration of CHF 12.4 million, indexed to the average compensation increase for associates based in Switzerland. The Board acknowledges that the compensation of the Chairman reflects his exceptional experience and significant on-going contribution to building the Group, representing our interests in the global business community and delivering sustainable value for our shareholders. One third of his total compensation is paid out in monthly cash installments; the remaining two-thirds are in the form of unrestricted Novartis shares that are granted to him each year at the closing market price of the underlying share at the end of the day at grant date, in 2012 on January 19, 2012.

Following his tenure as Chairman, Dr. Vasella agreed to continue to make available his know-how to Novartis and to refrain from activities that compete with any business of Novartis for a multi-year period. Dr. Vasella will receive fair market compensation in return for his services and for complying with the restriction not to compete. Dr. Vasella carries forward tradable options, shares and benefits (including pension) as a result of his 14-year tenure as our CEO. In his current capacity he receives no variable compensation, tradable options or equity other than the shares that are part of his remuneration as Chairman.

The other members of the Board of Directors receive, in one installment, an annual fixed Board membership fee and additional fees for committee chairmanships, committee memberships, and other functions to compensate for their increased responsibilities and engagements. They do not receive additional fees for attending meetings. The annual fees cover the period from the Annual General Meeting of the year of disclosure to the next Annual General Meeting. These members of the Board of Directors are paid in unrestricted shares for at least 50% of their fees. If one of these Board of Directors members does not elect for a full grant in shares, the remaining part of the fee is paid in cash at the time the shares are delivered. The fees shown in the attached table reflects the full amount paid in cash or delivered as shares in the given year. With the exception of the Chairman, they do not have pension benefits. Members of the Board of Directors do not receive share options. The fee rates for Board membership and functional roles of other members of the Board of Directors are as follows:

BOARD MEMBER ANNUAL FEE RATES (EXCL. CHAIRMAN)

	Annual fee (CHF)
Board membership	350 000
Chairman's Committee membership	150 000
Audit and Compliance Committee membership	100 000
Other Board Committee membership	50 000
Vice chairmanship of the Board of Directors	50 000
Board Committee chairmanship (except for ACC)	10 000
Audit and Compliance Committee chairmanship	20 000
Delegated board membership[1]	125 000

[1] The Board of Directors has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD). The Board of Directors has delegated both Rolf M. Zinkernagel and William Brody to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

BENCHMARKING OF THE COMPENSATION OF THE MEMBERS OF THE BOARD OF DIRECTORS

The level of compensation for the members of the Board of Directors is set based on benchmarks that include the remuneration of members of board of directors of comparable healthcare companies (see also the list of benchmark companies under "Compensation of Executives and other associates," p.127) and selected leading Swiss companies (i.e. UBS, Nestlé and Credit Suisse).

BOARD MEMBER COMPENSATION IN 2012[1]

	Board membership	Vice Chairman	Chairman's Committee	Audit and Compliance Committee	Risk Committee	Compensation Committee	Corporate Governance and Nomination Committee	Delegated board membership	Annual cash compensation (CHF) (A)	Shares (Market value) (CHF) (B)[2]	Shares (Number)	Other (CHF) (C)	Total (CHF) (A)+(B)+(C)
Daniel Vasella	**Chair**		**Chair**	•[3]	•[3]	•[3]	•[3]		4 110 750	8 241 815	152 063	715 027[4]	13 067 592
Ulrich Lehner	•	•	•	•	•	•	Chair		405 000	405 037	7 473	43 070[5]	853 107
Dimitri Azar	•								140 000	210 025	3 875	–	350 025
William Brody[6]	•					•		•	262 500	262 545	4 844	–	525 045
Srikant Datar	•		•	Chair	•	•			360 000	360 051	6 643	–	720 051
Ann Fudge	•				•		•		225 000	225 038	4 152	–	450 038
Pierre Landolt[7]	•						•		–	400 050	7 381	23 977[5]	424 027
Enrico Vanni	•			•		Chair			255 000	255 011	4 705	30 150[5]	540 161
Andreas von Planta	•			•	Chair		•		280 000	280 051	5 167	29 023[5]	589 074
Wendelin Wiedeking	•			•	•				–	500 049	9 226	29 607[5]	529 656
Marjorie M.T. Yang	•					•			200 000	200 052	3 691	24 177[5]	424 229
Rolf M. Zinkernagel[8]	•						•	•	325 000	325 037	5 997	34 383[5]	684 420
Total									**6 563 250**	**11 664 761**	**215 217**	**929 414**	**19 157 425**

See note 12 to the Financial Statements of Novartis AG for 2011 data.

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not compensation.

[2] The value of the shares reflected in this column has been calculated based on market value of the shares at grant date. All shares were granted as per January 19, 2012 against the prevailing share price of CHF 54.20.

[3] Daniel Vasella attended the meetings of these Committees as a guest without voting rights.

[4] Includes inter alia social security costs due by the individual and paid by the company, pension and life insurance.

[5] Includes social security costs due by the individual and paid by the company.

[6] The Board of Directors has delegated William Brody to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

[7] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of the compensation.

[8] The Board of Directors has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

SHARES AND SHARE OPTIONS OWNED BY MEMBERS OF THE BOARD OF DIRECTORS

Shareholders want Board members to align their interests with the rest of the shareholders. Among other requirements, the members of the Board of Directors are thus required to own at least 5 000 Novartis shares within three years after joining the Board of Directors. As of December 31, 2012, all members of the Board of Directors who have served at least three years on the Board of Directors have complied with the share ownership guidelines.

The last year in which Novartis granted share options to non-executive members of the Board of Directors was 2002. The total number of vested and unvested Novartis shares and share options owned by members of the Board of Directors and "persons closely linked"[1] to them as of January 17, 2013, is shown in the following tables.

As of January 17, 2013, none of the members of the Board of Directors together with "persons closely linked"[1] to them owned 1% or more of the outstanding shares of Novartis, either directly or through share options.

[1] "Persons closely linked" are (i) their spouse, (ii) their children below age 18, (iii) any legal entities that they own or otherwise control, and (iv) any legal or natural person who is acting as their fiduciary.

SHARES AND SHARE OPTIONS OWNED BY BOARD MEMBERS[1]

	Number of shares[2]	Number of share options[3]
Daniel Vasella	3 170 729	1 633 290[4]
Ulrich Lehner	34 363	
Dimitri Azar	5 743	
William Brody	18 420	
Srikant Datar	31 080	
Ann Fudge	13 769	
Pierre Landolt[5]	52 356	
Enrico Vanni	12 501	
Andreas von Planta	121 334	
Wendelin Wiedeking	260 286	
Marjorie M.T. Yang	18 000	
Rolf M. Zinkernagel	45 948	
Total	**3 784 529**	**1 633 290**

[1] Includes holdings of "persons closely linked" to Board members (see definition under – Share and Share Options owned by Members of the Board of Directors).
[2] Each share provides entitlement to one vote.
[3] 2002 was the last year during which Novartis granted share options to non-executive Board members. All these options have expired in 2011.
[4] Includes options awarded during Daniel Vasella's tenure as Chairman and CEO.
[5] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of all shares.

LOANS TO MEMBERS OF THE BOARD OF DIRECTORS

No loans were granted to current or former members of the Board of Directors during 2012. No such loans were outstanding as of December 31, 2012.

OTHER PAYMENTS TO MEMBERS OF THE BOARD OF DIRECTORS

During 2012, no payments (or waivers of claims) other than those set out in the Board Member Compensation table on p.144 (including its footnotes) were made to current members of the Board of Directors or to "persons closely linked" to them (see definition under "Compensation of the Board of Directors – Shares and Share Options Owned by Members of the Board of Directors").

PAYMENTS TO FORMER MEMBERS OF THE BOARD OF DIRECTORS

During 2012, no payments (or waivers of claims) were made to former Board members or to "persons closely linked" to them (see definition under "Compensation of the Board of Directors – Shares and Share Options Owned by Members of the Board of Directors"), except for an amount of CHF 62 346 that was paid to the Honorary Chairman.

NOTE 27 TO THE GROUP'S AUDITED CONSOLIDATED FINANCIAL STATEMENTS AND NOTE 12 TO THE AUDITED FINANCIAL STATEMENTS OF NOVARTIS AG

The total expense for the year for the compensation awarded to the members of the Board of Directors and the members of the Executive Committee using IFRS measurement rules is presented in our Financial Report in note 27 to the Group's audited consolidated financial statements.

Note 12 included in the audited financial statements of Novartis AG represents the total compensation related to the 2012 and 2011 performance years respectively.

FINANCIAL REPORT

CONTENTS

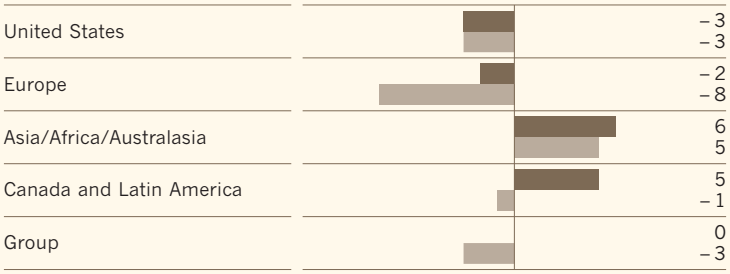
FINANCIAL HIGHLIGHTS 2012

KEY FIGURES

	2012 USD millions	2011 USD millions	Change USD %	Change cc %
Net sales	**56 673**	58 566	– 3	0
Operating income	**11 511**	10 998	5	8
Return on net sales (%)	**20.3**	18.8		
Net income	**9 618**	9 245	4	7
Basic earnings per share (USD)[1]	**3.93**	3.83	3	6
Core operating income[2]	**15 160**	15 909	– 5	– 2
Core return on net sales (%)	**26.7**	27.2		
Core net income[2]	**12 811**	13 490	– 5	– 3
Core earnings per share (USD)[1; 2]	**5.25**	5.57	– 6	– 3
Equity at year end	**69 219**	65 940	5	
Dividend (CHF)[3]	**2.30**	2.25	2	

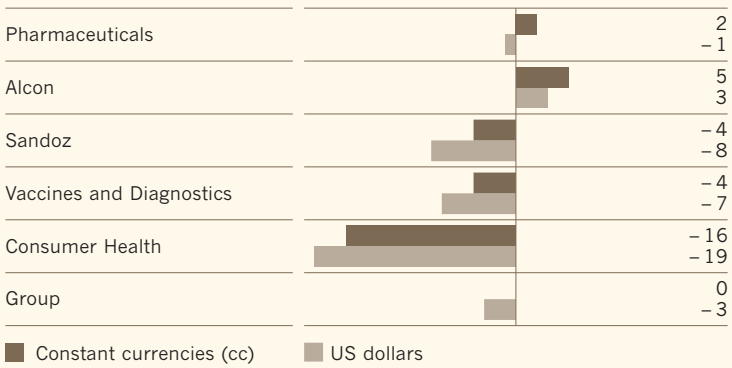
NET SALES GROWTH BY REGION

(in %)



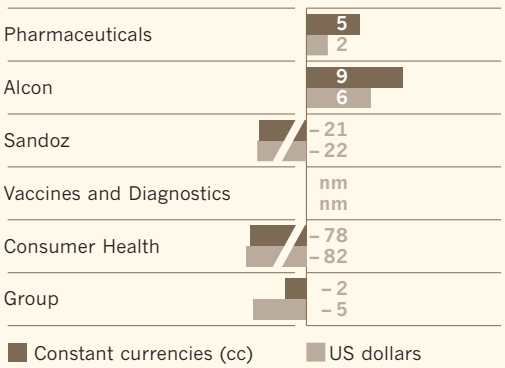
NET SALES GROWTH BY SEGMENT

(in %)

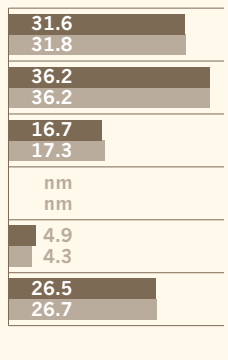


CORE OPERATING INCOME GROWTH

(in %)[2]

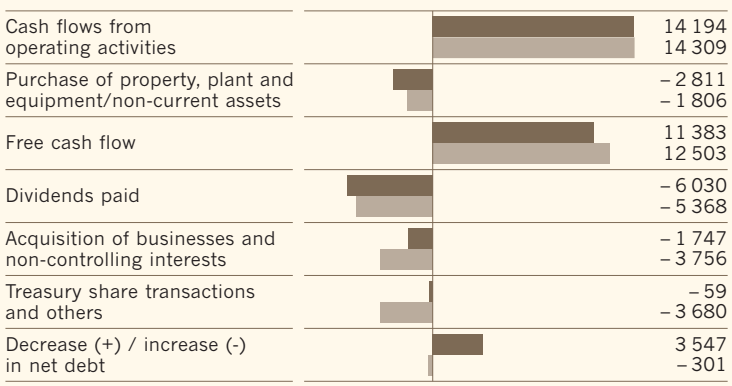


CORE OPERATING MARGIN (in %)[2]



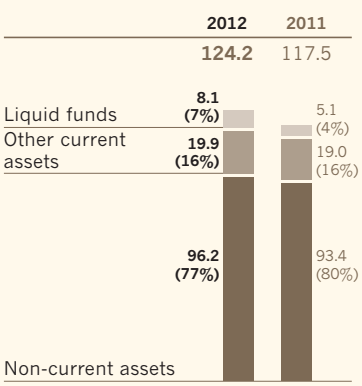
FREE CASH FLOW AND CHANGE IN NET DEBT

(in USD millions)



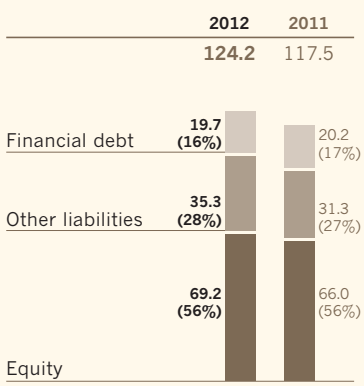
TOTAL ASSETS

(in USD billions and %)



TOTAL EQUITY AND LIABILITIES

(in USD billions and %)



[1] 2012 average number of shares outstanding: 2 418.1 million (2011: 2 382.5 million).

[2] Core results for operating income, net income and earnings per share (EPS) eliminate the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail starting on page 182.

[3] Dividend payment for 2012: proposal to 2013 Annual General Meeting.

nm = not meaningful

KEY FINANCIAL DEVELOPMENTS IN 2012

NET SALES	Net sales declined 3% (unchanged in constant currencies, or cc) to USD 56.7 billion. Recently launched products contributed USD 16.3 billion or 29% of Group net sales, up from 25% in 2011, substantially absorbing the impact of patent expiries.
PHARMACEUTICALS	Net sales were USD 32.2 billion (–1%, +2% cc), driven by 8 percentage points of volume growth, more than offsetting the negative impact of generic competition (USD 1.9 billion, –6 percentage points). Eight products achieved blockbuster status (sales above USD 1 billion) versus seven products in the previous year. Products launched since 2007 contributed USD 11.4 billion or 35% of net sales for the division compared to 28% in 2011.
ALCON	Net sales were USD 10.2 billion, an increase of 3% (+5% cc) over the previous year, with sales growth across its Surgical, Ophthalmic Pharmaceuticals and Vision Care franchises.
SANDOZ	Net sales of USD 8.7 billion were down 8% (–4% cc), driven by increased competition for enoxaparin in the United States and a decline in Germany, partially offset by double-digit sales growth in biosimilars, the rest of Western Europe and in Asia.
VACCINES AND DIAGNOSTICS	Net sales were USD 1.9 billion, down 7% (–4% cc) from the previous year, impacted by bulk pediatric shipments and a one-time pre-pandemic sale in 2011. *Menveo* and the Diagnostics business continued to grow.
CONSUMER HEALTH	Net sales of USD 3.7 billion were down 19% (–16% cc) compared to 2011, mainly due to the absence of shipments from the United States manufacturing site at Lincoln, Nebraska.
OPERATING INCOME	Operating income increased 5% (+8% cc) to USD 11.5 billion. Core operating income declined to USD 15.2 billion (–5%, –2% cc), with core operating income margin in constant currencies down 0.7 percentage points, partially offset by a positive currency impact of 0.2 percentage points, to 26.7% of net sales.
NET INCOME	Net income was USD 9.6 billion, up 4% (+7% cc) from the previous year. Core net income decreased 5% (–3% cc) to USD 12.8 billion, in line with the decline in core operating income.
BASIC EARNINGS PER SHARE	Earnings per share (EPS) increased 3% (+6% cc) to USD 3.93 from USD 3.83 in 2011, while core EPS declined 6% (–3% cc) to USD 5.25.
FREE CASH FLOW	Free cash flow was USD 11.4 billion, down 9% from 2011.
DIVIDEND	Proposed dividend of CHF 2.30 per share for 2012, up 2% from CHF 2.25 in 2011, represents 16th consecutive annual increase and a dividend yield of 4%.

This operating and financial review should be read together with the Group's consolidated financial statements in this Annual Report, which have been prepared in accordance with International Financial Reporting Standards (IFRS) as published by the International Accounting Standards Board.

BUSINESS AND OPERATING ENVIRONMENT

OPPORTUNITY AND RISK SUMMARY

Our financial results are affected, to varying degrees, by the following external factors.

TRANSFORMATIONAL CHANGES FUELING DEMAND

Aging population and shifting behaviors: The aging of the world population, as well as the increasing prevalence of obesity and other unhealthy lifestyle factors, is driving demand for treatments that address conditions disproportionately afflicting the elderly as well as other chronic diseases.

Rise in healthcare spending: The global healthcare market continues to grow, led by emerging economies, where access and demand for healthcare are expanding.

Scientific advances: Personalized medicine is opening new opportunities for targeted therapies, helping improve patient outcomes and reduce costs.

New technologies: Social and mobile technologies are facilitating the delivery of care and enhancing communication with patients, providers and payors.

Shift to generics and over-the-counter products: Faced with rising healthcare costs, governments around the world are encouraging consumers to substitute generics for patented pharmaceuticals. Consumers, too, are shifting to over-the-counter products in an effort to keep costs down.

INCREASINGLY CHALLENGING BUSINESS ENVIRONMENT

Patent expirations and generic competition: The loss of market exclusivity and the introduction of generic competitors can significantly erode sales of our innovative products.

Regulatory and safety hurdles: The costs associated with bringing a drug to market have increased as a result of heightened regulatory requirements. Even after a drug is approved, there is a possibility that safety events could occur and materially affect our results.

Manufacturing quality and complexity: The manufacture of our products is both highly regulated and complex, and may result in a variety of issues that could lead to extended supply disruptions and significant liability.

Financial crisis: As challenges from the 2008 financial crisis continue to affect the global economy, governments and patients worldwide are seeking to minimize healthcare costs.

Legal proceedings: There is a trend of increasing government investigations and litigations against companies in the healthcare industry. Despite our best efforts to comply with the laws of the approximately 140 countries in which we sell products, any failure in compliance could have a material adverse effect on our business and reputation.

For more detail on these trends and how they impact our results, see "Factors Affecting Results of Operations" below.

NOVARTIS STRUCTURE

The Novartis Group strategy for sustainable, long-term growth is based on focused diversification, in which we seek to access multiple, growing segments of the healthcare market. Reflecting our leadership positions across these segments, the Group's businesses are divided on a worldwide basis into six global operating divisions, which report results in five segments (Pharmaceuticals, Alcon, Sandoz, Vaccines and Diagnostics, and Consumer Health), and Corporate activities. Except for Consumer Health, which comprises two divisions (Over-the-Counter, or OTC, and Animal Health) that are not material enough to the Group to be reported on an individual basis, these segments reflect the Group's internal management structure and are disclosed separately because they research, develop, manufacture, distribute and sell distinct products that require different marketing strategies.

PHARMACEUTICALS

Pharmaceuticals researches, develops, manufactures, distributes and sells patented prescription medicines and is organized in the following business franchises: Oncology; Primary Care, consisting of Primary Care medicines and Established Medicines; and Specialty Care, consisting of Ophthalmology, Neuroscience, Integrated Hospital Care, and Critical Care medicines. Novartis Oncology is organized as a business unit, responsible for the global development and marketing of oncology products.

Pharmaceuticals is the largest contributor among the segments, and in 2012 accounted for USD 32.2 billion, or 57%, of Group net sales and USD 9.6 billion, or 81%, of Group operating income (excluding Corporate Income and Expense, net).

ALCON

As the global leader in eye care, Alcon researches, develops, manufactures, distributes and sells eye care products and technologies to serve the full life cycle of eye care needs. Alcon offers a broad range of products to treat many eye diseases and conditions, and is organized into three businesses: Surgical, Ophthalmic Pharmaceuticals and Vision Care.

The Surgical portfolio includes technologies and devices for cataract, retinal, glaucoma and refractive surgery, as well as intraocular lenses to treat cataracts and refractive errors, like presbyopia and astigmatism. Alcon also provides viscoelastics, surgical solutions, surgical packs, and other disposable products for cataract and vitreoretinal surgery. In Ophthalmic Pharmaceuticals, the portfolio covers treatment options for elevated intraocular pressure caused by glaucoma, anti-infectives to aid in the treatment of bacterial infections and bacterial conjunctivitis, and ophthalmic solutions to treat inflammation and pain associated with ocular surgery. The Ophthalmic Pharmaceuticals product portfolio also includes eye and nasal allergy treatments, as well as over-the-counter dry eye relief and ocular vitamins. Daily disposable, monthly replacement, and color-enhancing contact lenses, as well as a complete line of contact lens care products including multi-purpose and hydrogen-peroxide based solutions, rewetting drops, and daily protein removers, comprise the portfolio in Vision Care.

In 2012, Alcon accounted for USD 10.2 billion, or 18%, of Group net sales, and USD 1.5 billion, or 12%, of Group operating income (excluding Corporate Income and Expense, net).

SANDOZ

Sandoz develops, manufactures, distributes and sells prescription medicines, as well as pharmaceutical and biotechnological active substances, which are not protected by valid and enforceable third-party patents. Sandoz has activities in Retail Generics, Anti-Infectives, Biopharmaceuticals, Oncology Injectables, Ophthalmics, Respiratory and Dermatology. In Retail Generics, Sandoz develops, manufactures and markets active ingredients and finished dosage forms of pharmaceuticals to third parties. In Anti-Infectives, Sandoz manufactures active pharmaceutical ingredients and intermediates – mainly antibiotics – for internal use by Retail Generics and for sale to third-party customers. In Biopharmaceuticals, Sandoz develops, manufactures and markets protein- or other biotechnology-based products (known as biosimilars or follow-on biologics) and sells biotechnology manufacturing services to other companies. In Oncology Injectables, Sandoz develops, manufactures and markets cytotoxic products for the hospital market. Sandoz Ophthalmics, which was formed through the integration of Falcon, Alcon's generic division, develops, manufactures and markets generic ophthalmic and otic products. In addition, Sandoz is active in Respiratory following its acquisition of Oriel Therapeutics in 2010, and expanded its presence in Dermatology through the acquisition of specialty dermatology company Fougera Pharmaceuticals, Inc. in 2012.

In 2012, Sandoz accounted for USD 8.7 billion, or 15%, of Group net sales and USD 1.1 billion, or 9% of Group operating income (excluding Corporate Income and Expense, net).

VACCINES AND DIAGNOSTICS

Vaccines and Diagnostics researches, develops, manufactures, distributes and sells preventive human vaccines and novel blood-screening diagnostic tools, which help protect the world's blood supply by preventing the spread of infectious diseases.

In 2012, Vaccines and Diagnostics accounted for USD 1.9 billion, or 3%, of Group net sales and generated an operating loss of USD 250 million.

CONSUMER HEALTH

Consumer Health consists of two divisions: OTC and Animal Health. Each has its own research, development, manufacturing, distribution and selling capabilities, but neither is material enough to the Group to be separately disclosed as a segment. OTC offers readily-available consumer medicine, and Animal Health provides veterinary products for farm and companion animals.

In 2012, Consumer Health accounted for USD 3.7 billion, or 7%, of Group net sales and USD 48 million, or slightly below 1%, of Group operating income (excluding Corporate Income and Expense, net).

CORPORATE

Corporate activities include certain functions – such as Financial Reporting & Accounting, Treasury, Internal Audit, IT, Legal, Tax and Investor Relations – that are managed at the Corporate level and provide support to the organization but are not attributable to specific divisions. Corporate also includes the costs of our headquarters and corporate coordination functions in major countries.

NOVARTIS STRATEGY FOR SUSTAINABLE GROWTH

As the only healthcare company globally with leading positions in pharmaceuticals, eye care, generics, vaccines and diagnostics, over-the-counter medicines and animal health, we believe that Novartis is uniquely positioned to capture growth opportunities across the healthcare marketplace and to mitigate the impact of challenges in particular sectors.

OUR PRIORITIES: INNOVATION, GROWTH AND PRODUCTIVITY

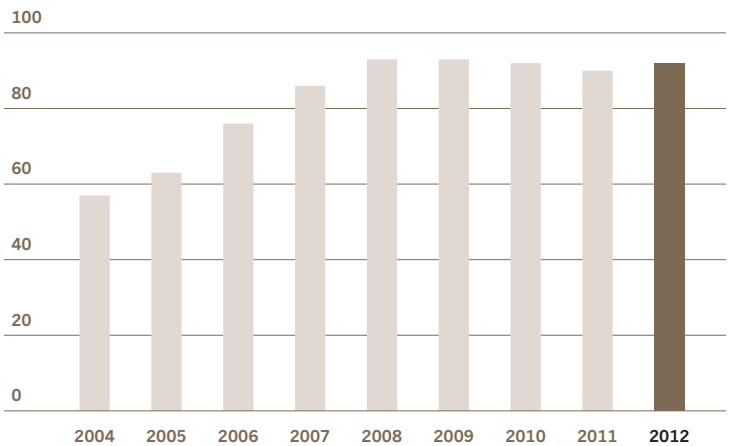
Our strategy, which is based on the focused diversification of our healthcare portfolio, requires a consistent focus on three core priorities: (1) extending our lead in innovation through the research and development of new offerings and the expansion of applications for existing offerings; (2) accelerating growth with new launches and a greater presence in Emerging Growth Markets; and (3) enhancing productivity through efficiency initiatives that free up resources for reinvestment and shareholder returns.

EXTENDING OUR LEAD IN INNOVATION

We believe that innovation is a competitive advantage for Novartis. In 2012, we maintained our investment in R&D as a percentage of sales at the upper level for our industry. Our Pharmaceuticals Division, for example, invested 21% of net sales in innovation.

Benefiting from our continued focus on innovation, Novartis has one of the industry's most competitive pipelines, delivering the highest number of new molecular entities (NMEs) between 2007 and 2011, according to Credit Suisse. As of the end of 2012, the Novartis Institutes for BioMedical Research (NIBR, our global pharmaceutical research organization whose costs are allocated to the Pharmaceuticals and Alcon divisions) had 92 NMEs in research and exploratory development prior to proof-of-concept (POC) determination. In 2012, NIBR delivered 12 positive POC studies, which we use to get an early read on a drug's safety and effectiveness.

Number of pre-POC NMEs from NIBR [1]



[1] NMEs in research and exploratory development prior to proof-of-concept (POC) determination.

Since its integration into the Novartis Group, Alcon has leveraged NIBR to gain access to a range of technologies, from biologics to structural biology and high throughput screening, that previously were only available to it through external partners. With expanded R&D capabilities, Alcon has prioritized glaucoma and macular degeneration in drug discovery efforts.

Sandoz also continues to innovate in the fast-growing biosimilars segment, where it is the global leader with three marketed products. With Phase III clinical trials for epoetin alfa (biosimilar Epogen®/Procrit®) and rituximab (biosimilar Rituxan®/Mabthera®) underway, Sandoz continued to advance its biosimilars pipeline in 2012.

In Vaccines and Diagnostics, we achieved important pipeline milestones this year, including a positive European Committee for Medicinal Products for Human Use (CHMP) opinion for *Bexsero*, our meningococcal serogroup B vaccine, for use in children over two months old and FDA approval for *Flucelvax*, the first cell-culture vaccine to help protect against seasonal influenza in the United States.

In terms of advancing innovative products through clinical trials, Novartis has a probability of success that is five times the industry median from 2007 to 2011, as calculated by biopharmaceutical benchmarking company KMR. Benefitting from our strength in this area, our robust pipeline has helped to rejuvenate our portfolio. For example, in 2012, our Pharmaceuticals Division received 11 approvals for innovative medicines and new indications in the United States and European Union, including EMA and FDA approval for *Afinitor* (everolimus) in combination with exemestane as a treatment for postmenopausal women with a specific type of advanced breast cancer, which affects approximately 220 000 women each year. These approvals, which were based on Phase III trial data showing that *Afinitor* plus exemestane more than doubled the time women with the HR+/HER2- type of advanced breast cancer lived without tumor growth, marks the first major breakthrough in the treatment of this disease in 15 years.

Focus: Results of R&D investments in Pharmaceuticals

71 NMEs in post-POC clinical development

138 projects in clinical development
- GenMed: 87 Pharmaceuticals projects (46 NMEs)
- Oncology: 51 projects (25 NMEs)

11 major approvals achieved in the US and EU including:
- *Afinitor* (HR+/HER2- breast cancer) – US and EU
- *Afinitor/Votubia* (TSC angiomyolipomas) – US and EU
- *Seebri* (COPD) – EU
- *Jakavi* (myelofibrosis) – EU
- *Signifor* (Cushing's disease) – EU
- *Certican* (liver transplantation) – EU

ACCELERATING GROWTH ACROSS SIX DIVISIONS

Building on our strength in innovation, Novartis seeks to drive growth across the portfolio by working to deliver new treatments quickly and efficiently to customers and patients in need. Since an increasing proportion of these customers and patients are found in emerging markets where demand for and access to healthcare are rising, Novartis continues to strengthen its presence in these fast-growing markets.

In 2012, innovative products continued to make a major contribution to the Group's overall performance, with recently launched products generating USD 16.3 billion or 29% of total net sales. These products, which include *Gilenya*, *Lucentis*, *Tasigna* and *Afinitor*, grew 13% over the previous year.

Emerging Growth Markets, which we define as all markets except the United States, Canada, Western Europe, Australia, New Zealand and Japan, were also a key contributor to growth in 2012, contributing USD 13.8 billion or 24% of total net sales. We also committed USD 500 million in 2012 to build a new state-of-the-art biotechnology production site in Singapore, which offers a wide range of advantages due to its strong local biomedical presence and knowledge, skilled labor, and proximity to growth markets in Asia. We expect this facility will significantly expand our footprint in this high-growth region.

ENHANCING PRODUCTIVITY

Novartis continually seeks to operate as efficiently as possible to reduce costs and enhance margins, in order to provide flexibility to invest for the future and increase returns to shareholders. Ongoing productivity initiatives relate to procurement and resource allocation across the portfolio, as well as our manufacturing network and supporting infrastructure.

We have made our Procurement function an important source of savings. By leveraging our scale, implementing global category management and creating country Centers of Excellence in key markets, we generated annual savings of approximately USD 1.3 billion in 2012.

We continued to optimize our Marketing & Sales function by reallocating resources and streamlining processes while investing in new launches for growth brands. In Pharmaceuticals, Marketing & Sales expenses in constant currencies decreased as a percentage of net sales to 26.6% for 2012 from 27.5% in 2011.

We also continued to optimize our manufacturing footprint in 2012 as part of a Group-wide review we initiated in 2010. The review has two aims: first, to establish a worldwide manufacturing network of technology Centers of Excellence, and second, to optimize the cost structure across divisions and enhance utilization rates at strategic sites to 80% of capacity. As of the end of 2012, we have 15 production sites in the process of being restructured or divested.

Lastly, with Alcon fully integrated as the second largest division in the Novartis Group portfolio, we realized merger-related cost synergies of approximately USD 370 million cumulatively, achieving our initial savings target one year ahead of time.

Taken together, our productivity initiatives allowed us to exceed our annual productivity target of 3.5 to 4.0% of net sales.

RESULTS OF OPERATIONS

In evaluating the Group's performance, we consider not only the IFRS results, but also additional non-IFRS measures, in particular core results and constant currency results. These measures assist us in evaluating our ongoing performance from year to year and we believe this additional information is useful to investors in understanding our business.

The Group's core results exclude the amortization of intangible assets, impairment charges, expenses relating to the integration of acquisitions as well as other items that are, or are expected to accumulate within the year to be, over a USD 25 million threshold that management deems exceptional. A reconciliation between IFRS results and core results is shown on pages 184 to 187.

We present information about our revenue and various values and components relating to operating profit and net income in constant currencies (cc). We calculate constant currency revenue and operating profit measures by applying the prior-year average exchange rates to current financial data expressed in non-US dollars in order to estimate an elimination of the impact of foreign exchange rate movements.

These non-IFRS measures are explained in more detail on page 182 and are not intended to be substitutes for the equivalent measures of financial performance prepared in accordance with IFRS. These measures may differ from similarly titled non-IFRS measures of other companies.

KEY FIGURES

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Change in constant currencies %
Net sales	**56 673**	**58 566**	**– 3**	**0**
Other revenues	888	809	10	11
Cost of goods sold	– 18 756	– 18 983	– 1	2
Gross profit	**38 805**	**40 392**	**– 4**	**– 1**
Marketing & Sales	– 14 353	– 15 079	– 5	– 1
Research & Development	– 9 332	– 9 583	– 3	0
General & Administration	– 2 937	– 2 970	– 1	3
Other income	1 187	1 354	– 12	– 6
Other expense	– 1 859	– 3 116	– 40	– 37
Operating income	**11 511**	**10 998**	**5**	**8**
Income from associated companies	552	528	5	5
Interest expense	– 724	– 751	– 4	– 1
Other financial income and expense	– 96	– 2	nm	nm
Income before taxes	**11 243**	**10 773**	**4**	**7**
Taxes	– 1 625	– 1 528	6	8
Net income	**9 618**	**9 245**	**4**	**7**
Attributable to:				
Shareholders of Novartis AG	*9 505*	*9 113*	*4*	*8*
Non-controlling interests	*113*	*132*	*– 14*	*– 14*
Basic earnings per share	**3.93**	**3.83**	**3**	**6**
Free cash flow	**11 383**	**12 503**	**– 9**	

CORE KEY FIGURES

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Change in constant currencies %
Core gross profit	**41 847**	**43 839**	**– 5**	**– 2**
Marketing & Sales	– 14 352	– 15 077	– 5	– 1
Research & Development	– 9 116	– 9 239	– 1	2
General & Administration	– 2 923	– 2 957	– 1	3
Other income	813	443	84	100
Other expense	– 1 109	– 1 100	1	9
Core operating income	**15 160**	**15 909**	**– 5**	**– 2**
Core net income	**12 811**	**13 490**	**– 5**	**– 3**
Core basic earnings per share	**5.25**	**5.57**	**– 6**	**– 3**

nm = not meaningful

GROUP OVERVIEW

Net sales amounted to USD 56.7 billion (–3%, 0% cc), as growth in recently launched products absorbed patent expiries. Currency depressed results by 3 percentage points as a result of the strengthening of the dollar against most currencies.

Across the Group's diversified healthcare portfolio, recently launched products continued to perform strongly and in 2012 comprised 29% of Group net sales, up from 25% a year ago.

Operating income increased 5% (+8% cc) to USD 11.5 billion. The strengthening of the US dollar resulted in a negative currency impact of 3 percentage points. Cost of goods sold decreased by 1% (+2% cc) to USD 18.8 billion in 2012, but represented an increase of 0.7 percentage points to 33.1% of net sales. This led to a reduction in the gross margin by 0.5 percentage points (cc) to 68.5%. Marketing & Sales expenses decreased 5% (–1% cc) to USD 14.4 billion, improving 0.4 percentage points to 25.3% of net sales, as productivity improvements and changes in the portfolio mix were partly offset by investments in new launch products. R&D expenses decreased by 3% (0% cc) in 2012 to USD 9.3 billion. This included USD 109 million in impairments of intangible assets. General & Administration expenses decreased by 1% (+3% cc) to USD 2.9 billion. Other income was down 12% (–6% cc) to USD 1.2 billion and largely consisted of a *Tekturna/Rasilez* provision reduction, divestment gains and restructuring provision release. Other expense was down 40% (–37% cc) to USD 1.9 billion and included acquisition-related charges and restructuring costs.

In 2012, the adjustments made to Group operating income to arrive at core operating income amounted to USD 3.6 billion (2011: USD 4.9 billion). These adjustments included the amortization of intangible assets of USD 2.9 billion (2011: USD 3.0 billion) and exceptional net expense of USD 773 million (2011: USD 1.9 billion).

The significant exceptional expense items, net, in 2012 were USD 149 million for a United States restructuring in Pharmaceuticals and USD 265 million of Alcon integration costs, which were offset by exceptional gains of USD 472 million. The previous year benefited from exceptional product divestment and other gains of USD 1.0 billion, offset by a number of exceptional expense items totaling USD 2.9 billion, principally the *Tekturna/Rasilez*-related impairment and other charges of USD 903 million, restructuring charges of USD 487 million and a legal settlement of USD 204 million.

Core operating income, which excludes exceptional items and amortization of intangible assets, decreased 5% (–2% cc) to USD 15.2 billion. Core operating income margin in constant currencies decreased by 0.7 percentage points. A positive currency impact of 0.2 percentage points resulted in a core operating income margin of 26.7% of net sales.

Net income increased 4% (+7% cc) to USD 9.6 billion following the increase in operating income. EPS increased 3% (+6% cc) to USD 3.93 from USD 3.83 in the prior year.

Core net income was down 5% (-3% cc) to USD 12.8 billion, in line with core operating income. Core EPS declined 6% (–3% cc) to USD 5.25.

Free cash flow of USD 11.4 billion was USD 1.1 billion lower than the prior year mainly on account of higher investments in property, plant and equipment as well as in intangible and other non-current assets and lower proceeds from the sale of non-current assets which amounted to USD 0.5 billion in the current period compared to USD 0.8 billion in the previous year.

NET SALES BY SEGMENT

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Change in constant currencies %
Pharmaceuticals	**32 153**	**32 508**	**–1**	**2**
Alcon	**10 225**	**9 958**	**3**	**5**
Sandoz	**8 702**	**9 473**	**–8**	**–4**
Vaccines and Diagnostics	**1 858**	**1 996**	**–7**	**–4**
Consumer Health	**3 735**	**4 631**	**–19**	**–16**
Net sales	**56 673**	**58 566**	**–3**	**0**

PHARMACEUTICALS

Net sales were USD 32.2 billion (–1%, +2% cc), driven by 8 percentage points of volume growth, partially offset in constant currencies by the negative impact of generic competition (USD 1.9 billion, –6 percentage points) and slightly negative pricing. Recently launched major products (including *Lucentis*, *Tasigna*, *Exjade*, *Sebivo/Tyzeka*, *Exforge*, *Galvus*, *Aclast/Reclast*, *Cubicin*, *Exelon* Patch, *Afinitor/Votubia*, *Tekturna/Rasilez*, *Onbrez*, *Gilenya*, *Fanapt* and *Ilaris*) contributed USD 11.4 billion or 35% of net sales for the division, compared to 28% in 2011.

Regionally, Europe (USD 10.2 billion, -5% cc) saw a strong performance of recently launched products but was impacted by generic competition, mainly for *Diovan*, and by negative price effects. Performance in the United States (USD 10.4 billion, +4% cc) benefited from robust growth for *Tasigna*, *Gilenya* and *Afinitor*, and was only partly impacted by generic competition to *Diovan* (USD 2.1 billion, -11% cc), as no generic competitor to *Diovan* mono-substance was approved in the United States by the end of 2012 (while the combination product, *Diovan HCT*, faced competition from a single generic competitor holding 180-day exclusivity and from Sandoz with an authorized generic). Japan's performance (USD 4.0 billion, +3% cc) improved versus 2011 due to new launches which more than offset the biennial price cut. Latin America and Canada (USD 3.1 billion, +9% cc) achieved strong growth rates fueled by new product launches despite the *Diovan* generic impact in Canada. Emerging Growth Markets (USD 7.4 billion, +6% cc) were driven by double-digit growth in China and India.

TOP 20 PHARMACEUTICALS DIVISION PRODUCT NET SALES – 2012

Brands	Business franchise	Indication	Net sales United States USD millions	% change in constant currencies	Net sales Rest of world USD millions	% change in constant currencies	Total net sales USD millions	% change in USD	% change in constant currencies
Gleevec/Glivec	Oncology	Chronic myeloid leukemia	1 698	16	2 977	– 2	**4 675**	**0**	**4**
Diovan/Co–Diovan	Primary care	Hypertension	2 087	– 11	2 330	– 28	**4 417**	**– 22**	**– 21**
Lucentis	Ophthalmics	Age-related macular degeneration			2 398	22	**2 398**	**17**	**22**
Sandostatin	Oncology	Acromegaly	649	13	863	5	**1 512**	**5**	**8**
Exforge	Primary care	Hypertension	358	10	994	18	**1 352**	**12**	**16**
Zometa	Oncology	Cancer complications	561	– 13	727	– 10	**1 288**	**– 13**	**– 11**
Gilenya	Neuroscience	Relapsing multiple sclerosis	727	90	468	nm	**1 195**	**142**	**147**
***Exelon/Exelon* Patch**	Neuroscience	Alzheimer's disease	428	14	622	– 4	**1 050**	**– 2**	**2**
Tasigna	Oncology	Chronic myeloid leukemia	351	38	647	47	**998**	**39**	**44**
Galvus	Primary care	Diabetes			910	43	**910**	**34**	**43**
Exjade	Oncology	Iron chelator	251	– 3	619	11	**870**	**2**	**7**
Neoral/Sandimmun	Integrated Hospital Care	Transplantation	64	– 10	757	– 6	**821**	**– 9**	**– 6**
Afinitor/Votubia	Oncology	Breast cancer	412	142	385	49	**797**	**80**	**85**
***Voltaren* (excl. OTC)**	Additional products	Inflammation/pain	1	– 75	758	1	**759**	**– 4**	**0**
Reclast/Aclasta	Established medicines	Osteoporosis	354	– 8	236	9	**590**	**– 4**	**– 2**
Myfortic	Integrated Hospital Care	Transplantation	239	20	340	14	**579**	**12**	**16**
Ritalin/Focalin	Additional products	Attention deficit/ hyperactivity disorder	402	1	152	8	**554**	**1**	**3**
Comtan/Stalevo	Neuroscience	Parkinson's disease	147	– 31	383	0	**530**	**– 14**	**– 11**
Xolair	Critical Care	Asthma			504	15	**504**	**5**	**12**
Femara	Oncology	Breast cancer	22	– 90	416	– 37	**438**	**– 52**	**– 50**
Top 20 products total			**8 751**	**6**	**17 486**	**3**	**26 237**	**0**	**4**
Rest of portfolio			1 641	– 3	4 275	– 5	**5 916**	**– 7**	**– 4**
Total Division sales			**10 392**	**4**	**21 761**	**1**	**32 153**	**– 1**	**2**

nm = not meaningful

Pharmaceuticals Division Product Highlights – Leading Products

Net sales growth data below refer to 2012 worldwide performance. Growth rates are not provided for some recently launched products since they are not meaningful.

Gleevec/Glivec (USD 4.7 billion, +4% cc) continued to grow as a treatment for adult patients with metastatic and/or unresectable KIT+ gastrointestinal stromal tumors (GIST), as an adjuvant treatment for certain adult patients following resection of KIT+ GIST, and as a targeted therapy for Philadelphia chromosome-positive chronic myeloid leukemia (Ph+ CML). Our Bcr-Abl franchise, which consists of *Gleevec/Glivec* and *Tasigna*, grew strongly in 2012, reaching net sales of USD 5.7 billion (+9% cc).

***Diovan* Group** (USD 4.4 billion, –21% cc), consisting of monosubstance *Diovan* and combination product *Diovan HCT*, saw worldwide sales decline due to the loss of exclusivity of both products in the European Union, Canada and the United States. Performance was sustained in key Emerging Growth Markets such as China, as well as select countries in Latin America, Asia Pacific, Middle East and Africa.

Lucentis (USD 2.4 billion, +22% cc) grew strongly as the only anti-VEGF therapy licensed in many countries for three ocular indications: wet age-related macular degeneration (wet AMD), visual impairment due to diabetic macular edema (DME), and visual impairment due to macular edema secondary to retinal vein occlusion (RVO). In wet AMD, *Lucentis* is approved in more than 100 countries and individualized treatment consistent with its EU label is the standard of care. *Lucentis* is approved for the treatment of visual impairment due to DME and visual impairment due to macular edema secondary to RVO in more than 80 countries. In September and October of 2012, we filed regulatory submissions in the European Union and Japan for *Lucentis* as a treatment for visual impairment due to choroidal neovascularization secondary to pathological myopia. Genentech/Roche holds the rights to *Lucentis* in the United States.

Sandostatin (USD 1.5 billion, +8% cc), a somatostatin analogue used as a treatment for patients with functional gastroenteropancreatic tumors as well as acromegaly, continued to benefit from increasing use of *Sandostatin LAR* in key markets. A new presentation of *Sandostatin LAR*, which includes an enhanced diluent, safety needle and vial adapter, has been approved in 26 countries to date with additional filings underway. *Sandostatin* is also approved in more than 39 countries for the delay of disease progression in patients with advanced neuroendocrine tumors of the midgut or unknown primary tumor location.

Exforge **Group** (USD 1.4 billion, +16% cc), which includes *Exforge* and *Exforge HCT*, continued to grow at a solid double-digit rate, fueled by continued demand in the United States, Asia Pacific and Middle East, as well as ongoing *Exforge HCT* launches in Asia and Latin America. *Exforge* delivered double-digit growth globally and is now available for patients in more than 100 countries. *Exforge HCT*, which consists of *Exforge* with a diuretic in a single pill, is now available in over 60 countries.

Zometa (USD 1.3 billion, –11% cc), which is used in an oncology setting to reduce or delay skeletal-related events in patients with bone metastases from solid tumors and multiple myeloma, declined as anticipated in 2012 due to competition.

Gilenya (USD 1.2 billion, +147% cc) continued to show rapid growth as the first once-daily oral therapy approved for relapsing remitting and/or relapsing forms of multiple sclerosis (MS or RRMS) in adult patients, and achieved blockbuster status in 2012 with USD 1.2 billion in annual sales. *Gilenya* is indicated in the United States for relapsing forms of MS, and in the European Union for adult patients with highly active RRMS, defined as either high disease activity despite treatment with beta interferon, or rapidly evolving severe RRMS. As of December 2012, there are approximately 56 000 patients who have been treated with *Gilenya* in clinical trials and in a post-marketing setting, and approximately 62 000 patient years of exposure. In April 2012, following completion of their safety reviews, the FDA and EMA both confirmed the positive benefit-risk profile of *Gilenya* when used in accordance with updated product information, which for both regions includes additional requirements (such as blood pressure monitoring and electrocardiograms) for the existing six-hour observation period following the first dose and more specific guidance on patient selection parameters to aid in the identification of patients suitable for *Gilenya* treatment. In particular situations, it is recommended that the first dose monitoring period be extended. *Gilenya* is currently approved in over 65 countries around the world, and is licensed from Mitsubishi Tanabe Pharma Corporation.

Exelon/Exelon **Patch** (USD 1.1 billion, +2 % cc) combined sales increased slightly in 2012 as a therapy for mild-to-moderate forms of Alzheimer's disease dementia as well as dementia linked with Parkinson's disease. *Exelon* Patch, the novel transdermal form of the medicine launched in 2007 and now available in more than 80 countries worldwide, generated the majority of the sales. In August 2012, the FDA approved a higher dose of *Exelon* Patch for the treatment of people with mild-to-moderate Alzheimer's disease and mild to moderate Parkinson's disease dementia. In November 2012, CHMP issued a positive opinion for the approval of the higher dose of *Exelon* Patch for the treatment of patients with mild-to-moderately severe Alzheimer's disease in Europe.

Tasigna (USD 1.0 billion, +44% cc) grew rapidly as a more effective, targeted therapy for certain adult patients with Ph+ CML. It is currently approved as first-line therapy for newly diagnosed patients with Ph+ CML in the chronic phase in more than 80 countries globally, including the United States, European Union, Japan and Switzerland, with additional submissions pending worldwide. *Tasigna* is also approved in more than 100 countries as a second-line treatment for patients with Ph+ CML in chronic and/or accelerated phase who are resistant or intolerant to existing treatment, such as *Gleevec/Glivec*. *Tasigna* market share continues to rise in both the first-line and second-line settings. This product is part of our Bcr-Abl franchise with net sales of USD 5.7 billion, (+9% cc), which also includes *Gleevec/Glivec*.

Galvus **Group** (USD 910 million, +43% cc), which includes *Galvus* (vildagliptin), an oral treatment for type 2 diabetes, and *Eucreas*, a single-pill combination of vildagliptin and metformin, delivered strong growth in key markets, particularly in Europe, Japan, Latin America and Asia Pacific. Performance was driven by a continued focus on patients whose diabetes remains uncontrolled on metformin, as well as an expansion of usage in new patient segments based on new indications. *Galvus* is currently approved in more than 100 countries. *Eucreas* was the first single-pill combining a DPP-4 inhibitor and metformin to be launched in Europe and is currently approved in more than 85 countries.

Exjade (USD 870 million, +7% cc), a once-daily oral therapy for blood transfusion iron overload approved in more than 100 countries, saw steady sales growth as a decline in the United States was more than offset by growth in Europe, Latin America, Canada and Japan. Worldwide regulatory filings are underway and the EMA has approved *Exjade* as a treatment for patients with non-transfusion-dependent thalassemia syndromes, a diverse group of genetic disorders that cause anemia, with a first approval achieved in Canada.

Neoral/Sandimmun (USD 821 million, –6% cc), an immunosuppressant primarily used to prevent organ rejection following a kidney, liver or heart transplant, experienced only modestly declining sales, despite ongoing generic competition, due to its pharmacokinetic profile, reliability and use in treating a life-threatening condition. *Neoral* is also approved for use in lung transplant patients in many countries outside the United States, and is also indicated for treatment of select autoimmune disorders such as psoriasis and rheumatoid arthritis. *Neoral* is marketed in approximately 100 countries.

Afinitor/Votubia (USD 797 million, +85% cc), an oral inhibitor of the mTOR pathway, accelerated its strong growth trajectory in 2012 following FDA and EMA approvals in HR+/HER2- advanced breast cancer. Everolimus, the active ingredient in *Afinitor/Votubia*, was also approved in the United States as *Afinitor* and in the Euro-

pean Union as *Votubia* for the treatment of adult patients with renal angiomyolipomas and subependymal giant cell astrocytomas (SEGAs) associated with tuberous sclerosis complex who do not require immediate surgery. The FDA also granted approval for a new formulation, *Afinitor Disperz* tablets, for patients with SEGAs. *Afinitor/Votubia* is now approved in five indications in the United States and four in the European Union. Everolimus is available under the trade names *Zortress/Certican* for use in other non-oncology indications and is exclusively licensed to Abbott and sublicensed to Boston Scientific for use in drug-eluting stents.

Voltaren*/*Cataflam (USD 759 million, 0% cc), a leading nonsteroidal anti-inflammatory drug available in more than 140 countries, saw stable sales as competition was offset by continued growth in regions such as Latin America, the Middle East, Africa and Asia based on long-term trust in the brand. Indicated for the relief of symptoms in rheumatic diseases like rheumatoid arthritis and osteoarthritis, and for various other inflammatory and pain conditions, *Voltaren/Cataflam* is marketed by the Pharmaceuticals Division in a wide variety of dosage forms. In addition, in various countries, our OTC Division markets low-dose oral forms and the topical therapy of *Voltaren* as over-the-counter products.

Reclast*/*Aclasta (USD 590 million, –2% cc), a once-yearly bisphosphonate infusion for the treatment of certain forms of osteoporosis and Paget's disease of the bone, saw sales decline slightly in 2012. Sold as *Reclast* in the United States and *Aclasta* in the rest of the world, the product is approved in more than 100 countries for up to six indications. It is also the only bisphosphonate approved to reduce the incidence of fractures at all three key fracture sites (hip, spine and non-spine) in the treatment of postmenopausal osteoporosis. Zoledronic acid, the active ingredient in *Reclast/Aclasta*, is also approved in a number of countries in a different dosage under the trade name *Zometa* for certain oncology indications.

Myfortic (USD 579 million, +16% cc), a transplantation medicine, continued to grow as a treatment for the prevention of acute rejection of kidney allografts. It is approved for this indication, in combination with cyclosporine and corticosteroids, in more than 90 countries.

Ritalin*/*Focalin (USD 554 million, +3% cc) continued to grow as a treatment for attention deficit hyperactivity disorder (ADHD) in children. *Ritalin* and *Ritalin LA* are available in more than 70 and 30 countries, respectively, and are also indicated for narcolepsy. *Focalin* and *Focalin XR* are available in the United States, and *Focalin XR,* which is additionally indicated for adults, is also approved in Switzerland. Immediate release *Focalin* is subject to generic competition.

Comtan*/*Stalevo (USD 530 million, –11% cc), indicated for the treatment of Parkinson's disease, saw sales decline in 2012 due to generic competition in some markets. *Stalevo* (carbidopa, levodopa and entacapone) is indicated for certain Parkinson's disease patients who experience end-of-dose motor fluctuations, known as "wearing off". *Stalevo* is available in more than 50 countries. *Comtan* (entacapone) is also indicated for the treatment of Parkinson's disease patients who experience end-of-dose wearing off and is marketed in approximately 50 countries. Both products are marketed by Novartis under a licensing agreement with the Orion Corporation

Xolair (USD 504 million, +12% cc), a biologic drug for severe persistent allergic asthma in Europe and moderate-to-severe persistent allergic asthma in the United States, is now approved in more than 90 countries and continued to grow strongly in Europe, Japan, Canada and Latin America. Novartis co-promotes *Xolair* with Genentech/Roche in the United States and shares a portion of operating income, but does not book United States sales. A Phase III trial is progressing to support registration in China. Omalizumab, the active ingredient in *Xolair*, is also in Phase III development for the treatment of a debilitating skin disease called chronic idiopathic urticaria, with regulatory filing planned in 2013.

Femara (USD 438 million, –50% cc), a treatment for early stage and advanced breast cancer in postmenopausal women, experienced a decline in sales due to multiple generic entries in the United States, Europe and other key markets.

Other Products of Significance

Tekturna/Rasilez (USD 383 million, –29% cc) sales declined following label updates in the European Union, United States and Japan. The label updates followed our decision in December 2011 to halt the ALTITUDE study. Patient safety is the highest priority for Novartis and we are sharing the end-of-treatment results which confirmed the preliminary findings with health authorities worldwide as required. Novartis voluntarily ceased to market *Valturna*, a single-pill combination containing aliskiren and valsartan, in the United States as of July 2012.

TOBI (USD 317 million, +9% cc) sales, including both *TOBI* nebulizer solution and *TOBI Podhaler* formulations of the antibiotic tobramycin, continued to grow with *TOBI Podhaler* capturing 13% of total sales in 2012. Both products are used for the management of Pseudomonas aeruginosa infection in cystic fibrosis patients aged six years and older. *TOBI Podhaler*, approved in the European Union, Canada, Switzerland and other countries can be delivered using a portable, pocket-sized inhaler that reduces administration time by approximately 70% relative to *TOBI*. In the United States, Novartis has responded to the FDA's October 2012 Complete Response Letter for *TOBI Podhaler* (the provisional US trade name) in October 2012 and anticipates an FDA action in the middle of 2013. An FDA Advisory Committee previously voted 13 to 1 that there was adequate evidence of efficacy and safety to support its use in the proposed indication.

Zortress/Certican (USD 210 million, +20% cc), a transplantation medicine available in more than 90 countries to prevent organ rejection in adult heart and kidney transplant patients, continued to generate robust growth. It is also approved to prevent organ rejection for liver transplant patients in the European Union (as of October 2012), Argentina, Chile and Philippines. Everolimus, the active ingredient in *Zortress/Certican*, is marketed for other indications

under the trade names *Afinitor/Votubia*. Everolimus is exclusively licensed to Abbott and sublicensed to Boston Scientific for use in drug-eluting stents.

Extavia (USD 159 million, +9% cc), the Novartis-patented version of Betaferon®/Betaseron® (interferon beta-1b) for relapsing forms of MS, continued to grow in key markets. *Extavia* is available in more than 35 countries, including the United States.

Arcapta Neohaler/Onbrez Breezhaler (USD 134 million, +39% cc) continued to grow strongly worldwide as a once-daily long-acting beta$_2$-agonist (LABA) for the maintenance bronchodilator treatment of airflow obstruction in adult patients with chronic obstructive pulmonary disease (COPD). Indacaterol, the active ingredient in *Arcapta Neohaler/Onbrez Breezhaler,* is now approved in more than 90 countries.

Ilaris (USD 72 million, +56% cc) showed strong growth as a treatment for adults and children suffering from cryopyrin-associated periodic syndrome (CAPS), a group of rare disorders characterized by chronic recurrent fever, urticaria, occasional arthritis, deafness, and potentially life threatening amyloidosis. *Ilaris* is approved for the treatment of CAPS in over 60 countries.

In January 2013, the CHMP of the EMA has adopted a positive opinion of *Ilaris* (canakinumab) for the treatment of patients whose acute gouty arthritis cannot be managed with standard of care. Approval by the European Commission is expected in the first half of 2013.

Jakavi (USD 30 million) sales grew as an oral inhibitor of the JAK 1 and JAK 2 tyrosine kinases and was approved in the European Union and Canada in the second half of 2012 for the treatment of disease-related splenomegaly or symptoms in adult patients with primary myelofibrosis (also known as chronic idiopathic myelofibrosis), post-polycythemia vera myelofibrosis or post-essential thrombocythemia myelofibrosis. *Jakavi* is available in 31 countries with additional worldwide regulatory filings underway. Incyte holds the rights for *Jakavi* in the United States where it is sold as Jakavi®.

ALCON

Net sales rose 3% (+5% cc) to USD 10.2 billion, driven by sales growth in Surgical (+5%, +8% cc), Ophthalmic Pharmaceuticals (+2%, +5% cc), and Vision Care (+1%, +4% cc) compared to the prior year.

Surgical sales growth was led by robust sales of Cataract, Vitreoretinal and Refractive equipment, advanced technology IOLs and procedural growth in Emerging Growth Markets. Ophthalmic Pharmaceuticals sales benefited from growth of the *Systane* (Dry Eye), *Nevanac* (Inflammation) and *Durezol* (Inflammation) brands, as well as strong growth in combination glaucoma brands *DuoTrav* and *Azarga*. The Ophthalmic Pharmaceuticals performance was offset by sales of *Travatan* in the United States with the generic entry of latanoprost into the glaucoma category. Vision Care maintained its solid sales performance with growth of *Air Optix*, a strong launch uptake of *Dailies Total1* lenses in Europe, and modest growth in the lens care solution business.

Alcon division net sales by product category:

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Constant currencies change %
Surgical				
Cataract products	2 932	2 858	3	6
of which cataract IOLs	*1 281*	*1 276*	*0*	*4*
Vitreoretinal products	578	529	9	12
Refractive/other	242	200	21	24
Total	**3 752**	**3 587**	**5**	**8**
Ophthalmic Pharmaceuticals				
Glaucoma	1 259	1 287	–2	1
Allergy/otic/nasal	901	884	2	3
Infection/inflammation	1 011	967	5	8
Dry eye/other	848	810	5	8
Total	**4 019**	**3 948**	**2**	**5**
Vision Care				
Contact lenses	1 732	1 701	2	5
Solutions/other	722	722	0	2
Total	**2 454**	**2 423**	**1**	**4**
Total net sales	**10 225**	**9 958**	**3**	**5**

Alcon Division Franchise Highlights

Net sales growth data below refer to 2012 worldwide performance.

Surgical

In 2012, global Surgical net sales were USD 3.8 billion, up 5% (+8% cc) over the previous year. Advanced technology IOLs showed continued strong growth of 13% (+16% cc), led by *AcrySof IQ Toric.* The launch of the *AcrySof IQ ReSTOR +2.5D Multifocal IOL* and *AcrySof IQ ReSTOR +2.5D Multifocal Toric IOL* in Europe also contributed to growth.

Global sales of *LenSx* femtosecond cataract refractive lasers grew 234% (cc), continued global launches contributing to strong *LenSx* uptake. *LenSx* lasers have now been installed or shipped to more than 40 markets and more than 1 000 surgeons have been trained to use this innovative technology. In addition, the *LenSx SoftFit* Patient Interface, Alcon's latest *LenSx* laser platform, was launched in the United States for use during cataract surgery.

Surgical also experienced growth in the Vitreoretinal category, driven by sales of *Constellation* equipment, which grew 28% (cc) in markets outside the United States. The Refractive/Other segment also grew, driven by *Wavelight FS200* and *EX500* product launches, offering faster treatment times during refractive surgery.

Ophthalmic Pharmaceuticals

Global net sales of Ophthalmic Pharmaceuticals products increased by 2% (+5% cc) in 2012, driven by non-US glaucoma product sales, inflammation products *Durezol* and *Nevanac*, and the

Systane dry eye portfolio. *Travatan/DuoTrav* solution sales in glaucoma grew by 12% (cc) in markets outside the United States, offset by the impact of generic competition in the United States. Infection/Inflammation product sales grew 10% (cc), led by strong growth of the *Durezol* emulsion and *Nevanac* ophthalmic suspension. *Systane Ultra* and *Systane Balance* were key growth drivers in the Dry Eye segment in Europe, Latin America, the Caribbean, Canada and Asia, with total product portfolio growth of 10% (cc).

Further strengthening growth prospects for Ophthalmic Pharmaceuticals, Alcon received FDA approval for *Durezol* to treat uveitis in 2012. Originally indicated for use as an anti-inflammatory post-surgery, this additional indication will treat inflammation in the uvea near the middle of the eye. *Nevanac* received EU approval for the indication of post-surgical macular edema to treat the inflammatory response in the retina following cataract surgery. In addition, FDA approval was received for *Nepafenac* ophthalmic suspension 0.3% for the treatment of pain and inflammation associated with cataract surgery. Alcon expanded its pharmaceutical offering by entering into a strategic licensing agreement with ThromboGenics to commercialize *Jetrea* (ocriplasmin) outside the United States. Ocriplasmin, which received a positive CHMP opinion in January 2013, may become the first pharmaceutical treatment for vitreomacular traction and macular hole in Europe. In October 2012, *Jetrea* was approved by the FDA.

Vision Care

The Vision Care business continued to grow, with global net sales up 1% (+4% cc, with 5% cc growth in contact lenses and 2% cc growth in lens care products) versus prior year. This growth was driven by the United States and Japan, as well as the continued strong performance of the *Air Optix* portfolio, which leads the marketplace in the multifocal segment and achieved 19% (cc) growth in 2012. Alcon also saw strong *Dailies* growth in the United States, up 14% (cc) over the previous year. *Dailies Total1*, the industry's first and only water gradient contact lens, was launched in Germany, Austria, Italy and France, gaining new users and market share in the silicone hydrogel daily disposable category, and was also approved in the United States and Japan. In lens care, Alcon achieved 10% (cc) growth of the *Clear Care* disinfecting solution.

SANDOZ

Sandoz net sales decreased by 8% (-4% cc) in 2012 to USD 8.7 billion as a result of declines in the United States retail generics and biosimilars (-17% cc) and Germany (-7% cc), partly offset by double-digit sales growth in biosimilars (+36% cc), the rest of Western Europe (+10% cc) and Asia (+17% cc). Total sales volume decreased 1 percentage point and price erosion was 5 percentage points primarily due to increased competition on United States sales of enoxaparin (USD 451 million in 2012 compared to USD 1.0 billion in 2011). Fougera contributed 2 additional percentage points of growth from the inclusion of approximately five months of sales in 2012.

VACCINES AND DIAGNOSTICS

Net sales were USD 1.9 billion (-7%, -4% cc) in 2012 compared to USD 2.0 billion in 2011. 2011 was impacted by the release of bulk pediatric shipments that had been delayed from the fourth quarter of 2010 and a one-time pre-pandemic sale.

The growth of our Meningococcal franchise was underpinned by *Menveo*, which continues to gain market share both in the United States and in the rest of the world, with sales of over USD 164 million (+18% cc) in 2012.

CONSUMER HEALTH

Consumer Health net sales declined 19% (–16% cc) mainly due to the impact of the suspension of production at the United States manufacturing site in Lincoln, Nebraska, where operations were suspended at the end of 2011 for quality upgrades and improvements.

OTC's net sales declined sharply versus the previous year primarily due to Lincoln. Also contributing to the sales decline was a weak cough-and-cold season in early 2012, as well as continued economic deterioration and government austerity measures in several European markets. Despite weak economic conditions, OTC gained market share in most European countries and is growing significantly ahead of the market in key Emerging Growth Markets, notably Russia and China. Increased advertising and promotion investments in growth brands like *Voltaren* and *Otrivin*, the launch of line extensions, and the improvement of commercial execution are the key drivers for these market share gains.

Animal Health reported a net sales decline as a result of limited sales of companion animal products manufactured at Lincoln. Excluding the Lincoln brands, Animal Health maintained strong single-digit growth. The United States continued to show strong momentum, delivering double-digit sales growth excluding the Lincoln brands, mainly driven by *Denagard*, *Atopica* and *Capstar*. Emerging Growth Markets posted high single-digit sales growth with particularly strong performances in China, India, Russia and Brazil.

OPERATING INCOME BY SEGMENTS

	Year ended Dec 31, 2012 USD millions	% of net sales	Year ended Dec 31, 2011 USD millions	% of net sales	Change in USD %	Change in constant currencies %
Pharmaceuticals	**9 598**	**29.9**	**8 296**	**25.5**	**16**	**19**
Alcon	**1 465**	**14.3**	**1 472**	**14.8**	**0**	**6**
Sandoz	**1 091**	**12.5**	**1 422**	**15.0**	**– 23**	**– 24**
Vaccines and Diagnostics	**– 250**	**– 13.5**	**– 249**	**– 12.5**	**0**	**13**
Consumer Health	**48**	**1.3**	**727**	**15.7**	**– 93**	**– 89**
Corporate income & expenses, net	– 441		– 670		– 34	– 31
Operating income	**11 511**	**20.3**	**10 998**	**18.8**	**5**	**8**

CORE OPERATING INCOME BY SEGMENTS

	Year ended Dec 31, 2012 USD millions	% of net sales	Year ended Dec 31, 2011 USD millions	% of net sales	Change in USD %	Change in constant currencies %
Pharmaceuticals	**10 213**	**31.8**	10 040	30.9	**2**	**5**
Alcon	**3 698**	**36.2**	3 492	35.1	**6**	**9**
Sandoz	**1 503**	**17.3**	1 921	20.3	**–22**	**–21**
Vaccines and Diagnostics	**–75**	**–4.0**	135	6.8	**nm**	**nm**
Consumer Health	**159**	**4.3**	873	18.9	**–82**	**–78**
Corporate income & expenses, net	–338		–552		–39	–35
Core operating income	**15 160**	**26.7**	15 909	27.2	**–5**	**–2**

nm = not meaningful

PHARMACEUTICALS

Pharmaceuticals reported an operating income of USD 9.6 billion (+16%, +19% cc). The operating income margin increased by 4.3 percentage points (cc) with a positive currency impact of 0.1 percentage points resulting in an operating income margin of 29.9% of net sales.

Adjustments to arrive at core operating income amounted to USD 615 million, consisting of USD 322 million for the amortization of intangible assets, USD 238 million of impairments and USD 55 million of other exceptional charges. The prior year adjustments amounted to USD 1.7 billion, principally related to impairments and other charges of USD 903 million for *Tekturna/Rasilez* and restructuring charges of USD 420 million offset by a USD 334 million gain due to the divestment of Elidel®.

Core operating income was USD 10.2 billion (+2%, +5% cc). Constant currency core operating income margin improved by 0.7 percentage points due to continuing productivity efforts. Currency movements had a positive impact of 0.2 percentage points resulting in a core operating income margin of 31.8% of net sales. The underlying gross margin decreased by 1.1 percentage points (cc), mainly driven by royalties and product mix, while R&D expenses improved margin by 0.3 percentage points (cc). As a percentage of net sales, Marketing & Sales and General & Administration expenses improved operating income margin by 0.8 percentage points (cc). Other Income and Expense, net also improved margin by 0.7 percentage points (cc).

As shown below, Pharmaceuticals invested USD 6.9 billion (on a core basis USD 6.7 billion) in research and development in 2012. This represented 21.5% (on a core basis 20.8%) of Pharmaceuticals' total net sales. Pharmaceuticals currently has 138 projects in clinical development.

Research and Exploratory Development expenditure was USD 2.6 billion in 2012, practically unchanged from the 2011 amount of USD 2.7 billion. Confirmatory Development expenditures in 2012 decreased by 5% to USD 4.3 billion as compared against 2011. This included USD 0.1 billion (2011: USD 0.3 billion) in impairments of intangible assets. On a core basis, Confirmatory Development expenditure remained unchanged at USD 4.2 billion in 2012 and represented 13.0% of net sales as in the prior year.

PHARMACEUTICALS RESEARCH AND DEVELOPMENT EXPENDITURE

	Year ended Dec 31, 2012		Year ended Dec 31, 2011	
	USD millions	Core R&D [1] USD millions	USD millions	Core R&D [1] USD millions
Research and Exploratory Development	2 584	2 530	2 676	2 625
Confirmatory Development	4 334	4 167	4 556	4 235
Total	**6 918**	**6 697**	**7 232**	**6 860**

[1] Core excludes impairments, amortization and other exceptional items.

ALCON

Operating income of USD 1.5 billion (0%, +6% cc) included amortization of intangible assets of USD 1.9 billion and integration costs of USD 264 million, whereas 2011 included an exceptional income of USD 268 million.

Adjustments to arrive at core operating income amounted to USD 2.2 billion (2011: USD 2.0 billion), mainly driven by the amortization of intangible assets of USD 1.9 billion (2011: USD 1.9 billion).

Alcon increased core operating income to USD 3.7 billion (+6%, +9% cc), delivering strong operating leverage through productivity gains and the realization of merger-related cost synergies (2012: USD 297 million), while continuing to invest in Emerging Growth Markets and R&D. Core operating margin in constant currencies increased by 1.1 percentage points to 36.2% of net sales. Gross margin in constant currencies improved 0.4 percentage points to 74.6% of net sales driven by procurement savings and productivity initiatives. Marketing & Sales expenses, which represented 24.1% of net sales, improved by 1.4 percentage points (cc) due to synergies. General & Administration expenses improved 0.1 percentage points (cc) to 4.9% of net sales. Investments in R&D represented 9.1% of net sales, decreasing 0.4 percentage points (cc) from the prior year.

SANDOZ

Operating income at Sandoz was USD 1.1 billion (–23%, –24% cc). The operating income margin fell by 3.1 percentage points in constant currencies, with a positive currency impact of 0.6 percentage points resulting in an operating income margin of 12.5% of net sales, as a result of enoxaparin-driven price erosion and continued investments into quality assurance and manufacturing as well as into the development of future biosimilar and respiratory products.

Adjustments to arrive at core operating income amounted to USD 412 million (2011: USD 499 million). These consist principally of amortization of intangible assets of USD 364 million (2011: USD 383 million) and costs related to the Fougera acquisition of USD 62 million. These were partly offset by a reduction of contingent consideration of USD 59 million related to a business combination (2011: USD 106 million) and lower legal settlement costs compared to the prior year of USD 204 million.

Core operating income decreased by 22% (-21% cc) to USD 1.5 billion. The addition of the Fougera business contributed 1.0 percentage points (cc) to core operating income. Core operating income margin in constant currencies decreased by 3.7 percentage points, partly offset by a positive currency impact of 0.7 percentage points, resulting in a core operating income margin of 17.3% of net sales. Gross margin decreased by 0.9 percentage points (cc), driven primarily by continued investments in quality assurance and manufacturing. As a percentage of net sales, Marketing & Sales expenses increased by 1.5 percentage points (cc) as a consequence of investments into growing businesses in biosimilars, Western Europe outside of Germany and Emerging Growth Markets. R&D expenses increased by 1.1 percentage points (cc) as a result of our investments into our biosimilars and respiratory pipeline and General & Administration expenses increased by 0.2 percentage points (cc). Other Income and Expense, net was unchanged compared to 2011.

VACCINES AND DIAGNOSTICS

Reported operating loss was USD 250 million (2011: USD 249 million loss) as a result of lower sales and the manufacturing ramp-up for upcoming launches of *Bexsero* and *Flucelvax* . 2012 included a licensing settlement benefit of USD 56 million, while 2011 included an impairment of USD 135 million related to a financial asset.

Core operating loss in 2012 was USD 75 million compared to a core operating income of USD 135 million in 2011.

CONSUMER HEALTH

Consumer Health reported an operating income of USD 48 million versus a prior-year income of USD 727 million largely due to the impact of the suspension of production and quality upgrade investments at Lincoln, as well as higher income in 2011 from the divestment of OTC non-core brands.

The operating income margin declined 14.4 percentage points to 1.3% of net sales, including a negative currency impact of 0.6 percentage points. Core operating income declined 82% (-78% cc) to USD 159 million and core operating income margin declined 14.6 percentage points to 4.3% of net sales.

Gross margin decreased 9.4 percentage points (cc) mainly due to disruptions in supply, idle capacity charges at Lincoln as well as one-time quality upgrade investments at the manufacturing facility. As a percentage of net sales, Marketing & Sales expenses increased 2.4 percentage points (cc), R&D expenses increased 1.4 percentage points (cc) and General & Administration expenses increased 0.9 percentage points (cc) largely as a result of lower sales that more than offset the positive impact from cost savings programs. During 2012, both Consumer Health businesses continued to increase overall R&D spending to support their future pipelines and also increased Marketing & Sales spend into products and markets that were not affected by the supply shortage. Other Income and Expense, net increased by 0.1 percentage points (cc).

CORPORATE INCOME AND EXPENSE, NET

Corporate income and expense, which includes the cost of Group management and central services, amounted to a USD 441 million net expense, compared to USD 670 million in 2011, principally due to reductions in environmental, restructuring and other provisions and an exceptional gain of USD 51 million from the sale of financial assets. Taking into account 2012 core adjustments of USD 103 million, core corporate income and expense decreased to a net expense of USD 338 million (2011: USD 552 million).

NON-OPERATING INCOME AND EXPENSE

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Change in constant currencies %
Operating income	**11 511**	**10 998**	**5**	**8**
Income from associated companies	552	528	5	5
Interest expense	– 724	– 751	– 4	– 1
Other financial income and expense	– 96	– 2	nm	nm
Income before taxes	**11 243**	**10 773**	**4**	**7**
Taxes	– 1 625	– 1 528	6	8
Group net income	**9 618**	**9 245**	**4**	**7**
Attributable to:				
Shareholders of Novartis AG	*9 505*	*9 113*	*4*	*8*
Non-controlling interests	*113*	*132*	*– 14*	*– 14*
Basic EPS (USD)	3.93	3.83	3	6

CORE NON-OPERATING INCOME AND EXPENSE

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %	Change in constant currencies %
Core operating income	**15 160**	**15 909**	**– 5**	**– 2**
Income from associated companies	755	779	– 3	– 3
Interest expense	– 724	– 751	– 4	– 1
Other financial income and expense	– 96	– 2	nm	nm
Core income before taxes	**15 095**	**15 935**	**– 5**	**– 3**
Taxes	– 2 284	– 2 445	– 7	– 5
Core net income	**12 811**	**13 490**	**– 5**	**– 3**
Attributable to:				
Shareholders of Novartis AG	*12 698*	*13 273*	*– 4*	*– 2*
Non-controlling interests	*113*	*217*	*– 48*	*– 48*
Core basic EPS (USD)	5.25	5.57	– 6	– 3

nm = not meaningful

INCOME FROM ASSOCIATED COMPANIES

The income from associated companies increased from USD 528 million in 2011 to USD 552 million in 2012.

The following is a summary of the individual components included in the income from associated companies:

	2012 USD millions	2011 USD millions
Novartis share of Roche's estimated current-year consolidated net income	691	661
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	– 153	– 162
Net income effect from Roche	**538**	**499**
Net income from other associated companies	**14**	**29**
Income from associated companies	**552**	**528**

The Group's 33.3% interest in Roche's voting shares, which represents a 6.4% interest in Roche's total equity, generated income of USD 538 million in 2012, up from USD 499 million in 2011. The 2012 contribution reflects an estimated USD 741 million share of Roche's net income in 2012. This contribution, however, was reduced by an exceptional charge of USD 50 million taken in 2012 as part of Roche's restructuring charges and USD 153 million for the amortization of intangible assets arising from the allocation of the purchase price paid by Novartis for this investment to Roche's intangible assets. A survey of analyst estimates is used to estimate the Group's share of net income in Roche. Any differences between these estimates and actual results will be adjusted in the 2013 consolidated financial statements.

Adjusting for the exceptional items in both years, core income from associated companies decreased 3% from USD 779 million to USD 755 million.

INTEREST EXPENSE AND OTHER FINANCIAL INCOME/EXPENSE

The interest expense decreased to USD 724 million in 2012 from USD 751 million in 2011 as a result of lower average gross financial debt compared to the prior year. Other financial income and expense amounted to a net expense of USD 96 million compared to a net expense of USD 2 million in 2011, mainly as a result of currency losses.

TAXES

Tax expenses in 2012 were USD 1.6 billion, an increase of 6% (8% cc) from 2011. The tax rate (taxes as a percentage of income before taxes) increased slightly to 14.5% in 2012 from 14.2% in 2011. The core tax rate (taxes as percentage of core income before taxes) decreased to 15.1% in 2012 from 15.3% in 2011.

For further information on the main elements contributing to the difference, see the core tables starting on page 182 and note 6 to the Group's consolidated financial statements.

FREE CASH FLOW

Novartis defines free cash flow as cash flow from operating activities less purchase or sale of property, plant and equipment, intangible, non-current and financial assets. Cash flows in connection with the acquisition or divestment of subsidiaries, associated companies and non-controlling interests are excluded from free cash flow. The Group's free cash flow measure, which is a non-IFRS measure, is discussed more on page 182. The following is a summary of the Group's free cash flow:

	2012 USD millions	2011 USD millions	Change USD millions
Operating income	**11 511**	**10 998**	**513**
Reversal of non-cash items			
Depreciation, amortization and impairments	4 954	5 980	– 1 026
Change in provisions and other non-current liabilities	539	1 295	– 756
Other	452	272	180
Operating income adjusted for non-cash items	**17 456**	**18 545**	**– 1 089**
Interest and other financial receipts	689	470	219
Interest and other financial payments	– 616	– 687	71
Taxes paid	– 2 022	– 2 435	413
Payments out of provisions and other net cash movements in non-current liabilities	– 1 173	– 1 471	298
Change in inventory and trade accounts receivable less accounts payable	183	– 492	675
Change in other net current assets and other operating cash flow items	– 323	379	– 702
Cash flows from operating activities	**14 194**	**14 309**	**– 115**
Purchase of property, plant and equipment	– 2 698	– 2 167	– 531
Purchase of intangible assets	– 370	– 220	– 150
Purchase of financial assets	– 180	– 139	– 41
Purchase of other non-current assets	– 57	– 48	– 9
Proceeds from sales of property, plant and equipment	92	61	31
Proceeds from sales of intangible assets	163	643	– 480
Proceeds from sales of financial assets	221	59	162
Proceeds from sales of other non-current assets	18	5	13
Group free cash flow	**11 383**	**12 503**	**– 1 120**

In 2012, free cash flow of USD 11.4 billion was USD 1.1 billion lower than the prior year mainly on account of higher investments in property, plant and equipment of USD 2.7 billion compared to USD 2.2 billion (4.8% of net sales compared to 3.7% in 2011) and lower divestment proceeds which amounted to USD 0.5 billion in 2012 compared to USD 0.8 billion in 2011.

This free cash flow was primarily used for dividend payments to shareholders of USD 6.0 billion (compared to USD 5.4 billion in 2011), for the recent acquisitions which on a net cash basis

amounted to USD 1.7 billion (mainly Fougera Pharmaceuticals, Inc.), and for the reduction of net debt of USD 3.5 billion. This allocation reflects management's intention to optimize shareholder returns whilst at the same time reinvesting surplus fund in the business to assure future growth.

LIQUIDITY, CASH FLOW AND CAPITAL RESOURCES

The following table sets forth certain information about the Group's cash flow and net debt.

	2012 USD millions	2011 USD millions	Change USD millions
Cash flows from operating activities	14 194	14 309	– 115
Cash flows used in investing activities	– 5 675	– 792	– 4 883
Cash flows used in financing activities	– 6 675	– 15 024	8 349
Currency translation effect on cash and cash equivalents	– 1	– 103	102
Net change in cash and cash equivalents	**1 843**	**– 1 610**	**3 453**
Change in marketable securities	1 201	– 1 449	2 650
Change in current and non-current financial debts	503	2 758	– 2 255
Change in net debt	**3 547**	**– 301**	**3 848**
Net debt at January 1	– 15 154	– 14 853	– 301
Net debt at December 31	**– 11 607**	**– 15 154**	**3 547**

Net debt consists of:

	2012 USD millions	2011 USD millions	Change USD millions
Current financial debts and derivative financial instruments	– 5 945	– 6 374	429
Non-current financial debts	– 13 781	– 13 855	74
Total financial debt	**– 19 726**	**– 20 229**	**503**
Less liquidity:			
Cash and cash equivalents	5 552	3 709	1 843
Marketable securities and derivative financial instruments	2 567	1 366	1 201
Total liquidity	**8 119**	**5 075**	**3 044**
Net debt at December 31	**– 11 607**	**– 15 154**	**3 547**

In 2012, cash flow from operating activities amounted to USD 14.2 billion, only marginally lower than the prior year amount of USD 14.3 billion as the impact of lower tax payments was offset by the payments from provisions created in earlier periods.

The cash flow used in investing activities amounted to USD 5.7 billion, USD 4.9 billion higher than 2011, which primarily reflected the amount spent for the acquisition of Fougera Pharmaceuticals, Inc. (USD 1.5 billion) and net investments in property, plant and equipment and other non-current assets, which amounted to USD 2.8 billion, while the net investment in marketable securities amounted to USD 1.1 billion. In 2011, the impact of the net investments in property, plant and equipment and in other non-current assets (USD 1.8 billion), as well as the cash used for acquisitions (USD 0.6 billion), were partially offset by the net proceeds from the sale of marketable securities (USD 1.6 billion).

In 2012, the cash used in financing activities amounted to USD 6.7 billion mainly on account of the dividend payment (USD 6.0 billion) and USD 0.5 billion net repayment of financial debt. This is a decrease of USD 8.3 billion compared to the prior year period. In 2011, the cash flow used in financing activities amounted to USD 15.0 billion mainly on account of the dividend payment (USD 5.4 billion), treasury share transactions (USD 3.5 billion), the acquisition of the non-controlling interest in Alcon (USD 3.2 billion) and USD 2.8 billion for the net repayment of financial debt.

In 2012, the total gross financial debt decreased by USD 0.5 billion and amounted to USD 19.7 billion compared to USD 20.2 billion in 2011.

Long-term financial debt remained stable at USD 13.8 billion and consisted of bonds of USD 12.8 billion and other long-term financial debt of USD 1.0 billion. Short-term debt decreased from USD 6.4 billion at December 31, 2011 to USD 5.9 billion at December 31, 2012 and consisted of commercial paper of USD 1.0 billion, current portion of long-term debt of USD 2.0 billion and other short-term borrowings of USD 2.9 billion. The change in short-term borrowings included the repayment of a 3.5% Swiss franc bond of CHF 700 million in 2012. In the third quarter, Novartis took advantage of the low interest rate environment and issued USD 2.0 billion of bonds to refinance existing short- and long-term indebtedness.

Group net debt decreased to USD 11.6 billion at the end of 2012, compared to USD 15.2 billion at the end of 2011.

The long-term credit rating for the company continues to be double-A (Moody's Aa2; Standard & Poor's AA–; Fitch AA).

We are not aware of significant demands to change our level of liquidity needed to support normal business activity. We intend to use part of our free cash flow to reduce our financial debt. We make use of various borrowing facilities provided by several financial institutions. We also successfully issued various bonds in 2010 and 2012. In addition, we raised funds through our commercial paper programs. We have no commitments from repurchase or securities lending transactions. The principal reason for the decrease in average current financial debt in 2012 compared to 2011 is the decrease in commercial paper during 2012.

CONDENSED CONSOLIDATED BALANCE SHEETS

	Dec 31, 2012 USD millions	Dec 31, 2011 USD millions	Change USD millions
Assets			
Property, plant and equipment	16 939	15 627	1 312
Goodwill	31 090	29 943	1 147
Intangible assets other than goodwill	30 331	31 969	– 1 638
Financial and other non-current assets	17 852	15 873	1 979
Total non-current assets	**96 212**	**93 412**	**2 800**
Inventories	6 744	5 930	814
Trade receivables	10 051	10 323	– 272
Other current assets	3 090	2 756	334
Cash, short-term deposits and marketable securities	8 119	5 075	3 044
Total current assets	**28 004**	**24 084**	**3 920**
Total assets	**124 216**	**117 496**	**6 720**
Equity and liabilities			
Total equity	**69 219**	**65 940**	**3 279**
Financial debts	13 781	13 855	– 74
Other non-current liabilities	17 165	14 553	2 612
Total non-current liabilities	**30 946**	**28 408**	**2 538**
Trade payables	5 593	4 989	604
Financial debts and derivatives	5 945	6 374	– 429
Other current liabilities	12 513	11 785	728
Total current liabilities	**24 051**	**23 148**	**903**
Total liabilities	**54 997**	**51 556**	**3 441**
Total equity and liabilities	**124 216**	**117 496**	**6 720**

Total non-current assets have increased during the year by USD 2.8 billion to USD 96.2 billion at December 31, 2012 as a result of investments in manufacturing and R&D capabilities as well as the Fougera acquisition.

Total current assets increased by USD 3.9 billion to USD 28.0 billion at December 31, 2012 mainly due to an increase in cash, short-term deposits and marketable securities of USD 3.0 billion. Inventory increased by USD 0.8 billion to USD 6.7 billion while trade receivables of USD 10.1 billion were slightly below last year's level.

Trade receivable balances include sales to drug wholesalers, retailers, private health systems, government agencies, managed care providers, pharmacy benefit managers and government-supported healthcare systems. We continue to monitor sovereign debt issues and economic conditions in Europe, in particular in Greece, Italy, Portugal, and Spain (GIPS countries), and evaluate accounts receivable in these countries for potential collection risks. A number of actions were taken to limit our credit risk exposure in these countries, including factoring without recourse and negotiating settlements with the governments or local authorities where we consider this makes economic sense. Deteriorating credit and economic conditions in these countries, among other factors may continue to result in an increase in the average length of time that it takes to collect these accounts receivables.

Based on our current incurred loss provisioning approach we consider that our doubtful debt provisions are adequate. However, we intend to continue to monitor the level of trade receivables in the GIPS countries. Should there be a substantial deterioration in our economic exposure, we may increase our level of provisions by moving to an expected loss provisioning approach or change terms of trade on which we operate.

The following table provides an overview of our aging analysis of our accounts receivable as of December 31, 2012 and 2011:

	2012 USD millions	2011 USD millions
Not overdue	8 584	8 967
Past due for not more than one month	552	498
Past due for more than one month but less than three months	321	295
Past due for more than three months but less than six months	301	249
Past due for more than six months but less than one year	205	228
Past due for more than one year	305	305
Provisions for doubtful trade receivables	– 217	– 219
Total trade receivables, net	**10 051**	**10 323**

With regard to the GIPS countries, the country with the largest outstanding trade receivables exposure is Italy. Substantially all of the outstanding trade receivables from this country are due directly from local governments or from government-funded entities. The movement in the outstanding trade receivables from this country during the year and the related outstanding accounts receivable and provision at December 31, 2012 is as follows:

	2012 USD millions	2011 USD millions
Gross trade receivables at December 31	712	761
Past due for more than one year at December 31	68	91
Provision at December 31	37	28

Other non-current liabilities amounted to USD 17.2 billion compared to USD 14.6 billion in the prior year. A major portion of this increase of USD 2.6 billion arose from the increase in the accrued liability for employee benefits related to our funded and unfunded defined benefit pension plans around the world, but principally in Switzerland and the United States, as well as unfunded and funded US post-retirement medical benefit schemes. The net unfunded deficit of USD 6.3 billion related to the defined benefit schemes comprises actuarially determined liabilities of USD 26.8 billion partially offset by funded plan assets of USD 20.5 billion.

This deficit adjusted for non-vested past service costs as well as for the overfunding of certain plans is recognized in our provisions and fluctuates considerably from time to time. This is due to the fact that the assets consist of both marketable securities and other investments which are valued at their current market value. The

actuarially calculated post-employment defined benefit obligations of USD 26.8 billion have an average duration of 14.1 years and are extremely sensitive to movements in discount rates which are currently at a historic low. The movements in these obligations are the principal reason for the increase in the provision by USD 2.3 billion over the year.

Trade payables of USD 5.6 billion and other current liabilities of USD 12.5 billion increased by USD 0.6 billion and USD 0.7 billion respectively.

Included in other current liabilities are USD 2.1 billion relating to outstanding taxes. While there is some uncertainty about the final taxes to be assessed in our major countries, we consider this uncertainty to be limited since our tax assessments are generally relatively current. In our key countries, Switzerland and the United States, assessments have been agreed by the tax authorities up to 2009 and 2006, respectively.

The Group's total equity rose to USD 69.2 billion as of December 31, 2012, compared to USD 65.9 billion at the end of 2011. This increase is driven by comprehensive income of USD 8.6 billion, consisting of net income of USD 9.6 billion, net actuarial losses from defined benefit plans of USD 1.8 billion and positive currency translation effects of USD 0.8 billion and an increase of USD 0.9 billion related to share-based compensation. These were partially offset by the dividend payment of USD 6.0 billion, with net sales of treasury shares and changes in non-controlling interests contributing an additional reduction of USD 0.2 billion.

As of December 31, 2012, net debt decreased to USD 11.6 billion, compared to USD 15.2 billion at December 31, 2011. The total gross short and long-term debt of USD 19.7 billion at December 31, 2012 was USD 0.5 billion less than the prior year-end level of USD 20.2 billion. As a result of the strong cash flow generation, the Group liquidity increased over the year to USD 8.1 billion at December 31, 2012 from USD 5.1 billion at the prior year end even after repayment of the CHF 700 million bond that matured in 2012. In the third quarter, Novartis took advantage of the low interest rate environment and issued USD 2.0 billion of bonds to refinance existing short- and long-term indebtedness.

The Group's debt/equity ratio improved slightly to 0.28:1 at December 31, 2012 compared to 0.31:1 at the beginning of the year.

An overview of the movements in our current financial debt and related interest rates is set forth below:

	December 31 USD millions	Average interest rate at year end %	Average balance during the year USD millions	Average interest rate during the year %	Maximum balance during the year USD millions
2012					
Interest-bearing accounts of associates	1 541	1.03	1 490	1.06	1 554
Other bank and financial debt	1 270	3.99	1 662	3.05	2 049
Commercial paper	963	0.66	3 738	0.17	6 287
Current portion of non-current financial debt	2 009	na	1 597	na	2 009
Fair value of derivative financial instruments	162	na	102	na	219
Total current financial debt	**5 945**		**8 589**		**12 118**
2011					
Interest-bearing accounts of associates	1 357	1.36	1 463	1.25	1 626
Other bank and financial debt	2 053	3.38	3 784	1.83	7 749
Commercial paper	2 156	0.55	5 597	0.21	8 673
Current portion of non-current financial debt	778	na	479	na	911
Fair value of derivative financial instruments	30	na	97	na	184
Total current financial debt	**6 374**		**11 420**		**19 143**

na = not applicable or available

Interest bearing accounts of associates relate to employee deposits in CHF from the compensation of associates employed by Swiss entities (actual interest rate: 1%). Other bank and financial debt refer to usual lending and overdraft facilities.

The maturity schedule of our net debt is as follows:

December 31, 2012	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Current assets						
Marketable securities and time deposits		1 240	26	543	606	2 415
Derivative financial instruments and accrued interest	36	106	10			152
Cash and cash equivalents	3 852	1 700				5 552
Total current financial assets	**3 888**	**3 046**	**36**	**543**	**606**	**8 119**
Non-current liabilities						
Financial debt				– 7 829	– 5 952	– 13 781
Financial debt – undiscounted				*– 7 848*	*– 6 002*	*– 13 850*
Total non-current financial debt				**– 7 829**	**– 5 952**	**– 13 781**
Current liabilities						
Financial debt	– 2 607	– 764	– 2 412			– 5 783
Financial debt – undiscounted	*– 2 607*	*– 764*	*– 2 413*			*– 5 784*
Derivative financial instruments	– 60	– 54	– 48			– 162
Total current financial debt	**– 2 667**	**– 818**	**– 2 460**			**– 5 945**
Net debt	**1 221**	**2 228**	**– 2 424**	**– 7 286**	**– 5 346**	**– 11 607**

December 31, 2011	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Current assets						
Marketable securities			36	638	562	1 236
Derivative financial instruments and accrued interest on derivative financial instruments	61	15	54			130
Cash and cash equivalents	3 709					3 709
Total current financial assets	**3 770**	**15**	**90**	**638**	**562**	**5 075**
Non-current liabilities						
Financial debt				– 9 874	– 3 981	– 13 855
Financial debt – undiscounted				*– 9 904*	*– 4 005*	*– 13 909*
Total non-current financial debt				**– 9 874**	**– 3 981**	**– 13 855**
Current liabilities						
Financial debt	– 4 039	– 1 100	– 1 205			– 6 344
Financial debt – undiscounted	*– 4 039*	*– 1 100*	*– 1 205*			*– 6 344*
Derivative financial instruments	– 7	– 7	– 16			– 30
Total current financial debt	**– 4 046**	**– 1 107**	**– 1 221**			**– 6 374**
Net debt	**– 276**	**– 1 092**	**– 1 131**	**– 9 236**	**– 3 419**	**– 15 154**

The following table provides a breakdown of liquidity and financial debt by currency:

LIQUIDITY AND FINANCIAL DEBT BY CURRENCY
(as of December 31)

	Liquidity in % 2012	Liquidity in % 2011	Financial debt in % 2012	Financial debt in % 2011
USD	72	60	63	56
EUR	5	2	11	13
CHF	15	33	13	15
JPY			10	14
Other	8	5	3	2
	100	100	100	100

CONTRACTUAL OBLIGATIONS

The following table summarizes the Group's contractual obligations and other commercial commitments as well as the effect these obligations and commitments are expected to have on the Group's liquidity and cash flow in future periods:

		Payments due by period			
	Total USD millions	Less than 1 year USD millions	2–3 years USD millions	4–5 years USD millions	After 5 years USD millions
Non-current financial debt	**15 790**	2 009	5 823	2 006	5 952
Operating leases	**3 145**	372	467	293	2 013
Unfunded pensions and other post-retirement obligations	**2 144**	97	195	207	1 645
Research & Development					
– Unconditional commitments	**219**	48	79	59	33
– Potential milestone commitments	**2 014**	456	526	766	266
Purchase commitments					
– Property, plant & equipment	**755**	508	236	11	
Total contractual cash obligations	**24 067**	**3 490**	**7 326**	**3 342**	**9 909**

The Group intends to fund the R&D and purchase commitments with internally generated resources.

SHARE INFORMATION

NOVARTIS SHARE DEVELOPMENTS IN 2012

– Swiss-listed Novartis shares rise 6.98% to CHF 57.45
– American Depositary Shares (ADS) rise 10.72% to USD 63.30

Novartis shares finished at CHF 57.45, an increase of 6.98% from the 2011 year-end closing price of CHF 53.70. The Novartis American Depositary Shares (ADS) increased by 10.72% to USD 63.30 from USD 57.17 in 2011. The Swiss Market Index (SMI) in comparison rose at a 14.93% pace in 2012, whereas the world pharmaceutical index (MSCI) grew by 10.79% in the year. Over a longer-term period, Novartis has consistently delivered a solid performance, providing a 9.0% compounded annual total shareholder return between January 1, 1996, and December 31, 2012, clearly exceeding the 7.6% compounded returns of its large pharmaceutical peers or the returns of 8.0% of the world pharmaceutical index (MSCI).

The market capitalization of Novartis amounted to USD 152 billion as of December 31, 2012, compared to USD 138 billion as of December 31, 2011.

SHARE REPURCHASE PROGRAMS

During 2012, Novartis repurchased 4.6 million of its shares for USD 240 million on the first trading line on the SIX. These shares will be kept as treasury shares principally for future employee participation program purposes. Following the approval of our shareholders at the Annual General Meeting on February 23, 2012, all shares repurchased on the second trading line of the SIX during 2011 were cancelled (total of 39.4 million shares, which corresponded to 1.4% of the registered Novartis share capital), and the share capital was reduced accordingly.

CONTINUOUSLY RISING DIVIDEND SINCE 1996

The Board of Directors proposes a 2.2% increase in the dividend payment for 2012 to CHF 2.30 per share (2011: CHF 2.25) for approval at the Annual General Meeting on February 22, 2013. This represents the 16th consecutive increase in the dividend paid per share since the creation of Novartis in December 1996. If the 2012 dividend proposal is approved by shareholders, dividends paid out on the outstanding shares will amount to approximately USD 6.2 billion (2011: USD 6.0 billion), resulting in an expected payout ratio of 65% of net income attributable to Novartis shareholders (2011: 66%). Based on the 2012 year-end share price of CHF 57.45, the dividend yield will be 4.0% (2011: 4.2%). The dividend payment date has been set for March 1, 2013. With the exception of 99.9 million treasury shares, all shares issued are dividend-bearing.

DIRECT SHARE PURCHASE PLANS

Since 2004, Novartis has offered a Direct Share Purchase Program to investors residing in Switzerland, Liechtenstein, France and the United Kingdom, which was the first of its kind in Europe. This plan offers an easy and inexpensive way for investors to directly purchase Novartis registered shares and for them to be held at no cost in a deposit account with SIX SAG AG. At the end of 2012, a total of 9 361 shareholders were enrolled in this program. Beginning in 2013, Novartis will continue to offer this program only for Swiss residents.

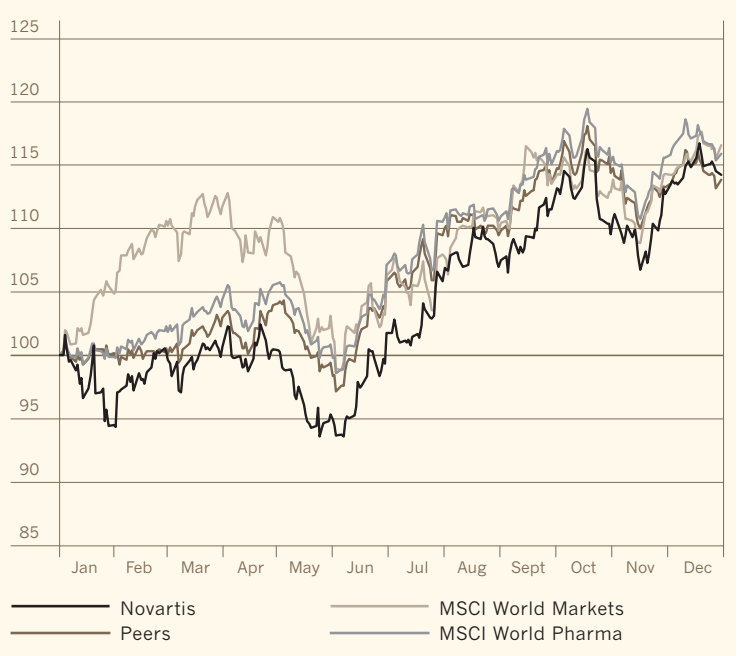
Novartis previously offered US investors an ADS Direct Share Purchase Plan. Novartis has terminated this Plan. JPMorgan will offer a similar program to US investors.

INFORMATION ON NOVARTIS SHARES

Further information can be found on the Internet at http://www.novartis.com/investors.

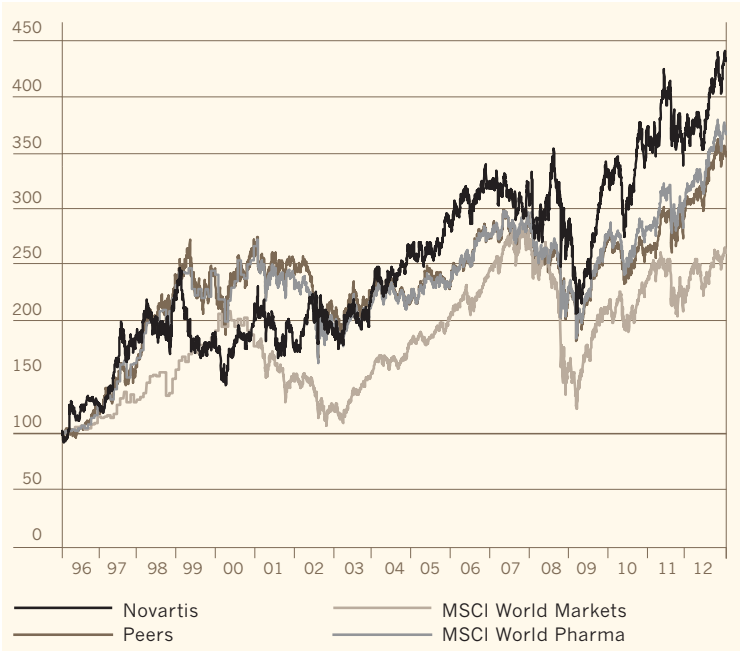
NOVARTIS 2012 SHARE PRICE MOVEMENT

(Based on USD amounts)



NOVARTIS 1996–2012 TOTAL SHAREHOLDER RETURN

(Based on USD amounts)



Source: Datastream. NB data are converted into US Dollars and re-based to 100 at January 1, 1996. Currency fluctuations have an influence on the representation of the relative performance of Novartis versus indices and peers.

KEY NOVARTIS SHARE DATA

	2012	2011
Issued shares	**2 706 193 000**	**2 745 623 000**
Treasury shares[1]	285 572 826	338 929 143
Outstanding shares at December 31	**2 420 620 174**	**2 406 693 857**
Average number of shares outstanding	**2 418 145 330**	**2 382 461 761**

[1] Approximately 175 million treasury shares (2011: 181 million) are held in entities that limit their availability for use.

PER-SHARE INFORMATION[1]

	2012	2011
Basic earnings per share (USD)	3.93	3.83
Diluted earnings per share (USD)	3.89	3.78
Operating cash flow (USD)	5.87	6.01
Year-end equity for Novartis AG shareholders (USD)	28.54	27.36
Dividend (CHF)[2]	2.30	2.25

[1] Calculated on average number of shares outstanding, except year-end equity per share.
[2] 2012: Proposal to shareholders for approval at the Annual General Meeting on February 22, 2013.

KEY RATIOS – DECEMBER 31

	2012	2011
Price/earnings ratio[1]	16.0	14.9
Enterprise value/EBITDA	10.0	9.1
Dividend yield (%)[1]	4.0	4.2

[1] Based on Novartis share price at the end of each year.

KEY DATA ON AMERICAN DEPOSITARY SHARES (ADS) ISSUED IN THE US

	2012	2011
Year-end ADS price (USD)	63.30	57.17
High[1]	63.96	64.52
Low[1]	51.48	51.65
Number of ADSs outstanding[2]	315 795 416	302 128 359

[1] Based on the daily closing sales prices.
[2] The depositary, JPMorgan Chase Bank, holds one Novartis AG share for every American Depositary Share (ADS) issued.

SHARE PRICE (CHF)

	2012	2011
Year-end share price	57.45	53.70
High[1]	59.00	55.80
Low[1]	48.80	39.99
Year-end market capitalization (USD billions)[2]	**152.0**	**137.5**
Year-end market capitalization (CHF billions)[2]	**139.1**	**129.2**

[1] Based on the daily closing sales prices.
[2] Market capitalization calculated based on number of shares outstanding (excluding treasury shares).

TRADING

Novartis shares are listed in Switzerland and traded on the SIX Swiss Exchange, while American Depositary Shares (ADSs) are listed on the New York Stock Exchange.

SYMBOLS

	SIX Swiss Exchange (Reuters/Bloomberg)	NYSE (Reuters/ Bloomberg)
Shares	NOVN.VX/NOVN VX	
ADSs		NVS

WIDELY DISPERSED SHAREHOLDINGS

Novartis shares are widely held. As of December 31, 2012, Novartis had approximately 161 000 shareholders (2011: 165 000) listed in its share register, representing 75% of issued shares. Based on the Novartis AG share register and excluding treasury shares, approximately 42% (2011: 43%) of the shares registered by name were held in Switzerland and 46% were held in the US (2011: 45%). Approximately 12% of the shares registered in the share register were held by individual investors, while 88% were held by legal entities, nominees and fiduciaries.

SUMMARY OF EQUITY MOVEMENTS

	Number of outstanding shares (in millions)			Issued share capital and reserves attributable to Novartis AG shareholders		
	2012	2011	Change	2012 USD millions	2011 USD millions	Change USD millions
Balance at beginning of year	**2 407**	**2 289**	**118**	**65 844**	**63 196**	**2 648**
Shares issued in connection with the merger with Alcon		108	– 108		6 009	– 6 009
Treasury shares exchanged in connection with the merger with Alcon		57	– 57		3 154	– 3 154
Excess of the purchase price for acquiring non-controlling interest compared to the recorded amounts and other impacts of change of ownership in consolidated entities					– 5 664	5 664
Share buy-backs:						
Shares acquired to be held in Group Treasury	– 5	– 21	16	– 240	– 1 131	891
Shares acquired to be cancelled		– 39	39		– 2 360	2 360
Equity-based compensation	11	7	4	856	806	50
Other treasury shares movements	8	6	2	151	31	120
Dividends				– 6 030	– 5 368	– 662
Net income of the year attributable to shareholders of Novartis AG				9 505	9 113	392
Other comprehensive income attributable to shareholders of Novartis AG				– 993	– 1 942	949
Balance at end of year	**2 421**	**2 407**	**14**	**69 093**	**65 844**	**3 249**

In 2012, the number of outstanding shares increased by 14 million, net (2011: 118 million shares, net). On the 1st trading line of the SIX Swiss Exchange 5 million shares were purchased for USD 240 million with the intention of being retained in Group Treasury (in 2011: 21 million shares purchased for USD 1.1 billion) and 8 million shares were sold via the first trading line or exchanged with employees due to options being exercised (2011: 6 million shares were sold). An additional 11 million shares were transferred to associates as part of the equity-settled compensation (2011: 7 million shares). The 39 million shares that had been repurchased for USD 2.4 billion in 2011 under the 2nd line of the SIX Swiss Exchange repurchase program with the intention of cancellation, were cancelled in 2012.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our principal accounting policies are set out in note 1 to the Group's consolidated financial statements, which are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Given the uncertainties inherent in our business activities, we must make certain estimates and assumptions that require difficult, subjective and complex judgments. Because of uncertainties inherent in such judgments, actual outcomes and results may differ from our assumptions and estimates which could materially affect the Group's consolidated financial statements. Application of the following accounting policies requires certain assumptions and estimates that have the potential for the most significant impact on our consolidated financial statements.

DEDUCTIONS FROM REVENUES

As is typical in the pharmaceuticals industry, our gross sales are subject to various deductions which are composed primarily of rebates and discounts to retail customers, government agencies, wholesalers, health insurance companies and managed healthcare organizations. These deductions represent estimates of the related obligations, requiring the use of judgment when estimating the effect of these sales deductions on gross sales for a reporting period. These adjustments are deducted from gross sales to arrive at net sales.

The following summarizes the nature of some of these deductions and how the deduction is estimated. After recording these, net sales represent our best estimate of the cash that we expect to ultimately collect. The United States market has the most complex arrangements related to revenue deductions.

UNITED STATES SPECIFIC HEALTHCARE PLANS AND PROGRAM REBATES

The United States Medicaid Drug Rebate Program is administered by State governments using State and Federal funds to provide assistance to certain vulnerable and needy individuals and families. Calculating the rebates to be paid involves interpreting relevant regulations, which are subject to challenge or change in interpretative guidance by government authorities. Provisions for estimating Medicaid rebates are calculated using a combination of historical experience, product and population growth, product price increases and the mix of contracts and specific terms in the individual State agreements. These provisions are adjusted based on established processes and experiences from re-filing data with individual States.

The United States Federal Medicare program, which funds healthcare benefits to individuals age 65 or older, provides prescription drug benefits under Part D of the program. This benefit is provided through private prescription drug plans. Provisions for estimating Medicare Part D rebates are calculated based on the terms of individual plan agreements, product sales and population growth, product price increases and the mix of contracts and adjusted periodically.

We offer rebates to key managed healthcare plans to sustain and increase market share for our products. These rebate programs provide payors a rebate after they attain certain performance parameters related to product purchases, formulary status or pre-established market share milestones relative to competitors. These rebates are estimated based on the terms of individual agreements, historical experience and projected product growth rates. We adjust provisions related to rebates periodically to reflect actual experience.

There is often a time lag of several months between us recording the revenue deductions and our final accounting for them.

NON-UNITED STATES SPECIFIC HEALTHCARE PLANS AND PROGRAM REBATES

In certain countries other than the United States we provide rebates to governments and other entities. These rebates are often mandated by laws or government regulations.

In several countries we enter into innovative pay-for-performance arrangements with certain healthcare providers, especially in Europe and Australia. Under these agreements, we may be required to make refunds to the healthcare providers or to provide additional medicines free of charge if anticipated treatment outcomes do not meet predefined targets. Potential refunds and the delivery of additional medicines at no cost are estimated and recorded as a deduction of revenue at the time the related revenues are recorded. Estimates are based on historical experience and clinical data. In cases where historical experience and clinical data are not sufficient for a reliable estimation of the outcome, revenue recognition would be deferred until such history would be available.

There is often a time lag of several months between us recording the revenue deductions and our final accounting for them.

NON-HEALTHCARE PLANS AND PROGRAM REBATES, RETURNS AND OTHER DEDUCTIONS

Charge-backs occur where our subsidiaries have arrangements with indirect customers to sell products at prices that are lower than the price charged to wholesalers. A chargeback represents the difference between the invoice price to the wholesaler and the indirect customer's contract price. We account for vendor charge-backs by reducing revenue by an amount equal to our estimate of charge-backs attributable to a sale and they are generally settled within one to three months of incurring the liability. Provisions for estimated charge-backs are calculated using a combination of factors such as historical experience, product growth rates, payments, level of inventory in the distribution channel, the terms of individual agreements and our estimate of the claims processing time lag.

We offer rebates to purchasing organizations and other direct and indirect customers to sustain and increase market share for our products. Since rebates are contractually agreed upon, rebates are estimated based on the terms of individual agreements, historical experience, and projected product growth rates.

When we sell a product providing a customer the right to return a product, we record a provision for estimated sales returns based on our sales returns policy and historical rates. Other factors considered include product recalls, expected marketplace changes and the remaining shelf life of the product, and the entry of generic products. In 2012, sales returns amounted to approximately 1% of gross product sales. If sufficient experience is not available, sales are only recorded based on evidence of product consumption or when the right of return has expired.

We enter into distribution service agreements with major wholesalers, which provide a financial disincentive for wholesalers to purchase product quantities exceeding current customer demand. Where possible, we adjust shipping patterns for our products to maintain wholesalers' inventories level consistent with underlying patient demand.

We offer cash discounts to customers to encourage prompt payment. Cash discounts are accrued at the time of invoicing and deducted from revenue.

Following a decrease in the price of a product, we generally grant customers a "shelf stock adjustment" for a customer's existing inventory for the involved product. Provisions for shelf stock adjustments, which are primarily relevant within the Sandoz Division, are determined at the time of the price decline or at the point of sale if a price decline can be reasonably estimated based on inventory levels of the relevant product.

Other sales discounts, such as consumer coupons and co-pay discount cards, are offered in some markets. These discounts are recorded at the time of sale, or when the coupon is issued and are estimated utilizing historical experience and the specific terms for each program. If a discount for a probable future transaction is offered as part of a sales transaction then an appropriate portion of revenue is deferred to cover this estimated obligation.

We adjust provisions for revenue deductions periodically to reflect actual experience. To evaluate the adequacy of provision balances, we use internal and external estimates of the level of inventory in the distribution channel, actual claims data received and the time lag for processing rebate claims. Management also estimates the level of inventory of the relevant product held by retailers and in transit. External data sources include reports of wholesalers and third-party market data purchased by Novartis.

The following table shows the worldwide extent of our revenue deductions provisions and related payment experiences:

PROVISIONS FOR REVENUE DEDUCTIONS

				Income statement charge			
	Revenue deductions provisions at January 1 USD millions	Effect of currency translation and business combinations USD millions	Payments/ utilizations USD millions	Adjustments of prior years USD millions	Current year USD millions	Change in provisions offset against gross trade receivables USD millions	Revenue deductions provisions at December 31 USD millions
2012							
US specific healthcare plans and program rebates	1 440	17	– 3 191	– 46	3 222		1 442
Non-US specific healthcare plans and program rebates	766	15	– 1 423	94	1 514		966
Non-healthcare plans and program related rebates, returns and other deductions	1 536	176	– 7 324	– 143	7 509	– 90	1 664
Total 2012	**3 742**	**208**	**– 11 938**	**– 95**	**12 245**	**– 90**	**4 072**
2011							
US specific healthcare plans and program rebates	1 162		– 2 860	– 19	3 157		1 440
Non-US specific healthcare plans and program rebates	575	– 24	– 1 043	– 23	1 281		766
Non-healthcare plans and program related rebates, returns and other deductions	1 360	– 68	– 6 846	– 7	7 324	– 227	1 536
Total 2011	**3 097**	**– 92**	**– 10 749**	**– 49**	**11 762**	**– 227**	**3 742**

The table below shows the gross to net sales reconciliation for our Pharmaceuticals Division:

GROSS TO NET SALES RECONCILIATION

	Income statement charge			
	Charged through revenue deduction provisions USD millions	Charged directly without being recorded in revenue deduction provisions USD millions	Total USD millions	In % of gross sales
2012				
Pharmaceuticals gross sales subject to deductions			**39 912**	**100.0**
US specific healthcare plans and program rebates	– 2 358		– 2 358	– 5.9
Non-US specific healthcare plans and program rebates	– 1 096	– 842	– 1 938	– 4.8
Non-healthcare plans and program related rebates, returns and other deductions	– 1 579	– 1 884	– 3 463	– 8.7
Total Pharmaceuticals gross to net sales adjustments	**– 5 033**	**– 2 726**	**– 7 759**	**– 19.4**
Pharmaceuticals net sales 2012			**32 153**	**80.6**
2011				
Pharmaceuticals gross sales subject to deductions			**40 004**	**100.0**
US specific healthcare plans and program rebates	– 2 424		– 2 424	– 6.0
Non-US specific healthcare plans and program rebates	– 801	– 408	– 1 209	– 3.0
Non-healthcare plans and program related rebates, returns and other deductions	– 1 631	– 2 232	– 3 863	– 9.7
Total Pharmaceuticals gross to net sales adjustments	**– 4 856**	**– 2 640**	**– 7 496**	**– 18.7**
Pharmaceuticals net sales 2011			**32 508**	**81.3**

IMPAIRMENT OF GOODWILL, INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

We review long-lived intangible assets and property, plant and equipment for impairment whenever events or changes in circumstance indicate that the asset's balance sheet carrying amount may not be recoverable. Goodwill, the Alcon brand-name and other currently not amortized intangible assets are reviewed for impairment at least annually.

An asset is generally considered impaired when its balance sheet carrying amount exceeds its estimated recoverable amount, which is defined as the higher of its fair value less costs to sell and its value in use. Usually, Novartis adopts the fair value less costs to sell method for its impairment tests. In most cases no directly observable market inputs are available to measure the fair value less costs to sell. Therefore an estimate of fair value less costs to sell is derived indirectly and is based on net present value techniques utilizing post-tax cash flows and discount rates. In the limited cases where the value in use method is applied, net present value techniques are utilized using pre-tax cash flows and discount rates.

Fair value reflects estimates of assumptions that market participants would be expected to use when pricing the asset and for this purpose management considers the range of economic conditions that are expected to exist over the remaining useful life of the asset. The estimates used in calculating net present values are highly sensitive, and depend on assumptions specific to the nature of the Group's activities with regard to:

– the amount and timing of projected future cash flows;
– future tax rates;
– the behavior of competitors (launch of competing products, marketing initiatives, etc.); and
– an appropriate discount rate.

Due to the above factors, actual cash flows and values could vary significantly from forecasted future cash flows and related values derived using discounting techniques.

The recoverable amount of a cash-generating unit and related goodwill is usually based on the fair value less costs of sale derived from applying discounted future cash flows based on the key assumptions in the following table:

	Pharmaceuticals %	Alcon %	Sandoz %	Vaccines and Diagnostics %	Consumer Health %
Sales growth rate assumptions after forecast period	1.6	3	0 to 2	0.5	0 to 2
Discount rate (post-tax)	7	7	7	7	7

In 2012, intangible asset impairment charges of USD 286 million were recognized. These relate to impairment charges of USD 211 million in the Pharmaceuticals Division. Novartis also recorded various impairment charges of USD 75 million in all other Divisions.

In 2011, intangible asset impairment charges of USD 627 million were recorded. USD 552 million of these arose in the Pharmaceuticals Division, principally due to the expected reduction in demand for *Tekturna/Rasilez* (aliskiren) and discontinuation of PRT128 (elinogrel), SMC021 (oral calcitonin), PTK796 and AGO178 (agomelatine) development programs. USD 75 million of impairment charges arose in all other Divisions.

Reversal of prior year impairment charges amounted to USD 3 million (2011: USD 8 million).

The amount of goodwill and other intangible assets on our consolidated balance sheet has increased significantly in recent years, primarily due to acquisitions. Although no significant additional impairments are currently anticipated, impairment testing could lead to material impairment charges in the future. For more information, see note 11 to the Group's consolidated financial statements.

Additionally, impairment charges for property, plant and equipment during 2012 amounted to USD 39 million (2011: USD 413 million of which USD 403 million was in Pharmaceuticals primarily related to the expected reduction in demand for *Tekturna/Rasilez* and the discontinuation of the SMC021 development program).

TRADE RECEIVABLES

Trade receivables are initially recognized at their invoiced amounts including any related sales taxes less adjustments for estimated revenue deductions such as rebates, chargebacks and cash discounts.

Provisions for doubtful trade receivables are established once there is an indication that it is likely that a loss will be incurred and represents the difference between the receivable value in the balance sheet and the estimated net collectible amount. Significant financial difficulties of a customer, such as probability of bankruptcy or financial reorganization or default/delinquency in payments are considered indicators that recovery of the trade receivable is doubtful. Trade receivable balances include sales to drug wholesalers, retailers, private health systems, government agencies, managed care providers, pharmacy benefit managers and government-supported healthcare systems. Novartis continues to monitor sovereign debt issues and economic conditions in Greece, Italy, Portugal, Spain and other countries in Europe and evaluates accounts receivable in these countries for potential collection risks. Substantially all of the trade receivables overdue from such countries are due directly from local governments or from government-funded entities. Deteriorating credit and economic conditions and other factors in these countries have resulted in, and may continue to result in an increase in the average length of time that it takes to collect these accounts receivable and may require Novartis to re-evaluate the collectability of these receivables in future periods.

RETIREMENT AND OTHER POST-EMPLOYMENT BENEFIT PLANS

We sponsor pension and other post-employment benefit plans in various forms that cover a significant portion of our current and former associates. For post-employment plans with defined benefit obligations, we are required to make significant assumptions and estimates about future events in calculating the expense and the

present value of the liability related to these plans. These include assumptions about the discount rates we apply to estimate future liabilities, expected returns on plan assets and rates of future pension increases. In addition, our actuarial consultants provide our management with historical statistical information such as withdrawal and mortality rates in connection with these estimates.

Assumptions and estimates used by the Group may differ materially from the actual results we experience due to changing market and economic conditions, higher or lower withdrawal rates, or longer/shorter life spans of participants among other factors. For example, a decrease in the discount rate we apply in determining the present value of the obligations of a quarter of one percent would have increased our year-end defined benefit pension obligation for plans in Switzerland, United States, UK, Germany and Japan, which represent about 95% of the Group total defined benefit pension obligation, by approximately USD 0.8 billion. If the 2012 discount rate had been a quarter of one percentage point lower than actually assumed, net periodic pension cost for pension plans in these countries, which represent about 75% of the Group's total net periodic pension cost for pension plans, would have decreased by approximately USD 13 million, and if the same decrease was also assumed for the expected return on plan assets for pension plans, the expected return on plan assets for pension plans in these five countries would have decreased by approximately USD 39 million. Depending on events, such differences could have a material effect on our total equity. For more information on obligations under retirement and other post-employment benefit plans and underlying actuarial assumptions, see note 25 to the Group's consolidated financial statements.

CONTINGENCIES

A number of our subsidiaries are involved in various government investigations and legal proceedings (intellectual property, product liability, commercial, employment and wrongful discharge, environmental claims, etc.) arising out of the normal conduct of their businesses. For more information, see note 20 to the Group's consolidated financial statements.

We record accruals for contingencies when it is probable that a liability has been incurred and the amount can be reliably estimated. These accruals are adjusted periodically as assessments change or additional information becomes available. For product liability claims, a significant portion of the overall accrual is actuarially determined based on factors such as past experience, amount and number of claims reported, and estimates of claims incurred but not yet reported. We provide for individually significant cases when probable and the amount can be reliably estimated. Expected legal defense costs are accrued when the amount can be reliably estimated.

In some instances, the inherent uncertainty of litigation, the resources required to defend against governmental actions, the potential impact on our reputation, and the potential for exclusion from United States federal and other government reimbursement programs have contributed to decisions by companies in our industry to enter into settlement agreements with governmental authorities. These settlements have had in the past, and may continue in the future, to involve large cash payments, including potential repayment of amounts that were allegedly improperly obtained and other penalties including treble damages. In addition, matters underlying governmental investigations and settlements may be the subject of separate private litigation.

Provisions are recorded for environmental remediation costs when expenditure on remedial work is probable and the cost can be reliably estimated. Remediation costs are provided for under "Non-current liabilities" in the Group's consolidated balance sheet. They are estimated by calculating the present value of expected costs.

Provisions relating to estimated future expenditure for liabilities do not usually reflect any insurance or other claims or recoveries, since these are only recognized as assets when the amount is reasonably estimable and collection is virtually certain.

RESEARCH & DEVELOPMENT

Internal Research & Development costs are fully charged to the consolidated income statement in the period in which they are incurred. We consider that regulatory and other uncertainties inherent in the development of new products preclude the capitalization of internal development expenses as an intangible asset usually until marketing approval from the regulatory authority is obtained in a relevant major market, such as for the United States, the European Union, Switzerland or Japan.

HEALTHCARE CONTRIBUTIONS

In many countries our subsidiaries are required to make contributions to the countries' healthcare costs as part of programs other than the ones mentioned under deductions from revenue above. The amounts to be paid depend on various criteria such as the sales volume compared to certain targets, compared to the competition or to the Group's market share. There is considerable judgment required in estimating these contributions. The most important healthcare contributions relate to the United States Healthcare Reform fee which was introduced in 2011. This fee is an annual fee to be paid by pharmaceutical companies based on the prior year's government program sales. Effective 2013, the United States government has also implemented a medical device sales tax which is expected to be applicable to Alcon's United States sales of products that are considered surgical devices under the respective act. The Pharmaceutical fee and the Medical Device Tax are recorded in "Other expenses" since they are considered to be an indirect tax or in inventory and cost of goods sold when the tax is levied on intercompany sales. The annual expense for these United States taxes is approximately USD 150 million.

TAXES

We prepare and file our tax returns based on an interpretation of tax laws and regulations, and record estimates based on these judgments and interpretations. Our tax returns are subject to examination by the competent taxing authorities, which may result in an assessment being made requiring payments of additional tax, interest or penalties. Inherent uncertainties exist in our estimates of our tax positions. We believe that our estimated amounts for current and deferred tax assets or liabilities, including any amounts related to any uncertain tax positions, are appropriate based on currently known facts and circumstances.

NEW ACCOUNTING PRONOUNCEMENTS

See note 1 to the Group's consolidated financial statements

EFFECTS OF CURRENCY FLUCTUATIONS

We transact our business in many currencies other than the US dollar, our reporting currency.

The following provides an overview of net sales and expenses for 2012 and 2011 for currencies most important to the Group:

Currency		2012 %	2011 %
US dollar (USD)	Net sales	36	36
	Operating expenses	39	38
Euro (EUR)	Net sales	25	27
	Operating expenses	25	25
Swiss franc (CHF)	Net sales	2	2
	Operating expenses	13	14
Japanese yen (JPY)	Net sales	9	9
	Operating expenses	5	4
Other currencies	Net sales	28	26
	Operating expenses	18	19

We prepare our consolidated financial statements in US dollars. As a result, fluctuations in the exchange rates between the US dollar and other currencies can have a significant effect on both the Group's results of operations as well as on the reported value of our assets, liabilities and cash flows. This in turn may significantly affect reported earnings (both positively and negatively) and the comparability of period-to-period results of operations.

For purposes of our consolidated balance sheets, we translate assets and liabilities denominated in other currencies into US dollars at the prevailing market exchange rates as of the relevant balance sheet date. For purposes of the Group's consolidated income and cash flow statements, revenue, expense and cash flow items in local currencies are translated into US dollars at average exchange rates prevailing during the relevant period. As a result, even if the amounts or values of these items remain unchanged in the respective local currency, changes in exchange rates have an impact on the amounts or values of these items in our consolidated financial statements.

We seek to manage currency exposure by engaging in hedging transactions where management deems appropriate, after taking into account the natural hedging afforded by our global business activity. For 2012, we entered into various contracts that change in value with movements in foreign exchange rates in order to preserve the value of assets, commitments and expected transactions. We also use forward contracts and foreign currency options to hedge expected net revenues in foreign currencies. For more information on how these transactions affect our consolidated financial statements and on how foreign exchange rate exposure is managed, see notes 1, 5, 16 and 29 to the Group's consolidated financial statements.

There is however, also a risk that certain countries could devalue their currency. If this occurs then it could impact the effective prices we would be able to charge for our products and also have an adverse impact on both our consolidated income statement and currency translation adjustments included in our consolidated equity.

The average value of the US dollar in 2012 increased against the EUR, CHF, and GBP. The following table sets forth the foreign exchange rates of the US dollar against these currencies, used for foreign currency translation when preparing the Group's consolidated financial statements:

	Average for year			Year-end		
USD per unit	2012	2011	Change in %	2012	2011	Change in %
EUR	1.286	1.392	– 8%	1.319	1.294	2%
CHF	1.067	1.130	– 6%	1.093	1.064	3%
GBP	1.585	1.603	– 1%	1.616	1.543	5%
JPY (100)	1.254	1.255	0%	1.161	1.289	– 10%

The following table provides a summary of the currency impact on key Group figures due to their conversion into USD, the Group's reporting currency, of the financial data from entities reporting in non-US dollars. Constant currency (cc) calculations apply the exchange rates of the prior year to the current year financial data for entities reporting in non-US dollars.

CURRENCY IMPACT ON KEY FIGURES

	Change in constant currencies % 2012	Change in USD % 2012	Percentage point currency impact 2012	Change in constant currencies % 2011	Change in USD % 2011	Percentage point currency impact 2011
Net sales	0	–3	–3	12	16	4
Operating income	8	5	–3	1	–5	–6
Net income	7	4	–3	–2	–7	–5
Core operating income	–2	–5	–3	16	14	–2
Core net income	–3	–5	–2	15	12	–3

For additional information on the effects of currency fluctuations, see note 29 to the Group's consolidated financial statements.

FACTORS AFFECTING RESULTS OF OPERATIONS

A number of key factors influence the Group's results of operations and the development of our businesses.

We believe that healthcare remains a growth industry, driven by the rapid aging of the global population, expanding access to healthcare in emerging markets and advances in science and technology that create opportunities to improve health outcomes and enhance quality of life for patients worldwide. At the same time, challenging business and regulatory conditions continue to impede growth across the healthcare industry.

As the only healthcare company with leading positions in pharmaceuticals, eye care, generics, vaccines and diagnostics, over-the-counter medicines and animal health, we believe that Novartis is well-positioned to capture opportunities and mitigate risks across the healthcare landscape. We expect that our continued focus on innovation, growth and productivity across our broad, diversified portfolio will allow us to meet the evolving needs of patients and healthcare systems worldwide.

TRANSFORMATIONAL CHANGES FUELING DEMAND

Long-term trends in the composition and behavior of the worldwide population, as well as ongoing innovation in science and technology, are driving demand for and access to healthcare. These changes present opportunities for Novartis to expand its presence in new and established markets and meet the changing demands of patients around the world.

AGING POPULATION AND SHIFTING BEHAVIORS

As the global life expectancy continues to rise, the UN Population Fund projects that the total number of people over 60 will exceed 1 billion worldwide in the next decade, an increase of approximately 200 million over 2012. By 2050, the over-60 population will be larger than the under-15 population, according to the United Nations Population Fund. This aging of the global population has accelerated demand for treatments addressing diseases and conditions – such as glaucoma, cataracts and wet age-related macular degeneration, among other eye diseases, which Novartis offers treatments to address – that disproportionately afflict the elderly.

At the same time, due to increasing economic prosperity and shifting nutritional habits, the global incidence of obesity is rising, and is now more than double the rate it was in 1980, according to the World Health Organization (WHO). This trend is particularly evident in dynamic, emerging markets: China, for example, has seen its number of obese people quintuple since 2005 to nearly 100 million today, according to Chinese government statistics.

Increased rates of obesity, as well as habits such as cigarette smoking and sedentary lifestyles, have, in turn, boosted the prevalence of chronic diseases – including cardiovascular disease, diabetes and chronic respiratory diseases – which now account for more than 60% of all deaths worldwide, according to the WHO. Novartis businesses, particularly Pharmaceuticals, Alcon and Sandoz, offer products that help patients suffering from chronic diseases, and we plan to continue to make investments in new treatments to address these growing health threats.

GLOBAL RISE IN HEALTHCARE SPENDING LED BY EMERGING MARKETS

Despite a difficult economic environment, global healthcare spending continues to climb, and is projected to reach nearly USD 1.2 trillion by 2016, according to industry research firm IMS Health.

While the US continues to outstrip all other countries in terms of healthcare expenditures, emerging markets are contributing an increasing proportion of total global spend. Driven by rising incomes, continued low cost for drugs and government sponsored

programs to increase access to treatments, emerging markets are expected to double their spending on pharmaceuticals over the next five years and contribute 30% of global healthcare expenditures by 2016, according to IMS Health. Developed markets, by contrast, are expected to account for 57% of global healthcare spending in 2016, down from 73% in 2006.

Reflecting the importance of emerging markets within the Novartis growth strategy, we continue to expand our presence, not only in the so-called BRIC countries (Brazil, Russia, India and China), which are well-known to be large and growing markets, but in other fast-growing markets as well. The Middle East, for example, has become a growth engine for Novartis, due in part to our investments in Egypt, Saudi Arabia and the United Arab Emirates, where our Pharmaceuticals Division is growing ahead of the market. We also signed a Memorandum of Understanding with the Government of Malaysia to help strengthen the country's healthcare capabilities. Our collaboration, the first of its kind in Malaysia, will likely include building technical capabilities, promoting clinical trials, expanding access to innovative medicines and quality generic products, and supporting healthcare start-up companies through the Novartis Venture Fund.

SCIENTIFIC ADVANCES OPENING NEW OPPORTUNITIES FOR TARGETED THERAPIES

With scientific advances, there is a growing opportunity to personalize healthcare for individual patients to improve results and reduce costs. For example, it is estimated that up to 95% of the variability in patient drug response may be due to genetic differences, according to scientific studies. Tailoring treatments based on specific biological factors, or "biomarkers," that indicate whether or not a given drug will be effective for a particular patient can significantly enhance response rates and outcomes while reducing costs associated with unnecessary or ineffective treatments. The market for personalized medicine is expected to be a major growth driver for the industry, with around 11% annual growth projected in the coming years, according to PricewaterhouseCoopers.

Advancing personalized medicine is central to our overall drug discovery and development strategy. In 2012, we realigned our Molecular Diagnostics unit and embedded it within Oncology Global Development to coordinate the development of innovative new treatments for patients with cancers and other diseases, with the development of tests, also known as companion diagnostics, to pinpoint the patients who are most likely to benefit from those treatments. Our diagnostics function, now known as Companion Diagnostics (CDx), is responsible for developing and manufacturing regulated diagnostic tests and registrational assays for pivotal clinical trials across the Pharmaceuticals portfolio.

Also within our Pharmaceuticals Division, Genoptix Medical Laboratory, which we acquired in 2011, continues to provide comprehensive laboratory services to US community-based hematologists and oncologists, advancing their ability to define and monitor individualized treatment programs.

Additionally, across our R&D activities at NIBR and Sandoz, we require that all proposals for new drug targets include a "path to the clinic." This often includes a biomarker discovery phase to identify which individuals will benefit most from a potential treatment and which might have a negative or no response, helping direct medical decision-making and subsequent therapy assessments for patients.

NEW TECHNOLOGIES CHANGING THE DELIVERY OF HEALTHCARE

The rise of social and mobile technology is making it easier for patients, providers and payors to address healthcare needs quickly and efficiently. For example, according to PricewaterhouseCoopers, one in three patients have sought information about other patient experiences with their disease and one in four have posted their health experience to social networks. On the provider side, more than 60% of physicians in the United States were using tablet computers as of May 2012, up from 35% a year previously (according to healthcare market research firm Manhattan Research), to research medical treatments and access electronic health records.

Health applications on mobile phones, known as mHealth applications, have also provided a low-cost, real-time way to track disease progression and facilitate communication with patients, providers and payors. The data collected through these applications are more reliable than self-reporting from patients and can help scientists and doctors gather evidence to guide their investigations and tailor treatment regimens for individual patients. Additionally, when mHealth applications are used in combination with GPS data, they can support early detection and warning systems for global outbreaks of illnesses related to environmental exposures or infectious agents. As applications like these continue to proliferate and advance, according to business intelligence firm Global Data, the global mHealth market is set to jump in value by around 40% to USD 11.7 billion in 2018, potentially changing the delivery of health services and providing Novartis with more opportunities to reach patients and improve quality of care.

Through our eHealth program, Novartis is using emerging technologies to radically rethink the way we deliver products and services to patients, doctors and payors. For example, we developed a medical patch for *Exelon*, our Alzheimer's treatment, that integrates an electronic chip to signal when it is time for a replacement. Similarly, work is progressing on a proprietary smart inhaler for COPD patients, the "eBreezhaler," which sends reminders and motivational messages based on actual patient behavior to help improve adherence and outcomes.

SHIFT TO GENERICS AND OTC PRODUCTS

While healthcare costs continue to rise as a percentage of GDP in countries around the world, consumer demand for affordable products – both in developed and developing economies – has also increased. The global generics industry has grown by roughly 9% per year on average between 2007 and 2011, according to industry research firm MarketLine, significantly higher than the equivalent growth rate for pharmaceuticals, and will likely accelerate as

healthcare systems encourage the use of generics to keep costs down.

Similarly, over-the-counter products, which in the United States are used on a regular basis by 35% of adults (according to the American College of Preventative Medicine), have also seen an increase in demand (as calculated by market research firm Kalorama Information). With leadership positions in both generics and over-the-counter medicines, we believe that Novartis is well-positioned to take advantage of these trends.

INCREASINGLY CHALLENGING BUSINESS ENVIRONMENT

While demographic and socioeconomic trends, as well as scientific and technological innovation, have created valuable opportunities for us to grow our business and improve the health of patients globally, significant challenges continue to pressure the industry.

PATENT EXPIRATIONS AND GENERIC COMPETITION PRESSURING INDUSTRY

It is estimated that between 2013 and 2016, drugs worth USD 156 billion in sales globally will lose market exclusivity, according to pharmaceutical sector research firm EvaluatePharma. In Japan, which has historically had relatively low generic penetration, generic drugs accounted for more than 25% – an all-time high – of the domestic prescription medicines market in 2012, according to the Japan Generic Medicines Association. In the weeks and months following patent expiry, sales of brand-name drugs typically fall dramatically, by as much as 90% in some markets.

The ability to secure and defend our intellectual property is particularly crucial for our Pharmaceuticals and Alcon divisions, where the loss of patent protection on one or more products can have a material effect on the Group's results of operations. To counter these challenges, Novartis focuses on innovating in areas of unmet patient need in order to rejuvenate the portfolio with new products and therapies. We expect revenue from recently launched products, which comprised 29% of net sales in 2012, to balance the impact of patent loss. We also take legally permissible steps to defend our intellectual property rights, including initiating patent infringement lawsuits against generic drug manufacturers.

Some of our best-selling products have begun to face considerable competition due to expiration of their patent protection:

The patent on valsartan, the active ingredient of *Diovan/Co-Diovan/Diovan HCT* (high blood pressure), expired in the major countries of the European Union in November 2011, and generic competitors have launched there. In addition, patent protection expired in the United States in September 2012, and generic versions of *Diovan HCT* have launched in the United States. Generic versions of *Diovan* monotherapy have not yet launched but could potentially launch at any time. In addition, patent protection for valsartan is scheduled to expire in Japan in 2013 and 2016 for *Co-Diovan* (including patent term extensions). The active ingredient valsartan is also used in the single-pill combination therapies *Exforge* and *Exforge HCT* (high blood pressure). While market exclusivities for *Exforge/Exforge HCT* will remain in the European Union and Japan due to regulatory patent protection, there is a risk that generic manufacturers may circumvent regulatory exclusivity and gain approval of a combination valsartan-amlodipine product in Europe. In the United States, under a license agreement with a generics manufacturer, the product is expected to face generic competition beginning in October 2014.

The patent on *Femara* (cancer) expired in 2011 in the United States and in major European markets, and generic competitors have launched in those markets.

The patent on zoledronic acid, the active ingredient in *Zometa* (cancer), as well as in *Reclast/Aclasta* (osteoporosis), expired in 2012 in a limited number of smaller markets, and will expire in 2013 in the United States and in other major markets. However, certain forms or uses of these products are covered by additional patents with later expiration dates in certain markets.

The patent on the active ingredient in *Gleevec/Glivec* (cancer) will expire in 2015 in the United States, in 2016 in the major EU countries and 2014 in Japan, in each case including extensions. However, the product is protected by additional patents claiming innovative features of *Gleevec/Glivec*.

In 2013, the impact of generic competition on our net sales is expected to be as much as USD 3.5 billion. As we typically have substantially reduced marketing and research and development expenses related to a product in its final year of exclusivity, it is expected that the loss of patent protection will have an impact on our operating income which can be expected to correspond to a significant portion of the product's lost sales. The magnitude of such an impact could depend on a number of factors, including: the time of year at which such exclusivity would be lost; the ease or difficulty of manufacturing a competitor product and obtaining regulatory approval to market it; the number of generic competitor products approved, and whether, in the United States, a single competitor is granted an exclusive marketing period; and the geographies in which generic competitor products are approved, including the strength of the market for generic pharmaceutical products in such geographies and the comparative profitability of patented pharmaceutical products in such geographies.

While this wave of patent expiries represents a significant challenge for our Pharmaceuticals and Alcon divisions, it also presents an opportunity for Sandoz, which develops, manufactures, distributes and sells prescription medicines that are not protected by valid and enforceable third-party patents. Global spending on generics is expected to increase from USD 242 billion in 2011 to more than USD 400 billion by 2016 according to IMS Health, fueled by volume growth in emerging markets and increased demand in developed nations.

HEIGHTENED REGULATORY AND SAFETY HURDLES

The costs associated with bringing a new drug to market have continued to increase as requirements with respect to documentation proving efficacy and safety have become more stringent.

Even after a new drug is approved, there is a risk that safety events could occur in patients, despite our commitment to the highest standards of quality and safety across all of our divisions. Such events could not only harm our reputation and the trust we share with patients who depend on our products, but could also have a negative impact on our results, such as through a reduction in demand, product recalls or withdrawals, or legal proceedings.

Despite this risk, however, we expect that our focus on improving patient outcomes and understanding disease pathways will allow Novartis to continue to bring innovative, effective and safe medicines to market.

RISK OF LIABILITY AND SUPPLY DISRUPTION FROM MANUFACTURING ISSUES

The manufacture of our products is both highly regulated and complex, and may result in a variety of issues that could lead to extended supply disruptions and significant liability. Governmental health authorities around the world, including the FDA, closely regulate the manufacture of our products, and continue to intensify their scrutiny of manufacturers' compliance with their requirements. If we or our third party suppliers fail to comply fully with these requirements, then we could be required to shut down our production facilities or production lines. In this event, we could experience product shortages, or be unable to supply products to patients for an extended period of time, and such shortages or supply failures have led to, and could continue to lead to, significant losses of sales revenue and to potential third party litigation. Health authorities could also impose significant penalties on us.

Like our competitors, we have faced, and in some cases continue to face, significant manufacturing issues. For example, in 2012, we continued to progress quality remediation programs at three of Sandoz's North American manufacturing facilities (following an FDA warning letter in 2011) and at Consumer Health's manufacturing facility in Lincoln, Nebraska, United States, where we suspended operations and shipments at the end of 2011. Although we have made significant progress in 2012 at these sites, as a result of the manufacturing issues, we have suffered and may continue to suffer significant losses in sales and market share. In addition, we have been required to expend considerable resources on the remediation of these sites.

In addition to regulatory requirements, many of our products involve technically complex manufacturing processes or require a supply of highly specialized raw materials. For example, a significant portion of the Group's portfolio of products, including products from Pharmaceuticals, Sandoz, and Vaccines and Diagnostics, are "biologic" products, which cannot be manufactured synthetically, but typically must be produced from living plant or animal microorganisms. In addition, the Group's portfolio includes a number of sterile products, including oncology treatments, which are considered to be technically complex to manufacture and require strict environmental controls. Because the production process for these products is so complex and sensitive, there is a greater chance of production failures and lengthy supply interruptions.

Finally, because our products are intended to promote the health of patients, any manufacturing issues that result in supply disruptions or other production problems could potentially subject us, not only to government penalties, but also to lawsuits or allegations that the public health, or the health of individuals, has been endangered.

FINANCIAL CRISIS INCREASING PRESSURES ON DRUG PRICES

Despite hopes that the global economy would recover in 2012, challenges stemming from the 2008 financial crisis continue to weigh on the industry. The economies of Greece, Italy, Portugal and Spain in particular continued to contract under austerity measures, and with budgets under pressure, these governments have taken steps to keep costs down by introducing price reductions and rebates to make medications more affordable. These lower prices affect all of our businesses that rely on reimbursement, including Pharmaceuticals, Alcon, Sandoz, and Vaccines and Diagnostics.

In addition, consumer confidence remains low, and patients around the world are looking for ways to keep healthcare spending to a minimum. In the United States, for example, according to one study, 58% of people reported that they put off or went without necessary treatment in the previous year due to cost, up from 50% in 2011. To combat this trend, Novartis offers coupon programs and incentives for patented products to facilitate access to the most effective treatments at an affordable price. In Brazil, for example, our patient program "Vale mas Saude" provides value-added solutions for the treatment of several chronic conditions (such as hypertension, diabetes, chronic obstructive pulmonary disease, asthma, and neurological disorders) to almost 3 million patients and over 50 000 participating physicians. Educational support and progressive discounts mean more Brazilian patients have access to treatment. In addition, patient compliance to treatment has more than doubled in Brazil, along with increased visits to pharmacies.

POTENTIAL LIABILITY ARISING FROM LEGAL PROCEEDINGS

In recent years, there has been a trend of increasing government investigations and litigations against companies operating in the industries of which we are a part, both in the United States and in an increasing number of countries around the world. We are obligated to comply with the laws of the approximately 140 countries in which we operate, covering an extremely wide range of activities. To that end, we have a significant global compliance with law program in place. Nonetheless, despite our efforts, any failure to comply with the law could lead to substantial liabilities that may not be covered by insurance, and could affect our business and reputation.

A number of our subsidiaries are, and will likely continue to be, subject to various legal proceedings that arise from time to time, such as proceedings regarding product liability, commercial dis-

putes, employment and wrongful discharge, antitrust, securities, sales and marketing practices, health and safety issues, environmental remediation, taxation, privacy and intellectual property matters. Such proceedings are inherently unpredictable, and large judgments sometimes occur. As a consequence, we may in the future incur judgments or enter into settlements of claims that could have a material adverse effect on our results of operations or cash flows.

In addition, governments and regulatory authorities around the world have been stepping up their compliance and law enforcement activities in recent years in key areas, including corruption, marketing practices, insider trading, antitrust, trade restrictions, embargo legislation and data privacy. Responding to such investigations is costly, and requires an increasing amount of our management's time and attention. In addition, such investigations may affect our reputation and create a risk of potential exclusion from government reimbursement programs in the United States and other countries. These factors have contributed to recent decisions by us and other companies in our industry, when deemed in the companies' interest, to enter into settlement agreements with governmental authorities around the world prior to any formal decision by the authorities. These settlements have involved and may continue to involve large cash payments, including the potential repayment of amounts allegedly obtained improperly and penalties of up to treble damages. In addition, settlements of healthcare fraud cases often require companies to enter into corporate integrity agreements, which are intended to regulate company behavior for a period of years. Also, matters underlying governmental investigations and settlements may be the subject of separate private litigation.

Adverse judgments or settlements in any of the significant investigations or cases against us could have a material adverse effect on our business, financial condition and results of operations.

EXECUTION OF FOCUSED DIVERSIFICATION STRATEGY

To capture opportunities and mitigate risks, Novartis aims to maintain leadership positions in growing segments of the healthcare industry.

RESEARCHING AREAS OF GROWING UNMET MEDICAL NEED

Patients are at the center of everything we do, and while many of our competitors have outsourced or partially outsourced their research and development activities, we have continued our efforts to expand and rejuvenate our portfolio through innovation in order to bring new healthcare solutions to market in areas where currently available treatments do not meet patient needs.

Pharmaceuticals and Alcon conduct research through NIBR, which focuses on studying molecular signaling pathways that, when defective, can lead to disease. When drugs pass initial safety and efficacy tests in one disease area, we frequently initiate parallel studies in other indications because illnesses can share a common underlying pathway. We also leverage our NIBR R&D investments in Animal Health, as many of the medicines developed for human patients also have applications for pets and farm animals.

Beyond our internal research activities, Novartis also collaborates with partners to develop and commercialize promising treatments that can improve patient outcomes. For example, in 2012, we announced an exclusive, multi-year collaboration with the University of Pennsylvania to research, develop and commercialize targeted chimeric antigen receptor (CAR) immunotherapies, a new frontier in oncology research that has the potential to transform the treatment of cancer. Also this year, Alcon entered into a licensing agreement with ThromboGenics to commercialize *Jetrea* (ocriplasmin), the first pharmacological treatment for symptomatic vitreomacular adhesion (VMA), outside of the United States. Ocriplasmin received FDA approval in October and is currently under EMA review. There are more than 300 000 VMA patients in Europe alone who could potentially benefit from ocriplasmin. If approved, Alcon plans to introduce ocriplasmin in more than 40 countries worldwide.

In addition, we have a significant pipeline of cardiovascular products in late-stage development, with both RLX030 in development for acute heart failure (from the acquisition of Corthera Inc. in 2009) and LCZ696 in development for hypertension and chronic heart failure. Both RLX030 and LCZ696 have the potential to address large patient populations, as the prevalence of heart failure is increasing. Chronic heart failure currently affects 20 million people worldwide and is projected to grow by 2.3% over the next decade. Of the 2 million people with acute heart failure who are discharged from the hospital each year in the United States and Europe, approximately 50% could be eligible for RLX030, if approved.

We believe that our focus on researching areas of unmet need will allow us to extend our lead in innovation. We continued our strong track record of bringing new medicines and indications to market in 2012, as our Pharmaceuticals Division secured 11 major approvals for new products and indications in the United States and European Union, on top of significant approvals in Alcon and Vaccines and Diagnostics.

FOCUSING ON PATIENT OUTCOMES

Reflecting our commitment to patients, our strategy has moved from a transactional approach of simply selling pills to a more integrated approach that focuses on improving health outcomes and partnering with customers to deliver more services for patients.

We have developed support programs aimed at improving access and adherence to our treatments, which are expected to improve health outcomes and cut excess costs associated with low levels of adherence. For example, we established a *Gilenya* support program in the United States that provides MS patients with a nurse navigator to help arrange medical tests and improve compliance by following up with patients on a monthly basis. We are also in the process of conducting patient segmentation market research to understand issues around MS treatment adherence, and plan to

develop and offer an adherence program through the nurse navigator program later in the year.

Similarly, in Sandoz, we work to bring biopharmaceuticals to patients in need earlier in disease progression, aiming to help prevent the onset of serious or life-threatening complications. For example, in the UK, the introduction of biosimilar filgrastim moved the medication from a second-line to first-line treatment for febrile neutropenia associated with chemotherapy – a shift that significantly increased access to this important therapy for thousands of cancer patients.

TAILORING COMMERCIAL MODELS AROUND CUSTOMER NEEDS

In today's healthcare landscape, in which access to physicians is becoming increasingly restricted for sales representatives, Novartis collaborates with key customer segments in an effort to provide doctors and patients with the information and support they need. This partnership not only improves our relationships with important customers, but also may enable doctors to provide better care to patients.

Our "Key Account Management" approach, for example, allows us to identify opportunities to collaborate with customers to help them support patients and providers. In Taiwan, we instituted a patient education program along with one of our customers that helped to reduce stroke patient re-hospitalization rates from 23% to 15% while ensuring access to Novartis medications. We implemented a global franchise model within Alcon to encourage functional excellence, cross-functional collaboration and accelerated decision-making across R&D, commercial and manufacturing, enhancing innovation and speed-to-market of new products.

For doctors, our support comes in the form of education, raising awareness of the latest advances in our understanding of disease pathways and treatment options so they can provide the highest quality of care to patients. For example, in Sandoz, we are growing our medical affairs outreach to educate physicians about biosimilars products and assist them in understanding the value that these treatment options can provide. Novartis is also committed to working with payors to enable eligible patients to benefit from access to our industry-leading portfolio and, to that end, has over 150 individual patient access programs around the world.

ENGAGING PATIENTS IN THEIR CARE

In a recent survey, 50% of Americans said that texts, emails or smartphone applications with tips, reminders and encouragement could have helped them avoid a health problem in the past. To improve patient outcomes, Novartis is working to leverage the channels that patients use on a day-to-day basis to engage them in their own care. For example, in the UK, Sandoz launched a novel disease education tool that uses augmented reality to educate young children about growth hormone deficiencies.

Additionally, while patients could obtain better health outcomes by participating in clinical trials for new innovative treatments, very few of them do: only 2% of Americans get involved with clinical research each year and less than 4% of United States physicians ever participate, according to the Center for Information and Study on Clinical Research Participation. Novartis, in partnership with electronic health record (EHR) management companies, is piloting a process in which physicians are notified by the EHR management company about relevant ongoing clinical trials when they enter data into the EHR. By engaging patients at their point of care, we provide them with the information they need to make well-informed decisions about their health.

Alcon, too, has a long history of empowering patients by working with eye care professionals and policymakers to raise awareness about eye diseases and treatment options. For example, in Europe, Alcon works with policymakers to provide cataract patients with a choice between cataract surgery with a conventional intraocular lens (which is fully reimbursed), and cataract surgery with an advanced technology intraocular lens, which corrects refractive errors, such as presbyopia and astigmatism, while removing their cataract (which is available with a co-payment).

ENHANCING ACCESS TO HEALTHCARE

Access to healthcare is a global challenge, and bridging the access gap is a goal Novartis shares with governments, international agencies like the WHO, foundations and nongovernmental organizations.

At Novartis, enhancing access begins with medical research, continues with product donations and new business models, and is supported by action to strengthen healthcare in both developing and advanced economies. In 2012, our access-to-healthcare contributions and programs were valued at more than USD 2.0 billion, providing medicine to approximately 100 million patients and health education, infrastructure development and other programs to another 7.2 million people worldwide. Millions more purchased high-quality, low-cost generics from our Sandoz Division.

However, no single company — no matter how committed to patients — can bridge the access gap alone. Barriers to access can be overcome only with effective and coordinated action by all parties involved.

In 2012, Novartis extended its collaboration with the WHO and other organizations to eliminate leprosy. As part of a donation valued at more than USD 20 million, Novartis will continue to provide free multidrug therapy medicines to treat an estimated 850 000 people with leprosy through 2020. Similarly, Sandoz is working with the Zambian government to increase access to high-quality, affordable medicines across Africa by supporting small, independent health shops, the primary healthcare providers in rural areas. This support helps efforts to provide a consistent, reliable and safe supply of drugs for Zambia's patients, which in turn helps the country

reach several of its UN Millennium Development Goals by 2015. In addition, Alcon supports more than 800 medical missions and numerous partnerships with non-profit organizations each year to bring eye care to places in which services and treatments are not yet available, train local physicians to perform state-of-the-art surgery and provide sustainable eye care.

In addition, following the success of its Arogya Parivar ("healthy family") program in India, Novartis launched Familia Nawiri in Kenya and Cung Song Khoe in Vietnam in 2012. These localized social business models aim to expand access to quality healthcare for people living at the bottom of the pyramid without consistent access to healthcare or health education.

FACTORS AFFECTING COMPARABILITY OF YEAR-ON-YEAR RESULTS OF OPERATIONS

RECENT ACQUISITIONS

The comparability of the year-on-year results of our operations for the total Group can be significantly affected by acquisitions and divestments. The only transaction of significance during the year is mentioned below.

Sandoz – Acquisition of Fougera Pharmaceuticals, Inc.

On July 20, 2012, Sandoz completed the acquisition of 100% of Fougera Pharmaceuticals, Inc. a specialty dermatology generics company based in Melville, New York, for USD 1.5 billion in cash. The acquisition of Fougera Pharmaceuticals, Inc. creates another strong global growth platform for Sandoz. Fougera has strong dermatology development and manufacturing expertise and employs approximately 700 people.

The final purchase price allocation resulted in net identified assets of USD 0.6 billion (excluding acquired cash) and goodwill of USD 0.9 billion. Results of operations since the acquisition date were not material.

NON-IFRS MEASURES AS DEFINED BY NOVARTIS

The following non-IFRS metrics are used by Novartis when measuring performance, especially when measuring current year results against prior periods: core results, constant currencies, EBITDA, free cash flow and net debt.

Despite the use of these measures by management in setting goals and measuring the Group's performance, these are non-IFRS measures that have no standardized meaning prescribed by IFRS. As a result, such measures have limits in their usefulness to investors.

Because of their non-standardized definitions, the non-IFRS measures (unlike IFRS measures) may not be comparable to the calculation of similar measures of other companies. These measures are presented solely to permit investors to more fully understand how the Group's management assesses underlying performance. These measures are not, and should not be viewed as, a substitute for IFRS measures.

As an internal measure of Group performance, these measures have limitations, and the performance management process is not solely restricted to these metrics.

CORE RESULTS

The Group's core results – including core operating income, core net income and core earnings per share – exclude the amortization of intangible assets, impairment charges, expenses relating to the integration of acquisitions as well as other items that are, or are expected to accumulate within the year to be, over a USD 25 million threshold that management deems exceptional.

Novartis believes that investor understanding of the Group's performance is enhanced by disclosing core measures of performance because, since they exclude these exceptional items which can vary significantly from year to year, the core measures enable better comparison across years. For this same reason, Novartis uses these core measures in addition to IFRS and other measures as important factors in assessing the Group's performance.

The following are examples of how these core measures are utilized:

– In addition to monthly reports containing financial information prepared under IFRS, senior management receives a monthly analysis incorporating these core measures.
– Annual budgets are prepared for both IFRS and core measures.

CONSTANT CURRENCIES

Changes in the relative values of non-US currencies to the US dollar can affect the Group's financial results and financial position. To provide additional information that may be useful to investors, including changes in sales volume, we present information about our net sales and various values relating to operating and net income that are adjusted for such foreign currency effects.

Constant currency calculations have the goal of eliminating two exchange rate effects so that an estimate can be made of underlying changes in the consolidated income statement excluding the impact of fluctuations in exchange rates:

– the impact of translating the income statements of consolidated entities from their non-USD functional currencies to USD; and
– the impact of exchange rate movements on the major transactions of consolidated entities performed in currencies other than their functional currency.

We calculate constant currency measures by translating the current year's foreign currency values of the sales and earnings into USD using the average exchange rates from the prior year and comparing them to the prior year values in USD.

We use these constant currency measures in evaluating the Group's performance, since they may assist us in evaluating our ongoing performance from year to year. However, in performing our evaluation, we also consider equivalent measures of performance which do not take into account changes in the relative value of currencies.

FREE CASH FLOW

Novartis defines free cash flow as cash flow from operating activities excluding cash flow associated with the purchase or sale of property, plant & equipment, intangible, non-current and financial assets. Cash flows in connection with the acquisition or divestment of subsidiaries, associated companies and non-controlling interests are also excluded from free cash flow.

Free cash flow is presented as additional information because Novartis considers it to be a useful indicator of the Group's ability to operate without relying on additional borrowing or the use of existing cash. Free cash flow is a measure of the net cash generated that is available for dividend payments, debt repayment and investment in strategic opportunities. The Group uses free cash flow as a performance measure when making internal comparisons of the results of divisions. Free cash flow constitutes a non-IFRS financial measure, which means that it should not be interpreted as a measure determined under IFRS. Free cash flow is not intended to be a substitute measure for cash flow from operating activities (as determined under IFRS).

NET DEBT

Novartis defines net debt as our cash and cash equivalents, current investments and derivative financial instruments less interest-bearing loans and borrowings.

EBITDA

Novartis defines earnings before interest, tax, depreciation and amortization (EBITDA) as operating income excluding depreciation of property, plant & equipment (including any related impairment charges), amortization of intangible assets (including any related impairment charges), income from associated companies, interest expense, other financial income/expense, other expense and taxes.

	2012 USD millions	2011 USD millions	Change USD millions
Operating income	**11 511**	**10 998**	**513**
Depreciation of property, plant & equipment	1 704	1 728	– 24
Amortization of intangible assets	2 894	3 028	– 134
Impairments of property, plant & equipment and intangible assets	322	1 032	– 710
Group EBITDA	**16 431**	**16 786**	**– 355**

2012 AND 2011 RECONCILIATION OF IFRS RESULTS TO CORE RESULTS

2012	IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, restructuring and integration charges[3] USD millions	Exceptional items[4] USD millions	Core results USD millions
Gross profit	**38 805**	**2 786**	**174**	**39**	**43**	**41 847**
Operating income	**11 511**	**2 876**	**356**	**330**	**87**	**15 160**
Income before taxes	**11 243**	**3 045**	**356**	**364**	**87**	**15 095**
Taxes	– 1 625					– 2 284[5]
Net income	**9 618**					**12 811**
Basic earnings per share (USD)[6]	3.93					5.25
The following are adjustments to arrive at Core Gross Profit						
Other revenues	888				– 56	832
Cost of goods sold	– 18 756	2 786	174	39	99	– 15 658
The following are adjustments to arrive at Core Operating Income						
Marketing & Sales	– 14 353			1		– 14 352
Research & Development	– 9 332	87	109		20	– 9 116
General & Administration	– 2 937				14	– 2 923
Other income	1 187		– 1		– 373	813
Other expense	– 1 859	3	74	290	383	– 1 109
The following are adjustments to arrive at Core Income before taxes						
Income from associated companies	552	169		34		755

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; Other expense includes amortization of intangible assets; Income from associated companies includes the recurring amortization of the purchase price allocation related to intangible assets included in the Novartis equity-method accounting for Roche of USD 153 million and USD 16 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold, Research & Development, Other income, and Other expense include principally impairments of intangible assets and property, plant & equipment; Other expense also includes impairments of financial assets.

[3] Acquisition or divestment related items, restructuring and integration charges: Cost of goods sold includes acquisition related inventory step-up adjustments; Marketing & Sales and Other expense relate to Alcon and Fougera integration costs; Income from associated companies includes a USD 16 million revaluation gain on the initial interest in an acquired company and the Novartis share of USD 50 million restructuring charge related to Roche.

[4] Other exceptional items: Other revenues include an income of USD 56 million related to an intellectual property settlement and license agreement; Cost of goods sold, Research & Development, Other income, and Other expense include restructuring charges related to the Group-wide rationalization of manufacturing sites; Cost of goods sold also includes an additional charge of USD 22 million for product recalls related to a US production plant; Research & Development also includes a net USD 18 million increase of contingent consideration liabilities related to business combinations; General & Administration includes exceptional IT-related costs; Other income includes a provision reduction of USD 137 million mainly related to *Tekturna/Rasilez* inventories, a product divestment gain of USD 93 million, a reversal of prior year restructuring charges of USD 76 million, and a gain on divestment related to the Novartis Venture Funds of USD 51 million; Other expense includes principally a restructuring charge of USD 149 million related to the US business, and charges for transforming IT and finance processes of USD 117 million.

[5] Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on exceptional items although this is not the case for items arising from criminal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments of USD 3.9 billion to arrive at the core results before tax amounts to USD 659 million. This results in the average tax rate on the adjustments being 17.1 %.

[6] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

2011	IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, restructuring and integration charges[3] USD millions	Exceptional items[4] USD millions	Core results USD millions
Gross profit	**40 392**	**2 918**	**278**	**5**	**246**	**43 839**
Operating income	**10 998**	**3 028**	**1 224**	**148**	**511**	**15 909**
Income before taxes	**10 773**	**3 238**	**1 224**	**148**	**552**	**15 935**
Taxes	– 1 528					– 2 445[5]
Net income	**9 245**					**13 490**
Basic earnings per share (USD)[6]	3.83					5.57
The following are adjustments to arrive at Core Gross Profit						
Net sales	58 566				117	58 683
Cost of goods sold	– 18 983	2 918	278	5	129	– 15 653
The following are adjustments to arrive at Core Operating Income						
Marketing & Sales	– 15 079				2	– 15 077
Research & Development	– 9 583	93	341		– 90	– 9 239
General & Administration	– 2 970	13				– 2 957
Other income	1 354		– 3	– 102	– 806	443
Other expense	– 3 116	4	608	245	1 159	– 1 100
The following are adjustments to arrive at Core Income before taxes						
Income from associated companies	528	210			41	779

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; General & Administration includes the recurring amortization of intangible assets; Other expense includes amortization of intangible assets; Income from associated companies includes the recurring amortization of the purchase price allocation related to intangible assets included in the Novartis equity-method accounting for Roche of USD 162 million and USD 48 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold includes impairment charges related to *Tekturna/Rasilez*, Consumer Health in the US, and other intangible assets; Research & Development includes impairment charges principally for PTK796, AGO178 (agomelatine), PRT128, SMC021 and In Process Research & Development; Other income includes an impairment reversal; Other expense includes impairments of USD 314 million related to *Tekturna/Rasilez*, USD 47 million related to SMC021, USD 17 million related to the Group-wide rationalization of manufacturing sites, and amounts for financial assets.

[3] Acquisition-related divestment gains, restructuring and integration charges: Cost of goods sold includes an acquisition related inventory step-up adjustment; Other income includes a gain from product sales required by regulators to approve the Alcon merger; Other expense relates primarily to Alcon integration costs.

[4] Exceptional items: Net sales to third parties includes a returns provision related to *Tekturna/Rasilez* and a recall provision related to over-the-counter products; Cost of goods sold and Marketing & Sales include charges related to Consumer Health in the US; Cost of goods sold, Research & Development, Other income, and Other expense include restructuring charges related to the Group-wide rationalization of manufacturing sites; Cost of goods sold and Other expense include Swiss restructuring charges of USD 254 million; Research & Development includes a reduction to a contingent consideration liability related to a business combination of USD 106 million in Sandoz; Other income and expense include a net USD 183 million gain from the Jump litigation settlement and a USD 100 million settlement gain, a USD 85 million insurance settlement gain, product divestment gains of USD 378 million, charges of USD 284 million related to legal settlements, USD 161 million for IT and finance restructuring projects, an amount of USD 295 million related to *Tekturna/Rasilez*, an amount of USD 13 million related to SMC021, and other restructuring charges; Income from associated companies reflects a charge of USD 41 million for the Novartis share of Roche's restructuring.

[5] Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that is applicable to the item in the jurisdiction where the adjustment arises. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on exceptional items although this is not the case for items arising from criminal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments of USD 5.2 billion to arrive at the core results before tax amounts to USD 917 million. This results in the average tax rate on the adjustments being 17.8%.

[6] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

2012 AND 2011 RECONCILIATION OF SEGMENT OPERATING INCOME TO CORE OPERATING INCOME

	Pharmaceuticals		Alcon	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Operating income	**9 598**	**8 296**	**1 465**	**1 472**
Amortization of intangible assets	**322**	**423**	**1 915**	**1 928**
Impairments				
Intangible assets	211	552	17	20
Property, plant & equipment related to the Group-wide rationalization of manufacturing sites		12		5
Other property, plant & equipment	25	391		
Financial assets	2	30		4
Total impairment charges	**238**	**985**	**17**	**29**
Acquisition-related items				
- Gains		– 81		– 21
- Expenses			264	233
Total acquisition-related items, net		**– 81**	**264**	**212**
Other exceptional items				
Exceptional divestment gains	– 93	– 334		
Restructuring items				
- Income	– 70		– 1	
- Expense	240	420	24	52
Legal-related items				
- Income		– 100		– 229
- Expense	19	80		45
Additional exceptional income	– 137			– 17
Additional exceptional expense	96	351	14	
Total other exceptional items	**55**	**417**	**37**	**– 149**
Total adjustments	**615**	**1 744**	**2 233**	**2 020**
Core operating income	**10 213**	**10 040**	**3 698**	**3 492**
Core return on net sales	**31.8%**	**30.9%**	**36.2%**	**35.1%**

ENTERPRISE VALUE

Enterprise value represents the total amount that shareholders and debt holders have invested in Novartis, less the Group's liquidity.

	Dec 31, 2012 USD millions	Dec 31, 2011 USD millions	Change USD millions
Market capitalization	151 998	137 511	14 487
Non-controlling interests	126	96	30
Financial debts	19 726	20 229	– 503
Liquidity	– 8 119	– 5 075	– 3 044
Enterprise value	**163 731**	**152 761**	**10 970**
Enterprise value/EBITDA	**10**	**9**	

NOVARTIS ECONOMIC VALUE ADDED

Novartis utilizes its own definition for measuring Novartis Economic Value Added (NVA), which is utilized for determining payouts under the Long-Term Performance Plan. The following table shows NVA for 2012 and 2011 utilizing the Novartis definition.

	Year ended Dec 31, 2012 USD millions	Year ended Dec 31, 2011 USD millions	Change in USD %
Operating income	**11 511**	**10 998**	**5**
Income from associated companies	552	528	5
Operating interest	– 348	– 284	23
Operating tax	– 2 334	– 2 296	2
Capital charge	– 7 060	– 7 397	– 5
Novartis Economic Value Added	**2 321**	**1 549**	**50**

Sandoz		Vaccines and Diagnostics		Consumer Health		Corporate		Total	
2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
1 091	**1 422**	**– 250**	**– 249**	**48**	**727**	**– 441**	**– 670**	**11 511**	**10 998**
364	**383**	**215**	**231**	**57**	**59**	**3**	**4**	**2 876**	**3 028**
43	25	5	8	7	14			283	619
									17
3	1	6	2	3	2	2		39	396
		1	135			31	23	34	192
46	**26**	**12**	**145**	**10**	**16**	**33**	**23**	**356**	**1 224**
									– 102
62		3	5			1	12	330	250
62		**3**	**5**			**1**	**12**	**330**	**148**
					– 44	– 51		– 144	– 378
– 10	– 12			– 8				– 89	– 12
4	4	1	3	3	8			272	487
									– 329
	204			25				44	329
– 59	– 106	– 56					– 85	– 252	– 208
5				24	107	117	164	256	622
– 60	**90**	**– 55**	**3**	**44**	**71**	**66**	**79**	**87**	**511**
412	**499**	**175**	**384**	**111**	**146**	**103**	**118**	**3 649**	**4 911**
1 503	**1 921**	**– 75**	**135**	**159**	**873**	**– 338**	**– 552**	**15 160**	**15 909**
17.3%	**20.3%**	**– 4.0%**	**6.8%**	**4.3%**	**18.9%**			**26.7%**	**27.2%**

Operating interest is the internal charge on average working capital based on the short-term borrowing rates of the entity owning them.

Operating tax is the internal tax charge for each entity applying the applicable tax rate to the profit before tax of each entity unadjusted for tax-disallowed items or tax loss carryforwards.

The capital charge is the notional interest charge on the Group's average non-current assets based on an internally calculated weighted average cost of capital for the Group.

INTERNAL CONTROL OVER FINANCIAL REPORTING

The Group's management has assessed the effectiveness of internal control over financial reporting. The Group's independent statutory auditor also issued an opinion on the effectiveness of internal control over financial reporting. Both the Group's management and its external auditors concluded that the Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012.

SUMMARY OF QUARTERLY FINANCIAL DATA FOR 2012 AND 2011

USD millions unless indicated otherwise	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2011
Net sales	**13 735**	**14 303**	**13 807**	**14 828**	**56 673**	**14 027**	**14 915**	**14 843**	**14 781**	**58 566**
Other revenues	178	238	232	240	888	195	208	191	215	809
Cost of goods sold	– 4 484	– 4 610	– 4 575	– 5 087	– 18 756	– 4 458	– 4 619	– 4 788	– 5 118	– 18 983
Gross profit	**9 429**	**9 931**	**9 464**	**9 981**	**38 805**	**9 764**	**10 504**	**10 246**	**9 878**	**40 392**
Marketing & Sales	– 3 495	– 3 613	– 3 393	– 3 852	– 14 353	– 3 524	– 3 904	– 3 652	– 3 999	– 15 079
Research & Development	– 2 235	– 2 285	– 2 191	– 2 621	– 9 332	– 2 188	– 2 397	– 2 475	– 2 523	– 9 583
General & Administration	– 719	– 737	– 693	– 788	– 2 937	– 694	– 738	– 734	– 804	– 2 970
Other income	351	265	291	280	1 187	549	502	213	90	1 354
Other expense	– 516	– 373	– 451	– 519	– 1 859	– 499	– 645	– 647	– 1 325	– 3 116
Operating income	**2 815**	**3 188**	**3 027**	**2 481**	**11 511**	**3 408**	**3 322**	**2 951**	**1 317**	**10 998**
Income from associated companies	128	176	81	167	552	117	130	151	130	528
Interest expense	– 164	– 183	– 178	– 199	– 724	– 189	– 190	– 198	– 174	– 751
Other financial income and expense	– 41	34	– 70	– 19	– 96	22	– 16	4	– 12	– 2
Income before taxes	**2 738**	**3 215**	**2 860**	**2 430**	**11 243**	**3 358**	**3 246**	**2 908**	**1 261**	**10 773**
Taxes	– 411	– 482	– 384	– 348	– 1 625	– 537	– 520	– 420	– 51	– 1 528
Group net income	**2 327**	**2 733**	**2 476**	**2 082**	**9 618**	**2 821**	**2 726**	**2 488**	**1 210**	**9 245**
Attributable to:										
Shareholders of Novartis AG	*2 305*	*2 706*	*2 449*	*2 045*	*9 505*	*2 770*	*2 704*	*2 464*	*1 175*	9 113
Non-controlling interests	*22*	*27*	*27*	*37*	*113*	*51*	*22*	*24*	*35*	132
Basic earnings per share (USD)	*0.95*	*1.12*	*1.01*	*0.84*	*3.93*	*1.21*	*1.13*	*1.02*	*0.49*	*3.83*
Net sales by segment										
Pharmaceuticals	**7 839**	**8 255**	**7 783**	**8 276**	**32 153**	**7 698**	**8 338**	**8 159**	**8 313**	**32 508**
Alcon	**2 541**	**2 648**	**2 460**	**2 576**	**10 225**	**2 416**	**2 625**	**2 492**	**2 425**	**9 958**
Sandoz	**2 124**	**2 147**	**2 044**	**2 387**	**8 702**	**2 373**	**2 466**	**2 340**	**2 294**	**9 473**
Vaccines and Diagnostics	**299**	**349**	**582**	**628**	**1 858**	**371**	**299**	**655**	**671**	**1 996**
Consumer Health	**932**	**904**	**938**	**961**	**3 735**	**1 169**	**1 187**	**1 197**	**1 078**	**4 631**
Group net sales	**13 735**	**14 303**	**13 807**	**14 828**	**56 673**	**14 027**	**14 915**	**14 843**	**14 781**	**58 566**
Operating income by segment										
Pharmaceuticals	**2 402**	**2 741**	**2 531**	**1 924**	**9 598**	**2 461**	**2 791**	**2 219**	**825**	**8 296**
Alcon	**363**	**419**	**360**	**323**	**1 465**	**524**	**371**	**341**	**236**	**1 472**
Sandoz	**298**	**259**	**250**	**284**	**1 091**	**412**	**283**	**333**	**394**	**1 422**
Vaccines and Diagnostics	**– 173**	**– 96**	**– 22**	**41**	**– 250**	**– 101**	**– 214**	**24**	**42**	**– 249**
Consumer Health	**12**	**0**	**48**	**– 12**	**48**	**265**	**225**	**210**	**27**	**727**
Corporate income & expense, net	– 87	– 135	– 140	– 79	– 441	– 153	– 134	– 176	– 207	– 670
Group operating income	**2 815**	**3 188**	**3 027**	**2 481**	**11 511**	**3 408**	**3 322**	**2 951**	**1 317**	**10 998**
Core operating income	**3 686**	**3 911**	**3 889**	**3 674**	**15 160**	**4 012**	**4 235**	**4 112**	**3 550**	**15 909**
Core net income	**3 093**	**3 356**	**3 260**	**3 102**	**12 811**	**3 376**	**3 564**	**3 539**	**3 011**	**13 490**
Core basic earnings per share	*1.27*	*1.38*	*1.34*	*1.27*	*5.25*	*1.41*	*1.48*	*1.45*	*1.23*	*5.57*

SUMMARY OF GROUP FINANCIAL DATA 2008–2012

USD millions unless indicated otherwise		2012	2011	2010[1]	2009[1]	2008[2]
Net sales to third parties		**56 673**	**58 566**	**50 624**	**44 267**	**41 459**
Change relative to preceding year	%	– 3.2	15.7	14.4	6.8	8.9
Pharmaceuticals net sales		32 153	32 508	30 306	28 287	26 331
Change relative to preceding year	%	– 1.1	7.3	7.1	7.4	9.6
Alcon net sales		10 225	9 958	4 446	1 965	1 688
Change relative to preceding year	%	2.7	nm	nm	16.4	10.3
Sandoz net sales		8 702	9 473	8 592	7 493	7 557
Change relative to preceding year	%	– 8.1	10.3	14.7	– 0.8	5.4
Vaccines and Diagnostics net sales		1 858	1 996	2 918	2 424	1 759
Change relative to preceding year	%	– 6.9	– 31.6	20.4	37.8	21.1
Consumer Health net sales		3 735	4 631	4 362	4 098	4 124
Change relative to preceding year	%	– 19.3	6.2	6.4	– 0.6	5.9
Operating income from continuing operations		**11 511**	**10 998**	**11 526**	**9 982**	**8 964**
Change relative to preceding year	%	4.7	– 4.6	15.5	11.4	32.2
As a % of net sales	%	20.3	18.8	22.8	22.5	21.6
As a % of average equity	%	17.0	16.2	18.1	18.5	18.0
As a % of average net operating assets	%	14.2	13.3	16.6	18.9	19.1
Operating income from discontinued operations[3]						70
Net income from continuing operations		**9 618**	**9 245**	**9 969**	**8 454**	**8 163**
Change relative to preceding year	%	4.0	– 7.3	17.9	3.6	24.8
As a % of net sales	%	17.0	15.8	19.7	19.1	19.7
Net income from discontinued operations[3]						70
Total Group net income		**9 618**	**9 245**	**9 969**	**8 454**	**8 233**
As a % of average equity	%	14.2	13.6	15.7	15.7	16.5
Dividends of Novartis AG[4]		**6 160**	**6 030**	**5 368**	**4 486**	**3 941**
As % of net income from continuing operations[5]	%	65	66	55	53	49
Cash flows from operating activities[6]		**14 194**	**14 309**	**14 067**	**12 191**	**9 769**
Change relative to preceding year	%	– 0.8	1.7	15.4	24.8	6.1
As a % of net sales	%	25.0	24.4	27.8	27.5	23.6
Free cash flow[6]		**11 383**	**12 503**	**12 346**	**9 446**	**7 646**
Change relative to preceding year	%	– 9.0	1.3	30.7	23.5	20.2
As a % of net sales	%	20.1	21.3	24.4	21.3	18.4
Purchase of property, plant & equipment[6]		**2 698**	**2 167**	**1 678**	**1 887**	**2 106**
Change relative to preceding year	%	24.5	29.1	– 11.1	– 10.4	– 17.4
As a % of net sales	%	4.8	3.7	3.3	4.3	5.1
Depreciation of property, plant & equipment[6]		**1 704**	**1 728**	**1 363**	**1 241**	**1 205**
As a % of net sales	%	3.0	3.0	2.7	2.8	2.9
Core Research & Development[6]		**9 116**	**9 239**	**8 080**	**7 287**	**6 776**
As a % of net sales	%	16.1	15.8	16.0	16.5	16.3
Core Pharmaceuticals Division Research & Development		**6 697**	**6 860**	**6 344**	**5 909**	**5 335**
As a % of Pharmaceuticals Division net sales	%	20.8	21.1	20.9	20.9	20.3
Total assets		**124 216**	**117 496**	**123 318**	**95 505**	**78 299**
Liquidity		8 119	5 075	8 134	17 449	6 117
Equity		69 219	65 940	69 769	57 462	50 437
Debt/equity ratio		0.28:1	0.31:1	0.33:1	0.24:1	0.15:1
Current ratio		1.16:1	1.04:1	1.08:1	1.7:1	1.3:1
Net operating assets[6]		**80 826**	**81 094**	**84 622**	**54 001**	**51 684**
Change relative to preceding year	%	– 0.3	– 4.2	56.7	4.5	23.1
As a % of net sales	%	142.6	138.5	167.2	122.0	124.7
Personnel costs[6]		**14 772**	**14 913**	**12 240**	**10 920**	**10 634**
As a % of net sales	%	26.1	25.5	24.2	24.7	25.6
Full-time equivalent associates at year-end[6]		**127 724**	**123 686**	**119 418**	**99 834**	**96 717**
Net sales per full-time equivalent associate (average)[6]	USD	450 841	481 818	461 788	450 438	425 402

[1] Restated to reflect new segment allocation introduced during 2011.
[2] 2008 restated only for the transfer of CIBA Vision from Consumer Health to Alcon.
[3] Discontinued Consumer Health operations (Gerber, Medical Nutrition and Nutrition & Santé).
[4] 2012: Proposed dividend for approval at the Annual General Meeting in February 2013. In all years, figure reflects only amounts paid to third party shareholders of Novartis AG.
[5] Based on net income from continuing operations attributable to the shareholders of Novartis AG.
[6] Only continuing operations.
nm = not meaningful

CONSOLIDATED INCOME STATEMENTS

(For the years ended December 31, 2012 and 2011)

	Note	2012 USD millions	2011 USD millions
Net sales	3	**56 673**	**58 566**
Other revenues		888	809
Cost of goods sold		– 18 756	– 18 983
Gross profit		**38 805**	**40 392**
Marketing & Sales		– 14 353	– 15 079
Research & Development		– 9 332	– 9 583
General & Administration		– 2 937	– 2 970
Other income		1 187	1 354
Other expense		– 1 859	– 3 116
Operating income	3	**11 511**	**10 998**
Income from associated companies	4	552	528
Interest expense	5	– 724	– 751
Other financial income and expense	5	– 96	– 2
Income before taxes		**11 243**	**10 773**
Taxes	6	– 1 625	– 1 528
Net income		**9 618**	**9 245**
Attributable to:			
Shareholders of Novartis AG		*9 505*	*9 113*
Non-controlling interests		*113*	*132*
Basic earnings per share (USD)	7	3.93	3.83
Diluted earnings per share (USD)	7	3.89	3.78

The accompanying notes form an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(For the years ended December 31, 2012 and 2011)

	Note	2012 USD millions	2011 USD millions
Net income		**9 618**	**9 245**
Fair value adjustments on financial instruments, net of taxes	8.1	116	21
Actuarial losses from defined benefit plans, net of taxes	8.2	– 1 811	– 1 421
Novartis share of other items recorded in comprehensive income recognized by associated companies, net of taxes	8.3	– 107	1
Currency translation effects	8.4	808	– 559
Total comprehensive income		**8 624**	**7 287**
Attributable to:			
Shareholders of Novartis AG		*8 512*	*7 171*
Non-controlling interests		*112*	*116*

The accompanying notes form an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(For the years ended December 31, 2012 and 2011)

	Note	Share capital USD millions	Treasury shares USD millions	Share premium USD millions	Retained earnings USD millions	Total value adjustments USD millions	Total reserves USD millions	Non-controlling interests USD millions	Total equity USD millions
Total equity at January 1, 2011		**957**	**– 125**	**198**	**61 074**	**1 092**	**62 364**	**6 573**	**69 769**
Net income					9 113		9 113	132	9 245
Other comprehensive income	8				1	– 1 943	– 1 942	– 16	– 1 958
Total comprehensive income					**9 114**	**– 1 943**	**7 171**	**116**	**7 287**
Dividends	9.1				– 5 368		– 5 368		– 5 368
Purchase of treasury shares, net	9.2		– 31		– 3 429		– 3 429		– 3 460
Equity-based compensation	9.4		4		802		802		806
Excess of consideration exchanged for acquiring non-controlling interest compared to the recorded amounts	9.6				– 5 664		– 5 664		– 5 664
Changes in non-controlling interests	9.5							– 6 593	– 6 593
Fair value of Novartis shares used to acquire outstanding non-controlling interests in Alcon, Inc.	9.7	59	31		9 073		9 073		9 163
Total of other equity movements		**59**	**4**		**– 4 586**		**– 4 586**	**– 6 593**	**– 11 116**
Total equity at December 31, 2011		**1 016**	**– 121**	**198**	**65 602**	**– 851**	**64 949**	**96**	**65 940**
Net income					9 505		9 505	113	9 618
Other comprehensive income	8				– 107	– 886	– 993	– 1	– 994
Total comprehensive income					**9 398**	**– 886**	**8 512**	**112**	**8 624**
Dividends	9.1				– 6 030		– 6 030		– 6 030
Sale of treasury shares, net	9.2		2		– 91		– 91		– 89
Reduction of share capital	9.3	– 15	21		– 6		– 6		
Equity-based compensation	9.4		6		850		850		856
Changes in non-controlling interests	9.5							– 82	– 82
Total of other equity movements		**– 15**	**29**		**– 5 277**		**– 5 277**	**– 82**	**– 5 345**
Total equity at December 31, 2012		**1 001**	**– 92**	**198**	**69 723**	**– 1 737**	**68 184**	**126**	**69 219**

The accompanying notes form an integral part of the consolidated financial statements.

CONSOLIDATED BALANCE SHEETS
(At December 31, 2012 and 2011)

	Note	2012 USD millions	2011 USD millions
Assets			
Non-current assets			
Property, plant & equipment	10	16 939	15 627
Goodwill	11	31 090	29 943
Intangible assets other than goodwill	11	30 331	31 969
Investments in associated companies	4	8 840	8 622
Deferred tax assets	12	7 390	5 857
Financial assets	13	1 117	938
Other non-current assets	13	505	456
Total non-current assets		**96 212**	**93 412**
Current assets			
Inventories	14	6 744	5 930
Trade receivables	15	10 051	10 323
Marketable securities and derivative financial instruments	16	2 567	1 366
Cash and cash equivalents	16	5 552	3 709
Other current assets	17	3 090	2 756
Total current assets		**28 004**	**24 084**
Total assets		**124 216**	**117 496**
Equity and liabilities			
Equity			
Share capital	18	1 001	1 016
Treasury shares	18	– 92	– 121
Reserves		68 184	64 949
Issued share capital and reserves attributable to Novartis AG shareholders		**69 093**	**65 844**
Non-controlling interests		126	96
Total equity		**69 219**	**65 940**
Liabilities			
Non-current liabilities			
Financial debts	19	13 781	13 855
Deferred tax liabilities	12	7 286	6 761
Provisions and other non-current liabilities	20	9 879	7 792
Total non-current liabilities		**30 946**	**28 408**
Current liabilities			
Trade payables		5 593	4 989
Financial debts and derivative financial instruments	21	5 945	6 374
Current income tax liabilities		2 070	1 706
Provisions and other current liabilities	22	10 443	10 079
Total current liabilities		**24 051**	**23 148**
Total liabilities		**54 997**	**51 556**
Total equity and liabilities		**124 216**	**117 496**

The accompanying notes form an integral part of the consolidated financial statements.

CONSOLIDATED CASH FLOW STATEMENTS

(For the years ended December 31, 2012 and 2011)

	Note	2012 USD millions	2011 USD millions
Net income		**9 618**	**9 245**
Reversal of non-cash items	23.1	7 838	9 300
Dividends received from associated companies and others		426	404
Interest received		49	66
Interest paid		– 594	– 640
Other financial receipts		214	
Other financial payments		– 22	– 47
Taxes paid		– 2 022	– 2 435
Cash flows before working capital and provision changes		**15 507**	**15 893**
Restructuring payments and other cash payments from provisions		– 1 173	– 1 471
Change in net current assets and other operating cash flow items	23.2	– 140	– 113
Cash flows from operating activities		**14 194**	**14 309**
Purchase of property, plant & equipment		– 2 698	– 2 167
Proceeds from sales of property, plant & equipment		92	61
Purchase of intangible assets		– 370	– 220
Proceeds from sales of intangible assets		163	643
Purchase of financial assets		– 180	– 139
Proceeds from sales of financial assets		221	59
Purchase of other non-current assets		– 57	– 48
Proceeds from sales of other non-current assets		18	5
Acquisitions of interests in associated companies			– 12
Acquisitions and divestments of businesses	23.3	– 1 741	– 569
Purchase of marketable securities		– 1 639	– 1 750
Proceeds from sales of marketable securities		516	3 345
Cash flows used in investing activities		**– 5 675**	**– 792**
Acquisition of treasury shares		– 505	– 3 628
Disposal of treasury shares		414	159
Increase in non-current financial debts		1 979	281
Repayment of non-current financial debts		– 704	– 28
Change in current financial debts		– 1 737	– 3 054
Proceeds from issuance of share capital to third parties			4
Acquisition of non-controlling interests		– 6	– 3 187
Dividends paid to non-controlling interests and other financing cash flows		– 86	– 203
Dividends paid to shareholders of Novartis AG		– 6 030	– 5 368
Cash flows used in financing activities		**– 6 675**	**– 15 024**
Net effect of currency translation on cash and cash equivalents		– 1	– 103
Net change in cash and cash equivalents		**1 843**	**– 1 610**
Cash and cash equivalents at January 1		3 709	5 319
Cash and cash equivalents at December 31		**5 552**	**3 709**

The accompanying notes form an integral part of the consolidated financial statements.

1. SIGNIFICANT ACCOUNTING POLICIES

The Novartis Group (Group or Novartis) is a multinational group of companies specializing in the research, development, manufacturing and marketing of a broad range of healthcare products led by innovative pharmaceuticals. It is headquartered in Basel, Switzerland.

The consolidated financial statements of the Group comply with the International Financial Reporting Standards (IFRS) as published by the International Accounting Standards Board (IASB). They are prepared in accordance with the historical cost convention except for items that are required to be accounted for at fair value.

The Group's financial year end is December 31 which is also the annual closing date of the individual entity financial statements incorporated into the Group's consolidated financial statements.

The preparation of financial statements requires management to make estimates and other judgments either at the balance sheet date or during the year that affect the reported amounts of assets and liabilities (including any contingent amounts) as well as of revenues and expenses. Actual outcomes could differ from those estimates.

Listed below are accounting policies of significance to Novartis or, in cases where IFRS provides alternatives, the option adopted by Novartis.

SCOPE OF CONSOLIDATION

The consolidated financial statements include all entities that Novartis AG, Basel, Switzerland directly or indirectly controls (generally as a result of owning more than 50% of the entity's voting interest). Special purpose entities, irrespective of their legal structure, are consolidated in instances where the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from their activities. Consolidated entities are also referred to as "subsidiaries".

Where Novartis does not fully own a subsidiary it has elected to value any remaining outstanding non-controlling interest at the time of acquiring control of the subsidiary at its proportionate share of the fair value of the net identified assets.

Investments in associated companies (generally defined as investments in entities in which Novartis holds between 20% and 50% of voting shares or over which it otherwise has significant influence) and joint ventures are accounted for using the equity method.

FOREIGN CURRENCIES

The consolidated financial statements of Novartis are presented in US dollars (USD). The functional currency of subsidiaries is generally the local currency of the respective entity. The functional currency used for the reporting of certain Swiss and foreign finance entities is USD instead of their respective local currencies. This reflects the fact that the cash flows and transactions of these entities are primarily denominated in these currencies.

For subsidiaries not operating in hyperinflationary economies, the subsidiary's results, financial position and cash flows that do not have USD as their functional currency are translated into USD using the following exchange rates:

- income, expense and cash flows using for each month the average exchange rate with the US dollar values for each month being aggregated during the year.
- balance sheets using year-end exchange rates.
- the resulting exchange rate differences are recognized in other comprehensive income.

The only hyperinflationary economy applicable to Novartis is Venezuela. The financial statements of the major subsidiaries in this country are first adjusted for the effect of inflation and then translated into USD at the year-end exchange rate with any gain or loss on the net monetary position recorded in the related functional lines in the consolidated income statement.

ACQUISITION OF ASSETS

Acquired assets are initially recognized on the balance sheet at cost if they meet the criteria for capitalization. If acquired as part of a business combination the fair value of identified assets represents the cost for these assets. If separately acquired the cost of the asset includes the purchase price and any directly attributable costs for bringing the asset into the condition to operate as intended. Expected costs for obligations to dismantle and remove property, plant and equipment when it is no longer used are included in their cost.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are depreciated on a straight-line basis in the consolidated income statement over their estimated useful lives. Leasehold land is depreciated over the period of its lease whereas freehold land is not depreciated. Property, plant and equipment is assessed for impairment whenever there is an indication that its balance sheet carrying amount may not be recoverable. The related depreciation expense is included in the costs of the functions using the asset.

	Useful life
Buildings	20 to 40 years
Machinery and other equipment	
Machinery and equipment	7 to 20 years
Furniture and vehicles	5 to 10 years
Computer hardware	3 to 7 years

Government grants obtained for construction activities, including any related equipment, are deducted from the gross acquisition cost to arrive at the balance sheet carrying value of the related assets.

GOODWILL AND INTANGIBLE ASSETS

GOODWILL

Goodwill arises in a business combination and is the excess of the consideration transferred to acquire a business over the underlying fair value of the net identified assets acquired. It is allocated to cash generating units (CGUs) which are usually represented by the reported segments. For Consumer Health each division is a separate CGU. Goodwill is tested for impairment annually at the CGU level and any impairment charges are recorded under "Other Expense" in the consolidated income statement.

INTANGIBLE ASSETS AVAILABLE FOR USE

Novartis has the following classes of available-for-use intangible assets other than goodwill: Currently marketed products; Marketing know-how; Technologies; Other intangible assets (including computer software) and the Alcon brand name.

Currently marketed products represent the composite value of acquired intellectual property, patents, and distribution rights and product trade names.

Marketing know-how represents the value attributable to the expertise acquired for marketing and distributing Alcon surgical equipment.

Technologies represent identified and separable acquired know-how used in the research, development and production processes.

Significant investments in internally developed and acquired computer software are capitalized and included in the "Other" category and amortized once available for use.

The Alcon brand name is shown separately as it is the only Novartis intangible asset that is available for use with an indefinite useful life. Novartis considers that it is appropriate that the Alcon brand name has an indefinite life since Alcon has a history of strong revenue and cash flow performance, and Novartis has the intent and ability to support the brand with spending to maintain its value for the foreseeable future.

Except for the Alcon brand name, intangible assets available for use are amortized over their estimated useful lives on a straight-line basis and tested for impairment whenever facts and circumstances indicate that their carrying value may not be recoverable. The Alcon brand name is not amortized, but tested for impairment annually.

The following table shows the respective useful lives for available for use intangible assets and the location in the consolidated income statement in which the amortization and any potential impairment charge is recognized:

	Useful life	Income statement location for amortization and impairment charges
Currently marketed products	5 to 20 years	"Cost of goods sold"
Marketing-know how	25 years	"Cost of goods sold"
Technologies	10 to 30 years	"Cost of goods sold" or "Research and Development"
Other (including computer software)	3 to 5 years	In the respective functional expense
Alcon brand name	not amortized, indefinite useful life	Not applicable

INTANGIBLE ASSETS NOT YET AVAILABLE FOR USE

Acquired research and development intangible assets, which are still under development and have accordingly not yet obtained marketing approval, are recognized as In-Process Research & Development (IPR&D). IPR&D assets are only capitalized if they are deemed to enhance the intellectual property of Novartis and include items such as initial upfront and milestone payments on licensed or acquired compounds.

IPR&D is not amortized, but tested for impairment on an annual basis or when facts and circumstances warrant an impairment test. Any impairment charge is recorded in the consolidated income statement under "Research & Development". Once a project included in IPR&D has been successfully developed it is transferred to the "Currently marketed product" category mentioned above.

IMPAIRMENT OF GOODWILL, INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

An asset is generally considered impaired when its balance sheet carrying amount exceeds its estimated recoverable amount, which is defined as the higher of its fair value less costs to sell and its value in use. Usually, Novartis adopts the fair value less costs to sell method for its impairment tests. In most cases no directly observable market inputs are available to measure the fair value less cost to sell, therefore an estimate is derived indirectly and is based on net present value techniques utilizing post-tax cash flows and discount rates. In the limited cases where the value in use method is applied, net present value techniques are utilized using pre-tax cash flows and discount rates.

Fair value reflects estimates of assumptions that market participants would be expected to use when pricing the asset or CGU, and for this purpose management considers the range of economic conditions that are expected to exist over the remaining useful life of the asset.

The estimates used in calculating the net present values are highly sensitive and depend on assumptions specific to the nature of the Group's activities with regard to:

- the amount and timing of projected future cash flows;
- the outcome of R&D activities (compound efficacy, results of clinical trials, etc.);
- the amount and timing of projected costs to develop IPR&D into commercially viable products;
- the probability of obtaining regulatory approval;
- long-term sales forecasts for periods of up to 25 years;
- sales erosion rates after the end of patent protection and timing of the entry of generic competition;
- the closing of facilities and changes in the planned use of property, plant and equipment;
- the selected tax rate;
- the behavior of competitors (launch of competing products, marketing initiatives, etc.); and
- the selected discount rate.

Generally, for intangible assets and property, plant and equipment with a definite useful life Novartis uses cash flow projections for the whole useful life of these assets, and for goodwill and the Alcon brand name, Novartis utilizes cash flow projections for a five-year period based on management forecasts, with a terminal value based on sales projections usually in line with or lower than inflation rates for later periods. Probability-weighted scenarios are typically used.

Discount rates used are based on the Group's estimated weighted average cost of capital adjusted for specific country and currency risks associated with cash flow projections as an approximation of the weighted average cost of capital of a comparable market participant.

Due to the above factors, actual cash flows and values could vary significantly from forecasted future cash flows and related values derived using discounting techniques.

IMPAIRMENT OF ASSOCIATED COMPANIES

Novartis considers investments in associated companies for impairment testing whenever there is a quoted share price and when this has a fair value less than the per share balance sheet carrying value for the investment. For unquoted investments in associated companies recent financial information is taken into account to assess whether impairment testing is necessary.

If the recoverable amount of the investment is estimated to be lower than the balance sheet carrying amount an impairment charge is recognized for the difference in the consolidated income statement under "Income from associated companies".

CASH AND CASH EQUIVALENTS, MARKETABLE SECURITIES, DERIVATIVE FINANCIAL INSTRUMENTS AND NON-CURRENT FINANCIAL ASSETS

Cash and cash equivalents include highly liquid investments with original maturities of three months or less which are readily convertible to known amounts of cash. Bank overdrafts are usually presented within "Current financial debts" on the consolidated balance sheet except in cases where a right of offset has been agreed with a bank which then allows for presentation on a net basis.

The Group defines "marketable securities" as those financial items which are managed by the Group's Corporate Treasury activity and consist principally of quoted equity and quoted debt securities as well as fund investments which are principally traded in liquid markets. Certain financial assets are managed independently of Corporate Treasury and these typically are held for long-term strategic purposes and are therefore classified as non-current financial assets. They include equity securities and fund investments.

Financial assets are initially recorded at fair value on their trade date. Quoted securities are re-measured at each reporting date to fair value based on current market prices. If the market for a financial asset is not active or no market is available, fair values are established using valuation techniques. These include the use of data from the most recent arm's length relevant transactions, such as new financing rounds or partial disposals; reference to other instruments that are substantially the same; a discounted cash flow analysis; and other pricing models that make maximum use of observable market data.

The Group has classified all its equity and quoted debt securities as well as fund investments as available-for-sale, as they are not acquired to generate profit from short-term fluctuations in price. Unrealized gains, except exchange gains related to quoted debt instruments, are recorded as a fair value adjustment in the consolidated statement of comprehensive income. They are recognized in the consolidated income statement when the financial asset is sold at which time the gain is transferred either to "Other financial income and expense" for the marketable securities managed by the Group's Corporate Treasury activity or to "Other income" in the consolidated income statement for all other equity securities and fund investments. Exchange gains related to quoted debt instruments are immediately recognized in the consolidated income statement under "Other financial income and expense".

A security is assessed for impairment when its market value at the balance sheet date is less than initial cost reduced by any previously recognized impairment. Impairments on equity securities, quoted debt securities and fund investment and exchange rate gains and losses on quoted debt securities in a foreign currency which are managed by the Group's Corporate Treasury activity are immediately recorded in "Other financial income and expense" and impairments for all other equity securities and other fund investments in "Other expense" or "Other income" in the consolidated income statement.

Other non-current financial assets including loans are carried at either amortized cost which reflects the time value of money or cost adjusted for any accrued interest, less any allowances for uncollectable amounts. Impairments and exchange rate gains and losses on other non-current financial assets including loans as well as interest income using the effective interest rate method are immediately recorded in "Other income" or "Other expense" in the consolidated income statement.

Derivative financial instruments are initially recognized in the balance sheet at fair value and are re-measured to their current fair value at the end of each subsequent reporting period.

The Group utilizes derivative financial instruments for the purpose of hedging to reduce the volatility in the Group's performance due to the exposure to various types of business risks which the Group may face. The Group, therefore, enters into certain derivative financial instruments, which provide effective economic hedges under the Group's policies. The risk reduction is obtained because the derivative's value or cash flows are expected, wholly or partly, to move inversely to the hedged item and, therefore, offset changes in the value or cash flows of the hedged item. The Group's overall hedging strategy is aiming to mitigate the currency and interest exposure risk of positions which are contractually agreed and to partially hedge the exposure risk of selected anticipated transac-

tions. However, the Group generally does not hedge the translation risk related to its foreign investments.

Not all of the financial impact of derivative financial instruments can be matched with the financial impact of the economically hedged item. A pre-requisite for obtaining this accounting hedge relationship is extensive documentation on inception and proving on a regular basis that the economic hedge is effective for accounting purposes. Changes in the fair value of any derivative instruments that do not qualify for cash flow hedge accounting are recognized immediately in "Other financial income and expense" in the consolidated income statement.

INVENTORIES

Inventory is valued at acquisition or production cost determined on a first-in first-out basis, and this value is used for the "Cost of goods sold" in the consolidated income statement. Unsalable inventory is fully written off in the consolidated income statement under "Cost of goods sold".

TRADE RECEIVABLES

Trade receivables are initially recognized at their invoiced amounts including any related sales taxes less adjustments for estimated revenue deductions such as rebates, chargebacks and cash discounts.

Provisions for doubtful trade receivables are established once there is an indication that it is likely that a loss will be incurred and represent the difference between the trade receivable's carrying amount in the consolidated balance sheet and the estimated net collectible amount. Significant financial difficulties of a customer, such as probability of bankruptcy or financial reorganization or default/delinquency in payments are considered indicators that recovery of the trade receivable is doubtful. Charges for doubtful trade receivables are recognized in the consolidated income statement within "Marketing & Sales" expenses.

LEGAL AND ENVIRONMENTAL LIABILITIES

Subsidiaries are subject to contingencies arising in the ordinary course of business such as patent litigation, environmental remediation liabilities and other product-related litigations, commercial litigations, proceedings and governmental investigations. Provisions are made where a reliable estimate can be made of the probable outcome of legal or other disputes including related fees and expenses against the subsidiary. Novartis believes that its total provisions are adequate based upon currently available information, however, given the inherent difficulties in estimating liabilities in this area, Novartis may incur additional costs beyond the amounts provided. Management believes that such additional amounts, if any, would not be material to the Group's financial condition but could be material to the results of operations or cash flows in a given period.

CONTINGENT CONSIDERATION

In a business combination it is necessary to recognize contingent future payments to previous owners representing contractually defined potential amounts as a liability. Usually for Novartis these are linked to milestone or royalty payments related to intangible assets and are recognized as a financial liability at their fair value which is then re-measured at each subsequent reporting date. These usually depend on factors such as technical milestones or market performance and are adjusted for the probability of their likelihood of payment and if material, appropriately discounted to reflect the impact of time. Changes in the fair value of contingent payments in subsequent periods are recognized in the consolidated income statement. The effect of unwinding the discount over time is recognized in "Interest expense" in the consolidated income statement. When Novartis acquires assets subject to contingent payments outside of a business combination such contingent payments are only recognized when they become unconditional when they are included in the cost of the related assets.

DEFINED BENEFIT PENSION PLANS AND OTHER POST-EMPLOYMENT BENEFITS

The liability in respect of defined benefit pension plans and other post-employment benefits is the defined benefit obligation calculated annually by independent actuaries using the projected unit credit method. The service cost for such post-employment benefit plans is included in the personnel expenses of the various functions where the associates are employed, while the expected return on plan assets and interest expense are recognized as "Other income" or "Other expense".

The effects of changes in actuarial assumptions and experience adjustments on the value of plan assets and liabilities of defined benefit plans are immediately recognized in the consolidated balance sheet with a corresponding movement in the consolidated statement of comprehensive income.

TREASURY SHARES

Treasury shares are deducted from consolidated equity at their nominal value of CHF 0.50 per share. Differences between this amount and the transaction price on purchases or sales of treasury shares with third parties or the value of services received for the shares allocated to associates as part of share-based compensation arrangements are recorded in "Retained earnings" in the consolidated statement of changes in equity.

REVENUE RECOGNITION

REVENUE

Revenue is recognized on the sale of Novartis Group products and services and recorded as "Net sales" in the consolidated income statement when there is persuasive evidence that a sales arrangement exists, title and risks and rewards for the products are transferred to the customer, the price is determinable and collectability is reasonably assured. Where contracts contain customer acceptance provisions, sales are recognized upon the satisfaction of acceptance criteria which for surgical equipment is when title and risk and rewards are transferred after installation and any required

training has been completed. If products are stockpiled at the request of the customer, revenue is only recognized once the products have been inspected and accepted by the customer and there is no right of return or replenishment on product expiry and cost of storage will be paid by the customer on normal commercial terms.

Provisions for rebates and discounts granted to government agencies, wholesalers, retail pharmacies, managed care and other customers are recorded as a reduction of revenue at the time the related revenues are recorded or when the incentives are offered. They are calculated on the basis of historical experience and the specific terms in the individual agreements. Provisions for refunds granted to healthcare providers under innovative pay for performance agreements are recorded as a reduction of revenue at the time the related revenues are recorded. They are calculated on the basis of historical experience and clinical data for the product as well as the specific terms in the individual agreements. In cases where historical experience and clinical data are not sufficient for a reliable estimation of the outcome, revenue recognition is deferred until such history is available.

Cash discounts are offered to customers to encourage prompt payment and are recorded as revenue deductions. Wholesaler shelf-inventory adjustments are granted to customers based on the existing inventory of a product at the time of decreases in the invoice or contract price of a product or at the point of sale if a price decline is reasonably estimable. Where there is historical experience of Novartis agreeing to customer returns or Novartis can otherwise reasonably estimate expected future returns, Novartis records a provision for estimated sales returns. In doing so it applies the estimated rate of return, determined based on historical experience of customer returns or considering any other relevant factors, to the amounts invoiced also considering the amount of returned products to be destroyed versus products that can be placed back in inventory for resale. Where shipments are made on a re-sale or return basis, without sufficient historical experience for estimating sales returns, revenue is only recorded when there is evidence of consumption or when the right of return has expired.

Provisions for revenue deductions are adjusted to actual amounts as rebates, discounts and returns are processed. The provision represents estimates of the related obligations, requiring the use of judgment when estimating the effect of these sales deductions.

OTHER REVENUE

Royalty income is reported under "Other revenue" in the consolidated income statement and recognized on an accruals basis in accordance with the substance of the relevant agreements.

RESEARCH & DEVELOPMENT

Internal Research & Development (R&D) costs are fully charged to "Research & Development" in the consolidated income statement in the period in which they are incurred. The Group considers that regulatory and other uncertainties inherent in the development of new products preclude the capitalization of internal development expenses as an intangible asset until marketing approval from a regulatory authority is obtained in a major market such as the United States, the European Union, Switzerland or Japan.

Payments made to third parties in compensation for subcontracted R&D that is deemed not to enhance the intellectual property of Novartis such as contract research and development organizations are expensed as internal R&D expenses in the period in which they are incurred. Such payments are only capitalized if they meet the criteria for recognition of an internally generated intangible asset, usually when marketing approval has been achieved from a regulatory authority in a major market.

Payments made to third parties in order to in-license or acquire intellectual property rights, compounds and products (IPR&D), including initial upfront and subsequent milestone payments, are capitalized as are payments for other assets, such as technologies to be used in R&D activities. If additional payments are made to the originator company to continue to perform R&D activities, an evaluation is made as to the nature of the payments. Such additional payments will be expensed if they are deemed to be compensation for subcontracted R&D services not resulting in an additional transfer of intellectual property rights to Novartis. By contrast, such additional payments will be capitalized if they are deemed to be compensation for the transfer to Novartis of additional intellectual property developed at the risk of the originator company. Subsequent internal R&D costs in relation to IPR&D and other assets are expensed since the technical feasibility of the internal R&D activity can only be demonstrated by the receipt of marketing approval for a related product from a regulatory authority in a major market.

Costs for post-approval studies performed to support the continued registration of a marketed product are recognized as marketing expenses. Costs for activities that are required by regulatory authorities as a condition for obtaining marketing approval are charged as development expenses as they are incurred in cases where it is anticipated that the related product will be sold over a longer period than the activities required to be performed to obtain the marketing approval. In the rare cases where costs related to the conditional approval need to be incurred over a period beyond that of the anticipated product sales, then the expected costs of these activities will be expensed over the shorter period of the anticipated product sales. As a result, all activities necessary as a condition to maintain a received approval, whether conditional or not, are expensed in the consolidated income statement.

IPR&D assets are transferred to "Currently marketed products" once the related project has been successfully developed and are amortized in the consolidated income statement over their useful life. Other acquired technologies included in intangible assets are amortized in the consolidated income statement over their estimated useful lives.

Inventory produced ahead of regulatory approval is provisioned against and the charge is included in "Other expense" in the consolidated income statement as its ultimate use cannot be assured. If this inventory can subsequently be sold the provision is released to "Other income" in the consolidated income statement either on approval by the appropriate regulatory authority or, exceptionally in Europe, on recommendation by the Committee for Medicinal Products for Human Use (CHMP) if approval is virtually certain.

SHARE-BASED COMPENSATION

The fair value of Novartis shares, restricted shares, restricted share units (RSU) and American Depositary Shares (ADS) and related options granted to associates as compensation is recognized as an expense over the related vesting period. The expense recorded in the consolidated income statement is included in the personnel expenses of the various functions where the associates are employed. Assumptions are made concerning the forfeiture rate of not meeting the vesting conditions which are adjusted during the vesting period so that at the end of the vesting period there is only a charge for vested amounts. If a participant leaves Novartis, for reasons other than retirement, disability or death, unvested shares ADSs, RSUs and share options are forfeited, unless determined otherwise by the Compensation Committee (for example, in connection with a reorganization or divestment).

An option's fair value at grant date is calculated using the trinomial valuation method. Accurately measuring the value of share options is difficult and requires an estimate of factors used in the valuation model. These key factors involve uncertain future events, such as expected dividend yield and expected share price volatility. Expected volatilities are based on those implied from listed warrants on Novartis shares, and – to the extent that equivalent options are not available – a future extrapolation based on historical volatility. Novartis shares, restricted shares, RSUs and ADSs are valued using the market value on the grant date.

GOVERNMENT GRANTS

Grants from governments or similar organizations are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants related to income are deferred and recognized in the consolidated income statement over the period necessary to match them with the related costs which they are intended to compensate.

The accounting policy for property, plant and equipment describes the treatment of any related grants.

RESTRUCTURING CHARGES

Charges to increase restructuring provisions are included in "Other expense" in the consolidated income statements. Corresponding releases are recorded in "Other income" in the consolidated income statement.

TAXES

Taxes on income are provided in the same periods as the revenues and expenses to which they relate and include any interest and penalties incurred during the period. Deferred taxes are determined using the comprehensive liability method and are calculated on the temporary differences that arise between the tax base of an asset or liability and its carrying value in the entity's balance sheet prepared for consolidation purposes, except for those temporary differences related to investments in subsidiaries and associated companies, where the timing of their reversal can be controlled and it is probable that the difference will not reverse in the foreseeable future. Furthermore, withholding or other taxes on eventual distribution of a subsidiary's retained earnings are only taken into account where a dividend has been planned since generally the retained earnings are reinvested.

The estimated amounts for current and deferred tax assets or liabilities, including any amounts related to any uncertain tax positions, are based on currently known facts and circumstances. Tax returns are based on an interpretation of tax laws and regulations and record estimates based on these judgments and interpretations. The tax returns are subject to examination by the competent taxing authorities, which may result in an assessment being made requiring payments of additional tax, interest or penalties. Inherent uncertainties exist in the estimates of the tax positions.

STATUS OF ADOPTION OF SIGNIFICANT NEW OR AMENDED IFRS STANDARDS OR INTERPRETATIONS

The following new or amended IFRS standards will, based on a Novartis analysis, be of significance to the Group, but have not yet been early adopted.

In 2009, 2010 and 2011, IFRS 9 *Financial Instruments* was issued which will substantially change the classification and measurement of financial instruments, hedging requirements and the recognition of certain fair value changes in the consolidated financial statements. Currently, only new requirements on the classification and measurement for financial assets and financial liabilities have been issued. The mandatory effective date for requirements issued as part of IFRS 9 will be on or after January 1, 2015. Early application of the requirements is permitted although Novartis is still completing its evaluation of this standard and also has not yet decided on when to adopt.

In 2011, IAS 19 revised on *Employee Benefits* was issued, for adoption by January 1, 2013. The principal impact for Novartis will be that the concepts of expected return on plan assets and interest expense on the defined benefit obligation as separate components of defined benefit cost will be replaced by a concept that interest will be calculated on the net surplus/deficit of the defined benefit obligation and the assets which fund the post-employment obligation, generally using an interest rate reflecting market yields of high quality corporate bonds in deep markets. If this concept had been adopted by Novartis in 2012, it is estimated that the principal effect in the Group's consolidated financial statements would be on oper-

ating income which would have been lower by approximately USD 310 million. Novartis, as required by the standard, will retrospectively adopt the standard on January 1, 2013 by restating its consolidated income statements for 2012.

The following additional new standards will also be effective from January 1, 2013:

– IFRS 10 *Consolidated Financial Statements.* This requires that Novartis will need to consolidate an investee based on control, i.e. when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.
– IFRS 11 *Joint Arrangements*. This will require that Novartis classifies joint arrangements as either joint operations, where assets, liabilities, revenues and expenses are accounted for proportionally in accordance with the agreement, or as joint ventures, which are accounted for under the equity method.
– IFRS 12 *Disclosures of interests in other entities*. This brings together the disclosure requirements that apply to subsidiaries, associated companies, joint ventures, structured entities and unconsolidated structured entities.
– IFRS 13 *Fair value measurement*. This standard will introduce a fair value hierarchy, additional disclosures, a requirement for the fair value of liabilities to be based on the assumption that the liability will be transferred to another party and will remove the requirements to use bid and ask prices for actively quoted financial assets and liabilities.

Novartis has concluded that on adoption on January 1, 2013 none of these new standards will have a significant impact on the Group's consolidated financial statements.

2. SIGNIFICANT TRANSACTIONS

The following acquisitions, business combinations or other significant transactions occurred during 2012 and 2011. See note 24 for further details of the impact of these transactions on the consolidated financial statements.

SIGNIFICANT TRANSACTION IN 2012

Sandoz – Acquisition of Fougera Pharmaceuticals, Inc.

On July 20, 2012, Sandoz completed the acquisition of 100% of Fougera Pharmaceuticals, Inc., a specialty dermatology generics company based in Melville, New York, for USD 1.5 billion in cash. The acquisition of Fougera Pharmaceuticals, Inc. creates another strong global growth platform for Sandoz. Fougera has strong dermatology development and manufacturing expertise and employs approximately 700 people.

The final purchase price allocation resulted in net identified assets of USD 0.6 billion (excluding acquired cash) and goodwill of USD 0.9 billion. Results of operations since the acquisition date were not material.

SIGNIFICANT TRANSACTIONS IN 2011

Alcon full ownership and merger

On April 8, 2011 a Novartis Extraordinary General Meeting approved the merger of Alcon, Inc. with Novartis AG leading to the creation of the Alcon Division which became the fifth reported segment in Novartis' strategically diversified healthcare portfolio. The Extraordinary General Meeting also authorized the issuance of 108 million new shares. Alcon shareholders received 2.9228 Novartis shares (which included a dividend adjustment) and USD 8.20 in cash for each share of Alcon, resulting in a total consideration of USD 168.00 per share.

During 2011, prior to the merger on April 8, 2011, 4.8% of the non-controlling interests in Alcon, Inc. were acquired for USD 2.4 billion. Completion of the acquisition of the outstanding 18.6% of Alcon, Inc. on April 8, 2011 and subsequent merger, resulted in the issuance of Novartis shares with a fair value of USD 9.2 billion and a payment in cash of USD 0.5 billion to the Alcon, Inc. shareholders.

The excess of the value exchanged for the non-controlling interests in Alcon, Inc. in 2011 over its recorded value together with merger related transaction costs resulted in a reduction in the Novartis consolidated equity of USD 5.7 billion.

Pharmaceuticals – Acquisition of Genoptix, Inc.

On March 7, 2011 Novartis completed the acquisition of 100% of Genoptix, Inc., a specialized laboratory providing personalized diagnostic services to United States community-based hematologists and oncologists for USD 458 million in cash. Genoptix employed approximately 500 people.

The final purchase price allocation resulted in net identified assets of USD 237 million and goodwill of USD 221 million. Results of operations since the acquisition date in 2011 were not material.

3. SEGMENTATION OF KEY FIGURES 2012 AND 2011

Reporting segments are presented in a manner consistent with the internal reporting to the chief operating decision maker which is the Executive Committee of Novartis. It is responsible for allocating resources and assessing the performance of the reporting segments.

The businesses of Novartis are divided operationally on a worldwide basis into five reporting segments: Pharmaceuticals, Alcon, Sandoz, Vaccines and Diagnostics and Consumer Health. In addition, we separately report Corporate activities. Except for Consumer Health, these segments reflect the Group's internal management structures. These segments are managed separately, including the two divisions of the Consumer Health segment, because they research, develop, manufacture, distribute, and sell distinct products which require differing marketing strategies. In the case of Consumer Health, the segment comprises two divisions which are also managed separately, however, neither of these two divisions is material enough to the Group to be disclosed separately as a reporting segment. The reporting segments are as follows:

REPORTING SEGMENTS

Pharmaceuticals researches, develops, manufactures, distributes and sells patented prescription medicines and is organized in the following business franchises: Oncology; Primary Care, consisting of Primary Care medicines and Established Medicines; and Specialty Care, consisting of Ophthalmology, Neuroscience, Integrated Hospital Care, and Critical Care medicines. Novartis Oncology is organized as a business unit, responsible for the global development and marketing of oncology products. The Novartis Oncology Business Unit is not required to be disclosed separately as a segment since it shares common long-term economic perspectives, customers, research, development, production, distribution and regulatory factors with the rest of the division.

Alcon researches, discovers, develops, manufactures, distributes and sells eye care products. Alcon is the global leader in eye care with product offerings in Surgical, Ophthalmic Pharmaceuticals and Vision Care. In Surgical, Alcon develops, manufactures, distributes and sells ophthalmic surgical equipment, instruments, disposable products and intraocular lenses. In Ophthalmic Pharmaceuticals, Alcon discovers, develops, manufactures, distributes and sells medicines to treat chronic and acute diseases of the eye, as well as over-the-counter medicines for the eye. In Vision Care, Alcon develops, manufactures, distributes and sells contact lenses and lens care products.

Sandoz develops, manufactures, distributes and sells prescription medicines, as well as pharmaceutical and biotechnological active substances, which are not protected by valid and enforceable third-party patents. Sandoz has activities in Retail Generics, Anti-Infectives, Biopharmaceuticals & Oncology Injectables. In Retail Generics, Sandoz develops, manufactures and markets active ingredients and finished dosage forms of pharmaceuticals to third parties. In Anti-Infectives, Sandoz manufactures active pharmaceutical ingredients and intermediates – mainly antibiotics – for internal use by Retail Generics and for sale to third-party customers. In Biopharmaceuticals, Sandoz develops, manufactures and markets protein- or other biotechnology-based products (known as biosimilars or follow-on biologics) and sells biotechnology manufacturing services to other companies. In Oncology Injectables, Sandoz develops, manufacturers, and markets cytotoxic products for the hospital market. Sandoz Ophthalmics, which was formed through the integration of Alcon's generic division Falcon, develops, manufactures and markets generic ophthalmic and otic products. In addition, Sandoz expanded its presence in Respiratory through the acquisition of Oriel Therapeutics in 2010, and expanded its presence in Dermatology through the acquisition of specialty dermatology company Fougera Pharmaceuticals, Inc. in 2012.

Vaccines and Diagnostics consists of two activities: Vaccines and Diagnostics. Vaccines researches, develops, manufactures, distributes and sells human vaccines worldwide. Diagnostics researches, develops, distributes and sells blood testing and molecular diagnostics products.

Consumer Health consists of two divisions: OTC (over-the-counter medicines) and Animal Health. OTC offers readily available consumer medicine. Animal Health provides veterinary products for farm and companion animals.

The accounting policies mentioned above are used in the reporting of segment results. Inter-segmental sales are made at amounts which are considered to approximate arm's length transactions. The Executive Committee of Novartis evaluates segmental performance and allocates resources among the segments based on a number of measures including net sales, operating income and net operating assets. Segment net operating assets consist primarily of property, plant and equipment, intangible assets, inventories and trade and other operating receivables less operating liabilities.

CORPORATE

Income and expenses relating to Corporate include the costs of the Group headquarters and those of corporate coordination functions in major countries. In addition, Corporate includes other items of income and expense which are not attributable to specific segments such as certain expenses related to post-employment benefits, environmental remediation liabilities, charitable activities, donations and sponsorships.

Usually, no allocation of Corporate items is made to the segments. As a result, Corporate assets and liabilities principally consist of net liquidity (cash and cash equivalents, marketable securities less financial debts), investments in associated companies and current and deferred taxes and non-segmental specific environmental remediation and post-employment benefit liabilities.

3. SEGMENTATION OF KEY FIGURES 2012 AND 2011 (CONTINUED)

	Pharmaceuticals		Alcon	
(In USD millions)	**2012**	**2011**	**2012**	**2011**
Net sales to third parties	**32 153**	**32 508**	**10 225**	**9 958**
Sales to other segments	277	244	56	22
Net sales of segments	**32 430**	**32 752**	**10 281**	**9 980**
Other revenues	471	453	53	43
Cost of goods sold	– 6 578	– 6 573	– 4 618	– 4 566
Gross profit	**26 323**	**26 632**	**5 716**	**5 457**
Marketing & Sales	– 8 568	– 8 929	– 2 462	– 2 537
Research & Development	– 6 918	– 7 232	– 975	– 892
General & Administration	– 1 061	– 1 047	– 510	– 509
Other income	577	697	49	262
Other expense	– 755	– 1 825	– 353	– 309
Operating income	**9 598**	**8 296**	**1 465**	**1 472**
Income from associated companies	– 2	– 3	16	
Interest expense				
Other financial income and expense				
Income before taxes				
Taxes				
Group net income				
Attributable to:				
Shareholders of Novartis AG				
Non-controlling interests				
Included in net income are:				
Interest income				
Depreciation of property, plant & equipment	– 825	– 870	– 305	– 306
Amortization of intangible assets	– 324	– 423	– 1 926	– 1 928
Impairment charges on property, plant & equipment	– 25	– 403		– 5
Impairment charges on intangible assets	– 211	– 552	– 17	– 20
Impairment charges on financial assets	– 2	– 30		– 4
Additions to restructuring provisions	– 190	– 265	– 23	– 74
Equity-based compensation of Novartis and Alcon equity plans	– 641	– 648	– 113	– 113
Total assets	**24 956**	**24 111**	**45 166**	**46 065**
Total liabilities	– 10 673	– 10 415	– 2 578	– 2 273
Total equity	**14 283**	**13 696**	**42 588**	**43 792**
Net debt				
Net operating assets	**14 283**	**13 696**	**42 588**	**43 792**
Included in total assets and total liabilities are:				
Total property, plant & equipment	8 723	8 071	2 274	2 056
Additions to property, plant & equipment[1]	1 334	1 041	529	354
Total goodwill and intangible assets	6 056	6 244	38 913	40 542
Additions to goodwill and intangible assets[1]	165	219	130	80
Total investment in associated companies	1	3		18
Additions to investment in associated companies		5		3
Cash, marketable securities and derivative financial instruments				
Financial debts and derivative financial instruments				
Current income tax and deferred tax liabilities				

[1] Excluding impact of business combinations.

Sandoz		Vaccines and Diagnostics		Consumer Health		Corporate (including eliminations)		Total Group	
2012	**2011**	**2012**	**2011**	**2012**	**2011**	**2012**	**2011**	**2012**	**2011**
8 702	**9 473**	**1 858**	**1 996**	**3 735**	**4 631**			**56 673**	**58 566**
279	319	44	73	18	15	– 674	– 673		
8 981	**9 792**	**1 902**	**2 069**	**3 753**	**4 646**	**– 674**	**– 673**	**56 673**	**58 566**
12	9	331	295	26	24	– 5	– 15	888	809
– 5 126	– 5 445	– 1 478	– 1 410	– 1 729	– 1 735	773	746	– 18 756	– 18 983
3 867	**4 356**	**755**	**954**	**2 050**	**2 935**	**94**	**58**	**38 805**	**40 392**
– 1 561	– 1 591	– 324	– 363	– 1 442	– 1 674	4	15	– 14 353	– 15 079
– 695	– 640	– 453	– 523	– 291	– 296			– 9 332	– 9 583
– 350	– 369	– 136	– 150	– 271	– 291	– 609	– 604	– 2 937	– 2 970
74	88	23	18	75	91	389	198	1 187	1 354
– 244	– 422	– 115	– 185	– 73	– 38	– 319	– 337	– 1 859	– 3 116
1 091	**1 422**	**– 250**	**– 249**	**48**	**727**	**– 441**	**– 670**	**11 511**	**10 998**
5	4	3	2			530	525	552	528
								– 724	– 751
								– 96	– 2
								11 243	**10 773**
								– 1 625	– 1 528
								9 618	**9 245**
								9 505	*9 113*
								113	*132*
								50	62
– 287	– 303	– 135	– 115	– 47	– 50	– 105	– 84	– 1 704	– 1 728
– 368	– 383	– 215	– 231	– 57	– 59	– 4	– 4	– 2 894	– 3 028
– 3	– 1	– 6	– 2	– 3	– 2	– 2		– 39	– 413
– 43	– 25	– 5	– 8	– 7	– 14			– 283	– 619
		– 1	– 135			– 31	– 23	– 34	– 192
– 28		– 4		– 24	– 7	– 12		– 281	– 346
– 41	– 33	– 37	– 38	– 45	– 61	– 126	– 122	– 1 003	– 1 015
19 938	**17 965**	**5 713**	**5 764**	**2 644**	**2 684**	**25 799**	**20 907**	**124 216**	**117 496**
– 3 208	– 2 742	– 736	– 697	– 883	– 960	– 36 919	– 34 469	– 54 997	– 51 556
16 730	**15 223**	**4 977**	**5 067**	**1 761**	**1 724**	**– 11 120**	**– 13 562**	**69 219**	**65 940**
						11 607	15 154	11 607	15 154
16 730	**15 223**	**4 977**	**5 067**	**1 761**	**1 724**	**487**	**1 592**	**80 826**	**81 094**
3 103	2 824	1 581	1 535	457	431	801	710	16 939	15 627
462	335	165	192	76	74	188	190	2 754	2 186
12 881	11 356	2 724	2 883	829	867	18	20	61 421	61 912
22	24	33	6	24	4	6	3	380	336
22	18	2	4			8 815	8 579	8 840	8 622
						36	24	36	32
						8 119	5 075	8 119	5 075
						19 726	20 229	19 726	20 229
						9 356	8 467	9 356	8 467

3. SEGMENTATION OF KEY FIGURES 2012 AND 2011 (CONTINUED)

The following countries accounted for more than 5% of at least one of the respective Group totals for the years ended December 31, 2012 and 2011:

Country	Net sales[1]				Total of selected non-current assets[2]			
USD millions	2012	%	2011	%	2012	%	2011	%
Switzerland	706	1	726	1	37 579	43	38 827	45
United States	18 592	33	19 225	33	31 559	36	30 061	35
Germany	3 797	7	4 362	7	4 242	5	4 214	5
Japan	5 361	9	5 281	9	188		204	
France	2 709	5	2 848	5	301		299	
Other	25 508	45	26 124	45	13 331	16	12 556	15
Group	**56 673**	**100**	**58 566**	**100**	**87 200**	**100**	**86 161**	**100**
Europe	19 708	35	21 507	37	50 566	58	51 101	59
Americas	24 029	42	24 705	42	34 611	40	33 211	39
Asia / Africa / Australasia	12 936	23	12 354	21	2 023	2	1 849	2
Group	**56 673**	**100**	**58 566**	**100**	**87 200**	**100**	**86 161**	**100**

[1] Net sales from operations by location of third party customer.
[2] Total of property, plant and equipment, goodwill, intangible assets and investment in associated companies.

The Group's largest customer accounts for approximately 10% of net sales, and the second and third largest customer account for 9% and 8% of net sales (2011: 9%, 7% and 7% respectively). No other customer accounted for 4% or more of net sales, in either year.

The highest amounts of trade receivables outstanding were for these same three customers. They amounted to 8%, 7% and 6%, respectively, of the Group's trade receivables at December 31, 2012 (2011: 10%, 6% and 6% respectively).

PHARMACEUTICALS BUSINESS FRANCHISE NET SALES

Business franchise

	2012 USD millions	2011 USD millions	Change USD %
Primary care			
Hypertension medicines			
Diovan	4 417	5 665	– 22
Exforge	1 352	1 209	12
Subtotal Valsartan Group	5 769	6 874	– 16
Tekturna/Rasilez	383	557	– 31
Subtotal Hypertension	**6 152**	**7 431**	**– 17**
Galvus	910	677	34
Arcapta Neohaler/Onbrez Breezhaler	134	103	30
Other	3	0	nm
Total strategic franchise products	**7 199**	**8 211**	**– 12**
Established medicines	1 532	1 795	– 15
Total Primary Care products	**8 731**	**10 006**	**– 13**
Oncology			
Gleevec/Glivec	4 675	4 659	0
Tasigna	998	716	39
Subtotal Bcr-Abl franchise	5 673	5 375	6
Sandostatin	1 512	1 443	5
Zometa	1 288	1 487	– 13
Exjade	870	850	2
Afinitor/Votubia	797	443	80
Femara	438	911	– 52
Other	173	163	6
Total Oncology products	**10 751**	**10 672**	**1**
Specialty – Neuroscience			
Gilenya	1 195	494	142
Exelon/Exelon Patch	1 050	1 067	– 2
Comtan/Stalevo	530	614	– 14
Extavia	159	154	3
Other (including *Fanapt*)	62	46	35
Total strategic franchise products	**2 996**	**2 375**	**26**
Established medicines	483	547	– 12
Total Neuroscience products	**3 479**	**2 922**	**19**

Business franchise

	2012 USD millions	2011 USD millions	Change USD %
Specialty – Ophthalmics			
Lucentis	2 398	2 050	17
Other	88	113	– 22
Total Ophthalmics products	**2 486**	**2 163**	**15**
Specialty – Integrated Hospital Care (IHC)[1]			
Neoral/Sandimmun	821	903	– 9
Myfortic	579	518	12
Zortress/Certican	210	187	12
Ilaris	72	48	50
Other	398	363	10
Total strategic franchise products	**2 080**	**2 019**	**3**
Everolimus stent drug	256	256	0
Established medicines	1 160	1 220	– 5
Total IHC products	**3 496**	**3 495**	**0**
Specialty – Critical Care			
Xolair	504	478	5
TOBI	317	296	7
Total Critical Care products	**821**	**774**	**6**
Additional products			
Voltaren (excl. OTC)	759	794	– 4
Ritalin/Focalin	554	550	1
Tegretol	348	364	– 4
Trileptal	279	263	6
Foradil	240	312	– 23
Other	209	193	8
Total additional products	**2 389**	**2 476**	**– 4**
Total strategic franchise products	**26 333**	**26 214**	**0**
Total established medicines and additional products	5 820	6 294	– 8
Total Division net sales	**32 153**	**32 508**	**– 1**

[1] Includes Transplantation
nm = not meaningful

The product portfolio of other segments is widely spread and none of the products or product ranges exceed 5% of the net sales of the Group in 2012 and 2011.

4. ASSOCIATED COMPANIES

Novartis has a significant investment in Roche Holding AG (Roche) and certain other smaller investments which are accounted for as associated companies:

	Balance sheet value		Net income statement effect	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Roche Holding AG, Switzerland	8 588	8 362	538	499
Others	252	260	14	29
Total	**8 840**	**8 622**	**552**	**528**

ROCHE HOLDING AG

The Group's holding in Roche voting shares was 33.3% at December 31, 2012 and 2011. This investment represents approximately 6.4% of Roche's total outstanding voting and non-voting equity instruments at December 31, 2012 and 2011.

Since up-to-date financial data are not available when Novartis produces its consolidated financial results, a survey of analyst estimates is used to estimate the Group's share of net income in Roche. Any differences between these estimates and actual results will be adjusted in the Group's 2013 consolidated financial statements when available.

The following table shows summarized financial information of Roche for the year ended December 31, 2011 and for the six months ended June 30, 2012 since full year 2012 data is not yet available:

	Asset CHF billions	Liabilities CHF billions	Revenue CHF billions	Net income CHF billions
December 31, 2011	61.6	47.1	44.1	9.5
June 30, 2012	59.6	47.5	23.3	4.4

A purchase price allocation was performed on the basis of publicly available information at the time of acquisition of the investment. The December 31, 2012 balance sheet value allocation is as follows:

	USD millions
Novartis share of Roche's estimated net assets	2 753
Novartis share of re-appraised intangible assets	1 730
Implicit Novartis goodwill	3 112
Current value of share in net identifiable assets and goodwill	**7 595**
Accumulated equity accounting adjustments and translation effects less dividends received	993
December 31, 2012 balance sheet value	**8 588**

The identified intangible assets principally relate to the value of currently marketed products and are amortized on a straight-line basis over their estimated average useful life of 20 years.

The consolidated income statement effects from applying Novartis accounting principles for this investment in 2012 and 2011 are as follows:

	2012 USD millions	2011 USD millions
Novartis share of Roche's estimated current-year consolidated net income[1]	691	661
Amortization of fair value adjustments relating to intangible assets, net of taxes of USD 45 million (2011: USD 47 million)	– 153	– 162
Net income effect	**538**	**499**

[1] Includes Novartis share of Roche restructuring charges in 2012 of USD 50 million; 2011 USD 41 million relating to 2010 disclosed by Roche after publication of the Novartis 2010 consolidated financial statements.

The publicly quoted market value of the Novartis interest in Roche (Reuters symbol: RO.S) at December 31, 2012, was USD 10.9 billion (2011: USD 9.5 billion).

5. INTEREST EXPENSE AND OTHER FINANCIAL EXPENSE

	2012 USD millions	2011 USD millions
Interest expense	– 655	– 699
Expense due to discounting long-term liabilities	– 69	– 52
Total interest expense	**– 724**	**– 751**
Interest income	50	62
Dividend income	1	1
Net capital (losses)/gains on available-for-sale securities	– 6	2
Net capital gains/(losses) on cash and cash equivalents	47	– 124
Income on forward contracts and options	86	192
Expenses on forward contracts and options	– 129	– 67
Impairment of available-for-sale securities		– 3
Other financial expense	– 20	– 19
Monetary loss from hyperinflation accounting	– 19	– 19
Currency result, net	– 106	– 27
Total other financial income/(expense)	**– 96**	**– 2**

6. TAXES

INCOME BEFORE TAXES

	2012 USD millions	2011 USD millions
Switzerland	5 277	2 993
Foreign	5 966	7 780
Total income before taxes	**11 243**	**10 773**

CURRENT AND DEFERRED INCOME TAX EXPENSE

	2012 USD millions	2011 USD millions
Switzerland	– 530	– 488
Foreign	– 1 806	– 2 182
Total current income tax expense	**– 2 336**	**– 2 670**
Switzerland	220	161
Foreign	491	981
Total deferred tax income	**711**	**1 142**
Total income tax expense	**– 1 625**	**– 1 528**

ANALYSIS OF TAX RATE

The main elements contributing to the difference between the Group's overall expected tax rate (which can change each year since it is calculated as the weighted average tax rate based on pre-tax income of each subsidiary) and the effective tax rate are:

	2012 %	2011 %
Expected tax rate	13.7	15.5
Effect of disallowed expenditures	2.9	2.5
Effect of utilization of tax losses brought forward from prior periods	– 0.1	– 0.1
Effect of income taxed at reduced rates	– 0.3	
Effect of tax credits and allowances	– 1.7	– 2.4
Effect of tax benefits expiring in 2017	– 0.8	– 0.7
Effect of write-down of investments in subsidiaries		– 0.5
Prior year and other items	0.8	– 0.1
Effective tax rate	**14.5**	**14.2**

The utilization of tax-loss carry-forwards lowered the tax charge by USD 11 million in 2012 and by USD 6 million in 2011, respectively.

7. EARNINGS PER SHARE

Basic earnings per share (EPS) is calculated by dividing net income attributable to shareholders of Novartis AG by the weighted average number of shares outstanding in a reporting period. This calculation excludes the average number of issued shares purchased by the Group and held as treasury shares.

	2012	2011
Basic earnings per share		
Weighted average number of shares outstanding (in millions)	2 418	2 382
Net income attributable to shareholders of Novartis AG (USD millions)	**9 505**	**9 113**
Basic earnings per share (USD)	**3.93**	**3.83**

For diluted EPS, the weighted average number of shares outstanding is adjusted to assume the vesting of all restricted shares and the conversion of all potentially dilutive shares arising from options on Novartis shares that have been issued.

	2012	2011
Diluted earnings per share		
Weighted average number of shares outstanding (in millions)	2 418	2 382
Adjustment for vesting of restricted shares and dilutive shares from options (in millions)	27	31
Weighted average number of shares for diluted earnings per share (in millions)	2 445	2 413
Net income attributable to shareholders of Novartis AG (USD millions)	**9 505**	**9 113**
Diluted earnings per share (USD)	**3.89**	**3.78**

Options equivalent to 77.2 million shares (2011: 78.0 million) were excluded from the calculation of diluted EPS since they were not dilutive.

8. CHANGES IN CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

The consolidated statements of comprehensive income include the Group's net income for the year as well as all other valuation adjustments recorded in the Group's consolidated balance sheet but which under IFRS are not recorded in the consolidated income statement. These include fair value adjustments to financial instruments, actuarial gains or losses on defined benefit pension and other post-employment plans, revaluations of previously held equity interests (up to December 31, 2009 when the applicable accounting standard changed) and currency translation effects, net of tax. These amounts are subject to significant volatility outside of the control of management due to such factors as share price, foreign currency and interest rate movements.

The following table summarizes these value adjustments and currency translation effects attributable to Novartis shareholders:

	Fair value adjustments to marketable securities USD millions	Fair value adjustments of deferred cash flow hedges USD millions	Actuarial losses from defined benefit plans USD millions	Revaluation of previously held equity interests USD millions	Cumulative currency translation effects USD millions	Total value adjustments USD millions
Value adjustments at January 1, 2011	**158**	**– 182**	**– 3 238**	**685**	**3 669**	**1 092**
Fair value adjustments on financial instruments	– 21	41				20
Net actuarial losses from defined benefit plans			– 1 429			– 1 429
Currency translation effects					– 534	– 534
Total value adjustments in 2011	**– 21**	**41**	**– 1 429**		**– 534**	**– 1 943**
Value adjustments at December 31, 2011	**137**	**– 141**	**– 4 667**	**685**	**3 135**	**– 851**
Fair value adjustments on financial instruments	75	41				116
Net actuarial losses from defined benefit plans			– 1 811			– 1 811
Currency translation effects					809	809
Total value adjustments in 2012	**75**	**41**	**– 1 811**		**809**	**– 886**
Value adjustments at December 31, 2012	**212**	**– 100**	**– 6 478**	**685**	**3 944**	**– 1 737**

8.1) The 2012 and 2011 changes in the fair value of financial instruments were as follows:

	Fair value adjustments to marketable securities USD millions	Fair value adjustments of deferred cash flow hedges USD millions	Total USD millions
Fair value adjustments at January 1, 2012	**137**	**– 141**	**– 4**
Changes in fair value:			
– Available-for-sale marketable securities	20		20
– Available-for-sale financial investments	41		41
– Associated companies' movements in comprehensive income	5		5
Realized net losses/(gains) transferred to the consolidated income statement:			
– Marketable securities sold	3		3
– Other financial assets sold	– 19		– 19
Amortized net losses on cash flow hedges transferred to the consolidated income statement		44	44
Impaired financial assets transferred to the consolidated income statement	35		35
Deferred tax on above items	– 10	– 3	– 13
Fair value adjustments during the year	**75**	**41**	**116**
Attributable to:			
Shareholders of Novartis AG	*75*	*41*	*116*
Non-controlling interests			
Fair value adjustments at December 31, 2012	**212**	**– 100**	**112**

8. CHANGES IN CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (CONTINUED)

	Fair value adjustments to marketable securities USD millions	Fair value adjustments of deferred cash flow hedges USD millions	Total USD millions
Fair value adjustments at January 1, 2011	**157**	**– 182**	**– 25**
Changes in fair value:			
– Available-for-sale marketable securities	– 32		– 32
– Available-for-sale financial investments	– 141		– 141
– Associated companies' movements in comprehensive income	– 8		– 8
Realized net (gains) transferred to the consolidated income statement:			
– Marketable securities sold	– 13		– 13
– Other financial assets sold	– 13		– 13
Amortized net losses on cash flow hedges transferred to the consolidated income statement		44	44
Impaired marketable securities and other financial assets transferred to the consolidated income statement	192		192
Deferred tax on above items	– 5	– 3	– 8
Fair value adjustments during the year	**– 20**	**41**	**21**
Attributable to:			
Shareholders of Novartis AG	*– 21*	*41*	*20*
Non-controlling interests	*1*		*1*
Fair value adjustments at December 31, 2011	**137**	**– 141**	**– 4**

8.2) Actuarial gains and losses from defined benefit plans arise as follows:

	2012 USD millions	2011 USD millions
Defined benefit pension plans before tax	– 2 371	– 1 876
Other post-employment benefit plans before tax	27	– 55
Taxation on above items	533	510
Total after tax	**– 1 811**	**– 1 421**
Attributable to:		
Shareholders of Novartis AG	*– 1 811*	*– 1 429*
Non-controlling interests		*8*

8.3) The Group has investments in associated companies, principally Roche Holding AG. The Group's share in movements in these companies' other comprehensive income are recognized directly in the respective categories of the Novartis consolidated statement of comprehensive income, net of tax. The currency translation effects and fair value adjustments of associated companies are included in the corresponding Group amounts. All other movements in these companies' statements of comprehensive income are recognized directly in the consolidated statement of comprehensive income under "Novartis share of other items recorded in comprehensive income recognized by associated companies, net of taxes". These amounted to a loss of USD 107 million (2011: income of USD 1 million).

8.4) As a result of the liquidation of a subsidiary, USD 6 million of cumulative currency translation gains have been transferred into financial income in 2012 (2011: nil).

9. CHANGES IN CONSOLIDATED EQUITY

9.1) At the 2012 Annual General meeting, a dividend of CHF 2.25 per share was approved that amounted to USD 6.0 billion, and was paid in 2012 (2011: CHF 2.20 per share dividend payment that amounted to USD 5.4 billion). The amount available for distribution as a dividend to shareholders is based on the available distributable retained earnings of Novartis AG determined in accordance with the legal provisions of the Swiss Code of Obligation.

9.2) In 2012, 3.4 million shares, net were exchanged resulting in a net reduction of equity of USD 89 million (2011: 54.7 million shares for USD 3.5 billion). In 2012, via the first trading line of the SIX Swiss Exchange a total of 4.6 million shares were purchased for USD 240 million with the intention of retaining in Group Treasury (2011: USD 20.4 million shares for USD 1.1 billion) and 6.3 million shares were sold on the first trading line for USD 295 million (2011: nil). In addition 4.0 million shares were acquired from associates for USD 265 million and 5.7 million shares were distributed to associates for USD 121 million due to exercise of options held by associates with strike prices substantially lower than the market price of Novartis shares on the exercise date during 2012 (2011: 5.1 million shares for USD 31 million). In 2011, an additional 39.4 million shares were acquired via the second trading line on the SIX Swiss Exchange for USD 2.4 billion with the intention of cancellation.

9.3) In 2012, a total of 39.4 million shares were cancelled. These shares have been repurchased via the second trading line of the SIX Swiss Exchange in 2011.

9.4) Equity-settled share-based compensation is expensed in the consolidated income statement in accordance with the vesting period of the share-based compensation plans. The value for the shares and options granted, including associated tax, is credited to consolidated equity over the respective vesting period. In 2012, 10.6 million shares were transferred to associates as part of equity-based compensation. The resulting expense amounted to USD 856 million including a tax benefit of USD 108 million (2011: 7.2 million shares at a total amount of USD 806 million including a tax benefit of USD 44 million).

9.5) Changes in non-controlling interests amounted to a reduction of USD 82 million (2011: reduction of USD 6.6 billion driven by the acquisition of the remaining outstanding non-controlling interests in Alcon, Inc.).

9.6) The excess of the consideration exchanged by Novartis to acquire the additional non-controlling interests in Alcon, Inc. over the carrying value of the related outstanding non-controlling interests of Alcon, Inc. was recognized against consolidated equity. In 2011, this led to a reduction in equity of USD 5.7 billion.

9.7) In 2011, a total of 164.7 million Novartis shares with a fair value of USD 9.2 billion were exchanged on April 8, 2011 to acquire the outstanding non-controlling interests in Alcon, Inc. These shares consisted of 108 million newly issued shares and 56.7 million treasury shares.

10. PROPERTY, PLANT & EQUIPMENT MOVEMENTS

	Land USD millions	Buildings USD millions	Construction in progress USD millions	Machinery & other equipment USD millions	Total USD millions
2012					
Cost					
January 1	**831**	**11 429**	**2 164**	**15 511**	**29 935**
Impact of business combinations	10	76	12	28	126
Reclassifications[1]	11	296	– 1 226	919	
Additions	5	105	2 117	527	2 754
Disposals and derecognitions[2]	– 5	– 54	– 14	– 523	– 596
Currency translation effects	15	177	60	301	553
December 31	**867**	**12 029**	**3 113**	**16 763**	**32 772**
Accumulated depreciation					
January 1	**– 22**	**– 4 646**	**– 10**	**– 9 630**	**– 14 308**
Depreciation charge	– 4	– 465		– 1 235	– 1 704
Depreciation on disposals and derecognitions[2]	2	35		462	499
Impairment charge		– 20		– 19	– 39
Currency translation effects	– 1	– 80		– 200	– 281
December 31	**– 25**	**– 5 176**	**– 10**	**– 10 622**	**– 15 833**
Net book value at December 31	**842**	**6 853**	**3 103**	**6 141**	**16 939**
Insured value at December 31					**37 405**
Net book value of property, plant & equipment under finance lease contracts					**1**
Commitments for purchases of property, plant & equipment					**755**

[1] Reclassifications between various asset categories due to completion of plant and other equipment under construction.
[2] Derecognition of assets which are no longer used and are not considered to have a significant disposal value or other alternative use.

The Group was awarded government grants in the United States for the construction of a manufacturing facility to produce flu vaccines. The contracts included a maximum of USD 330 million cost reimbursement for construction activities and equipment, of which USD 240 million was received by December 31, 2012 (2011: USD 223 million). These grants are deducted in arriving at the balance sheet carrying value of the assets since the receipt of the respective government grant is reasonably assured. There are no onerous contracts or unfulfilled conditions in connection with this grant.

Borrowing costs on new additions to property, plant and equipment have been capitalized and amounted to USD 4 million in 2012 (2011: USD 1 million).

	Land USD millions	Buildings USD millions	Construction in progress USD millions	Machinery & other equipment USD millions	Total USD millions
2011					
Cost					
January 1	**827**	**10 674**	**2 327**	**15 129**	**28 957**
Acquisition and divestment of consolidated business	12	20		9	41
Reclassifications [1]		888	– 1 688	800	
Additions	2	105	1 616	463	2 186
Disposals and derecognitions [2]	– 3	– 148	– 21	– 638	– 810
Currency translation effects	– 7	– 110	– 70	– 252	– 439
December 31	**831**	**11 429**	**2 164**	**15 511**	**29 935**
Accumulated depreciation					
January 1	**– 19**	**– 4 318**	**– 6**	**– 8 774**	**– 13 117**
Depreciation on divested consolidated business		3		6	9
Reclassifications [1]		– 3		3	
Depreciation charge	– 3	– 438		– 1 287	– 1 728
Depreciation on disposals and derecognitions [2]		117		575	692
Impairment charge		– 55	– 4	– 354	– 413
Currency translation effects		48		201	249
December 31	**– 22**	**– 4 646**	**– 10**	**– 9 630**	**– 14 308**
Net book value at December 31	**809**	**6 783**	**2 154**	**5 881**	**15 627**
Insured value at December 31					**34 483**
Net book value of property, plant & equipment under finance lease contracts					**4**
Commitments for purchases of property, plant & equipment					**583**

[1] Reclassifications between various asset categories due to completion of plant and other equipment under construction.
[2] Derecognition of assets which are no longer used and are not considered to have a significant disposal value or other alternative use.

11. GOODWILL AND INTANGIBLE ASSET MOVEMENTS

	Goodwill USD millions	Acquired research & development USD millions	Alcon brand name USD millions	Technologies USD millions	Currently marketed products USD millions	Marketing know-how USD millions	Other intangible assets USD millions	Total of intangible assets other than goodwill USD millions
2012								
Cost								
January 1	**30 451**	**3 091**	**2 980**	**6 681**	**23 040**	**5 960**	**1 222**	**42 974**
Impact of business combinations	1 026	173		371	521			1 065
Reclassifications[1]		– 574			574			
Additions		175			136		69	380
Disposals and derecognitions[2]		– 34			– 19		– 10	– 63
Currency translation effects	128	26		27	160		22	235
December 31	**31 605**	**2 857**	**2 980**	**7 079**	**24 412**	**5 960**	**1 303**	**44 591**
Accumulated amortization								
January 1	**– 508**	**– 461**		**– 950**	**– 8 535**	**– 238**	**– 821**	**– 11 005**
Reclassifications[1]								
Amortization charge				– 590	– 1 959	– 238	– 107	– 2 894
Amortization on disposals and derecognitions[2]		34			17		10	61
Impairment charge		– 107			– 172		– 7	– 286
Reversal of impairment charge		3						3
Currency translation effects	– 7	– 12		– 11	– 101		– 15	– 139
December 31	**– 515**	**– 543**		**– 1 551**	**– 10 750**	**– 476**	**– 940**	**– 14 260**
Net book value at December 31	**31 090**	**2 314**	**2 980**	**5 528**	**13 662**	**5 484**	**363**	**30 331**

[1] Reclassifications between various asset categories as a result of product launches of acquired In-Process Research & Development.
[2] Derecognitions of assets which are no longer used or being developed and are not considered to have a significant disposal value or other alternative use.

SEGMENTATION OF GOODWILL AND INTANGIBLE ASSETS

The net book values at December 31, 2012 of goodwill and intangible assets are allocated to the Group's cash generating units as summarized below.

	Goodwill USD millions	Acquired research & development USD millions	Alcon brand name USD millions	Technologies USD millions	Currently marketed products USD millions	Marketing know-how USD millions	Other intangible assets USD millions	Total of intangible assets other than goodwill USD millions
Pharmaceuticals	3 139	1 037		19	1 694		167	2 917
Alcon	17 776	650	2 980	4 400	7 584	5 484	39	21 137
Sandoz	8 740	613		911	2 610		7	4 141
Vaccines and Diagnostics	1 198	10		198	1 199		119	1 526
Consumer Health	230	3			575		21	599
Corporate	7	1					10	11
Total	**31 090**	**2 314**	**2 980**	**5 528**	**13 662**	**5 484**	**363**	**30 331**
Potential impairment charge, if any, if discounted cash flows fell by 5%		9			6			
Potential impairment charge, if any, if discounted cash flows fell by 10%		19			12			

	Goodwill USD millions	Acquired research & development USD millions	Alcon brand name USD millions	Technologies USD millions	Currently marketed products USD millions	Marketing know-how USD millions	Other intangible assets USD millions	Total of intangible assets other than goodwill USD millions
2011								
Cost								
January 1	**30 261**	**4 627**	**2 980**	**6 699**	**22 740**	**5 960**	**1 135**	**44 141**
Impact of business combinations	303	7		3	101		1	112
Reclassifications[1]		– 255			260		– 5	
Additions[2]	69	122			43		102	267
Disposals and derecognitions[3]	– 48	– 1 420			– 19		– 4	– 1 443
Currency translation effects	– 134	10		– 21	– 85		– 7	– 103
December 31	**30 451**	**3 091**	**2 980**	**6 681**	**23 040**	**5 960**	**1 222**	**42 974**
Accumulated amortization								
January 1	**– 569**	**– 1 565**		**– 370**	**– 6 254**		**– 721**	**– 8 910**
Amortization charge				– 589	– 2 090	– 238	– 111	– 3 028
Amortization on disposals and derecognitions[3]	48	1 420			19		4	1 443
Impairment charge		– 338			– 287		– 2	– 627
Reversal of impairment charge					8			8
Currency translation effects	13	22		9	69		9	109
December 31	**– 508**	**– 461**		**– 950**	**– 8 535**	**– 238**	**– 821**	**– 11 005**
Net book value at December 31	**29 943**	**2 630**	**2 980**	**5 731**	**14 505**	**5 722**	**401**	**31 969**

[1] Reclassifications between various asset categories as a result of product launches of acquired In-Process Research & Development.
[2] Additions to goodwill relates to finalization of Alcon, Inc. acquisition accounting.
[3] Derecognitions of assets which are no longer used or being developed and are not considered to have a significant disposal value or other alternative use.

The recoverable amount of a cash-generating unit and related goodwill is usually based on the fair value less costs to sell valuation method. The following assumptions are used in the calculations:

	Pharmaceuticals %	Alcon %	Sandoz %	Vaccines and Diagnostics %	Consumer Health %
Sales growth rate assumptions after forecast period	1.6	3	0 to 2	0.5	0 to 2
Discount rate (post-tax)	7	7	7	7	7

In 2012, intangible asset impairment charges of USD 286 million were recognized. These relate to impairment charges of USD 211 million in the Pharmaceuticals Division and USD 75 million in all other divisions.

In 2011, intangible asset impairment charges of USD 627 million were recorded. USD 552 million of these arose in the Pharmaceuticals Division, principally due to the expected reduction in demand for *Tekturna/Rasilez* (aliskiren) and discontinuation of PRT128 (elinogrel), SMC021 (oral calcitonin), PTK796 and AGO178 (agomelatine) development programs. USD 75 million of impairment charges arose in all other Divisions.

Reversal of prior year impairment charges amounted to USD 3 million (2011: USD 8 million).

12. DEFERRED TAX ASSETS AND LIABILITIES

	Property, plant & equipment USD millions	Intangible assets USD millions	Pensions and other benefit obligations of associates USD millions	Inventories USD millions	Tax loss carryforwards USD millions	Other assets, provisions and accruals USD millions	Valuation allowance USD millions	Total USD millions
Gross deferred tax assets at January 1, 2012	**157**	**234**	**1 576**	**2 020**	**201**	**2 221**	**– 32**	**6 377**
Gross deferred tax liabilities at January 1, 2012	**– 947**	**– 5 168**	**– 373**	**– 225**	**– 13**	**– 555**		**– 7 281**
Net deferred tax balance at January 1, 2012	**– 790**	**– 4 934**	**1 203**	**1 795**	**188**	**1 666**	**– 32**	**– 904**
At January 1, 2012	**– 790**	**– 4 934**	**1 203**	**1 795**	**188**	**1 666**	**– 32**	**– 904**
Credited/(charged) to income	16	347	– 27	464	12	– 100	– 1	711
Credited to equity						49		49
Credited/(charged) to other comprehensive income			533			– 11		522
Impact of business combinations	– 3	– 326	29	– 6	5	71		– 230
Other movements	– 10	– 46	– 29	– 11	– 6	36	22	– 44
Net deferred tax balance at December 31, 2012	**– 787**	**– 4 959**	**1 709**	**2 242**	**199**	**1 711**	**– 11**	**104**
Gross deferred tax assets at December 31, 2012	**163**	**301**	**2 138**	**2 689**	**215**	**2 258**	**– 11**	**7 753**
Gross deferred tax liabilities at December 31, 2012	**– 950**	**– 5 260**	**– 429**	**– 447**	**– 16**	**– 547**		**– 7 649**
Net deferred tax balance at December 31, 2012	**– 787**	**– 4 959**	**1 709**	**2 242**	**199**	**1 711**	**– 11**	**104**
After offsetting USD 363 millions of deferred tax assets and liabilities within the same tax jurisdiction the balance amounts to:								
Deferred tax assets at December 31, 2012								**7 390**
Deferred tax liabilities at December 31, 2012								**– 7 286**
Net deferred tax balance at December 31, 2012								**104**
Gross deferred tax assets at January 1, 2011	**131**	**251**	**1 086**	**1 792**	**241**	**2 007**	**– 19**	**5 489**
Gross deferred tax liabilities at January 1, 2011	**– 951**	**– 5 689**	**– 409**	**– 253**	**– 10**	**– 626**		**– 7 938**
Net deferred tax balance at January 1, 2011	**– 820**	**– 5 438**	**677**	**1 539**	**231**	**1 381**	**– 19**	**– 2 449**
At January 1, 2011	**– 820**	**– 5 438**	**677**	**1 539**	**231**	**1 381**	**– 19**	**– 2 449**
Credited/(charged) to income	68	350	28	418	– 28	322	– 16	1 142
Credited to equity						22		22
Credited/(charged) to other comprehensive income			510			– 32		478
Impact of business combinations						– 9		– 9
Other movements	– 38	154	– 12	– 162	– 15	– 18	3	– 88
Net deferred tax balance at December 31, 2011	**– 790**	**– 4 934**	**1 203**	**1 795**	**188**	**1 666**	**– 32**	**– 904**
Gross deferred tax assets at December 31, 2011	**157**	**234**	**1 576**	**2 020**	**201**	**2 221**	**– 32**	**6 377**
Gross deferred tax liabilities at December 31, 2011	**– 947**	**– 5 168**	**– 373**	**– 225**	**– 13**	**– 555**		**– 7 281**
Net deferred tax balance at December 31, 2011	**– 790**	**– 4 934**	**1 203**	**1 795**	**188**	**1 666**	**– 32**	**– 904**
After offsetting USD 520 millions of deferred tax assets and liabilities within the same tax jurisdiction the balance amounts to:								
Deferred tax assets at December 31, 2011								**5 857**
Deferred tax liabilities at December 31, 2011								**– 6 761**
Net deferred tax balance at December 31, 2011								**– 904**

A reversal of valuation allowance could occur when circumstances make the realization of deferred taxes probable. This would result in a decrease in the Group's effective tax rate.

Deferred tax assets of USD 3.3 billion (2011: USD 2.3 billion) and deferred tax liabilities of USD 6.9 billion (2011: USD 6.5 billion) are expected to have an impact on current taxes payable after more than twelve months.

At December 31, 2012, unremitted earnings of USD 45 billion (2011: USD 51 billion) have been retained by consolidated entities for reinvestment. Therefore, no provision is made for income taxes that would be payable upon the distribution of these earnings. If these earnings were remitted, an income tax charge could result based on the tax statutes currently in effect.

	2012 USD millions	2011 USD millions
Temporary differences on which no deferred tax has been provided as they are permanent in nature related to:		
– Investments in subsidiaries	5 777	4 782
– Goodwill from acquisitions	– 26 097	– 25 089

The gross value of tax-loss carry-forwards that have, or have not, been capitalized as deferred tax assets, with their expiry dates is as follows:

	Not capitalized USD millions	Capitalized USD millions	2012 total USD millions
One year	178	28	206
Two years	175	23	198
Three years	76	61	137
Four years	78	26	104
Five years	116	32	148
More than five years	268	1 010	1 278
Total	**891**	**1 180**	**2 071**

In 2012, USD 75 million (2011: USD 155 million) of tax-loss carry-forwards expired.

	Not capitalized USD millions	Capitalized USD millions	2011 total USD millions
One year	81	2	83
Two years	171	4	175
Three years	175	38	213
Four years	72	29	101
Five years	63	100	163
More than five years	419	443	862
Total	**981**	**616**	**1 597**

Deferred tax assets related to taxable losses of relevant Group entities are recognized to the extent it is considered probable that future taxable profits will be available against which such losses can be utilized in the foreseeable future.

13. FINANCIAL AND OTHER NON-CURRENT ASSETS

FINANCIAL ASSETS

	2012 USD millions	2011 USD millions
Available-for-sale long-term financial investments	674	604
Long-term loans and receivables, advances and security deposits	443	334
Total financial assets	**1 117**	**938**

OTHER NON-CURRENT ASSETS

	2012 USD millions	2011 USD millions
Deferred compensation plans	315	264
Prepaid post-employment benefit plans	55	38
Other non-current assets	135	154
Total other non-current assets	**505**	**456**

14. INVENTORIES

	2012 USD millions	2011 USD millions
Raw material, consumables	955	930
Finished products	5 789	5 000
Total inventories	**6 744**	**5 930**

The amount of inventory recognized as an expense in "Cost of goods sold" in the consolidated income statements during 2012 amounted to USD 12.9 billion (2011: USD 13.1 billion).

The following summarizes movements in inventory write-downs deducted from inventory categories. Reversals of inventory provisions mainly result from the reassessment of inventory values manufactured prior to regulatory approval but for which approval was subsequently received:

	2012 USD millions	2011 USD millions
January 1	**– 741**	**– 879**
Impact of business combinations	– 19	
Inventory write-downs charged to the consolidated income statement	– 1 430	– 1 554
Utilization of inventory provisions	585	921
Reversal of inventory provisions	723	738
Currency translation effects	– 22	33
December 31	**– 904**	**– 741**

15. TRADE RECEIVABLES

	2012 USD millions	2011 USD millions
Total gross trade receivables	10 268	10 542
Provisions for doubtful trade receivables	– 217	– 219
Total trade receivables, net	**10 051**	**10 323**

The following table summarizes the movement in the provision for doubtful trade receivables:

	2012 USD millions	2011 USD millions
January 1	**– 219**	**– 221**
Impact of business combinations	– 1	– 9
Provisions for doubtful trade receivables charged to the consolidated income statement	– 107	– 116
Utilization or reversal of provisions for doubtful trade receivables	111	121
Currency translation effects	– 1	6
December 31	**– 217**	**– 219**

The following sets forth details of the age of trade receivables that are not overdue as specified in the payment terms and conditions established with Novartis customers as well as an analysis of overdue amounts and related provisions for doubtful trade receivables:

	2012 USD millions	2011 USD millions
Not overdue	8 584	8 967
Past due for not more than one month	552	498
Past due for more than one month but less than three months	321	295
Past due for more than three months but less than six months	301	249
Past due for more than six months but less than one year	205	228
Past due for more than one year	305	305
Provisions for doubtful trade receivables	– 217	– 219
Total trade receivables, net	**10 051**	**10 323**

Trade receivable balances include sales to drug wholesalers, retailers, private health systems, government agencies, managed care providers, pharmacy benefit managers and government-supported healthcare systems. Novartis continues to monitor sovereign debt issues and economic conditions in Greece, Italy, Portugal, Spain (GIPS) and other countries in Europe and evaluates accounts receivable in these countries for potential collection risks. Substantially all of the trade receivables from such countries are due directly from local governments or from government-funded entities. Deteriorating credit and economic conditions and other factors in these countries have resulted in, and may continue to result in an increase in the average length of time that it takes to collect these accounts receivable and may require Novartis to re-evaluate the collectability of these receivables in future periods.

With regard to the GIPS countries, the country with the largest outstanding trade receivables exposure is Italy. Substantially all of the outstanding trade receivables from this country are due directly from local governments or from government-funded entities. A summary of the outstanding trade receivables from this country and related provision at December 31, 2012 and 2011 is as follows:

	2012 USD millions	2011 USD millions
Gross trade receivables at December 31	712	761
Past due for more than one year at December 31	68	91
Provision at December 31	37	28

Novartis does not expect to write off trade receivable amounts that are not past due nor unprovided for.

Trade receivables include amounts denominated in the following major currencies:

Currency	2012 USD millions	2011 USD millions
CHF	307	288
EUR	2 482	2 636
GBP	136	139
JPY	1 765	1 929
USD	2 650	2 865
Other	2 711	2 466
Total trade receivables, net	**10 051**	**10 323**

Novartis has several significant irrevocable factoring arrangements. As a result USD 557 million (2011: USD 538 million) of trade receivables have been sold and derecognized in 2012.

16. MARKETABLE SECURITIES, DERIVATIVE FINANCIAL INSTRUMENTS AND CASH AND CASH EQUIVALENTS

MARKETABLE SECURITIES AND DERIVATIVE FINANCIAL INSTRUMENTS

	2012 USD millions	2011 USD millions
Debt securities	1 084	1 131
Equity securities	68	73
Fund investments	23	32
Total available-for-sale marketable securities	**1 175**	**1 236**
Time deposits with original maturity more than 90 days	1 240	
Derivative financial instruments	140	118
Accrued interest on debt securities and time deposits	12	12
Total marketable securities, time deposits and derivative financial instruments	**2 567**	**1 366**

At December 31, 2012 all debt securities are denominated in USD except for USD 645 million in CHF (2011: USD 694 million) and USD 26 million in EUR (2011: USD 26 million), respectively.

CASH AND CASH EQUIVALENTS

	2012 USD millions	2011 USD millions
Current accounts	2 323	1 877
Time deposits and short-term investments [1] with original maturity less than 90 days	3 229	1 832
Total cash and cash equivalents	**5 552**	**3 709**

[1] This amount contains USD 79 million (2011: USD 74 million) which covers a guarantee and so it is restricted in use.

17. OTHER CURRENT ASSETS

	2012 USD millions	2011 USD millions
VAT receivable	1 250	1 070
Withholding tax recoverable	167	173
Prepaid expenses		
– Third parties	602	694
– Associated companies	6	12
Other receivables		
– Third parties	1 057	794
– Associated companies	8	13
Total other current assets	**3 090**	**2 756**

18. DETAILS OF SHARES AND SHARE CAPITAL MOVEMENTS

	Number of shares [1]				
	Dec 31, 2010	Movement in year	Dec 31, 2011	Movement in year	Dec 31, 2012
Total Novartis shares	2 637 623 000	108 000 000	2 745 623 000	– 39 430 000	2 706 193 000
Total treasury shares	– 348 177 822	9 248 679	– 338 929 143	53 356 317	– 285 572 826
Total outstanding shares	**2 289 445 178**	**117 248 679**	**2 406 693 857**	**13 926 317**	**2 420 620 174**
	USD millions	USD millions	USD millions	USD millions	USD millions
Share capital	957	59	1 016	– 15	1 001
Treasury shares	– 125	4	– 121	29	– 92
Outstanding share capital	**832**	**63**	**895**	**14**	**909**

[1] All shares are registered, authorized, issued and fully paid. All are voting shares and, except for 99 859 750 treasury shares at December 31, 2012 (2011: 146 273 240), are dividend bearing.

In 2012, 39.4 million shares were cancelled that had been acquired in 2011 under the share buy-back program via the second trading line of the SIX Swiss Exchange. In 2011, following the Extraordinary General Meeting of Novartis AG on April 8, 2011, 108 million new Novartis shares were issued.

In 2012, 4.6 million shares were acquired with the intention of retaining in Group Treasury. 8.0 million shares, net were sold or exchanged with associates, mainly due to options being exercised and 10.6 million shares were transferred to associates as part of equity-based compensation. Including the 39.4 million shares that have been cancelled, this led to a decrease of 53.4 million of the treasury shares in 2012. As a consequence, outstanding shares increased by 13.9 million shares.

In 2011, a total of 54.7 million shares were purchased, including 39.4 million shares that were acquired under the repurchase program via the second trading line on the SIX Swiss Exchange, and 7.2 million shares were transferred to associates as part of equity-based compensation. 56.7 million treasury shares, together with the 108 million newly issued shares, were exchanged for the outstanding interests in Alcon, Inc., which was then merged into Novartis AG on the same day. These movements led to a decrease in the treasury shares of 9.2 million in 2011.

There are outstanding written call options on Novartis shares of 48 million originally issued as part of the share-based compensation of associates. The market maker has acquired these options but they have not yet been exercised. The weighted average exercise price of these options is USD 51.66 and they have contractual lives of up to 10 years.

19. NON-CURRENT FINANCIAL DEBTS

	2012 USD millions	2011 USD millions
Straight bonds	14 783	13 483
Liabilities to banks and other financial institutions[1]	1 004	1 146
Finance lease obligations	3	4
Total (including current portion of non-current financial debt)	**15 790**	**14 633**
Less current portion of non-current financial debt	– 2 009	– 778
Total non-current financial debts	**13 781**	**13 855**
Straight bonds		
3.625% CHF 800 million bond 2008/2015 of Novartis AG, Basel, Switzerland, issued at 100.35%	869	844
3.5% CHF 700 million bond 2008/2012 of Novartis Securities Investment Ltd., Hamilton, Bermuda, issued at 100.32%		744
5.125% USD 3 000 million bond 2009/2019 of Novartis Securities Investment Ltd., Hamilton, Bermuda, issued at 99.822%	2 988	2 986
4.125% USD 2 000 million bond 2009/2014 of Novartis Capital Corporation, New York, United States, issued at 99.897%	1 998	1 996
4.25% EUR 1 500 million bond 2009/2016 of Novartis Finance S.A., Luxembourg, Luxembourg, issued at 99.757%	1 974	1 935
1.9% USD 2 000 million bond 2010/2013 of Novartis Capital Corporation, New York, United States, issued at 99.867%	1 999	1 998
2.9% USD 2 000 million bond 2010/2015 of Novartis Capital Corporation, New York, United States, issued at 99.522%	1 993	1 990
4.4% USD 1 000 million bond 2010/2020 of Novartis Capital Corporation, New York, United States, issued at 99.237%	991	990
2.4% USD 1 500 million bond 2012/2022 of Novartis Capital Corporation, New York, United States, issued at 99.225%	1 483	
3.7% USD 500 million bond 2012/2042 of Novartis Capital Corporation, New York, United States, issued at 98.325%	488	
Total straight bonds	**14 783**	**13 483**

[1] Average interest rate 0.8% (2011: 0.9%)

		2012 USD millions	2011 USD millions
Breakdown by maturity	2012		778
	2013	2 009	2 029
	2014	2 713	2 789
	2015	3 110	3 108
	2016	1 987	1 948
	2017	19	3
	After 2017	5 952	3 978
Total		**15 790**	**14 633**

		2012 USD millions	2011 USD millions
Breakdown by currency	USD	11 943	9 962
	EUR	2 043	2 042
	JPY	929	1 031
	CHF	869	1 589
	Others	6	9
Total		**15 790**	**14 633**

Fair value comparison	2012 Balance sheet USD millions	2012 Fair values USD millions	2011 Balance sheet USD millions	2011 Fair values USD millions
Straight bonds	14 783	16 130	13 483	14 794
Others	1 007	1 007	1 150	1 150
Total	**15 790**	**17 137**	**14 633**	**15 944**

The fair values of straight bonds are determined by quoted market prices.

Collateralized non-current financial debt and pledged assets	2012 USD millions	2011 USD millions
Total amount of collateralized non-current financial debts	12	7
Total net book value of property, plant & equipment pledged as collateral for non-current financial debts	136	100

The Group's collateralized non-current financial debt consists of loan facilities at usual market conditions.

The percentage of fixed rate financial debt to total financial debt was 80% at December 31, 2012, and 72% at the end of 2011.

Financial debts, including current financial debts, contain only general default covenants. The Group is in compliance with these covenants.

The average interest rate on total financial debt in 2012 was 2.9% (2011: 2.7%).

20. PROVISIONS AND OTHER NON-CURRENT LIABILITIES

	2012 USD millions	2011 USD millions
Accrued liability for employee benefits:		
– Defined benefit pension plans	5 296	2 991
– Other long-term employee benefits and deferred compensation	631	600
– Other post-employment benefits	1 104	1 098
Environmental remediation provisions	1 001	1 059
Provisions for product liabilities, governmental investigations and other legal matters	630	777
Contingent consideration	573	482
Other non-current liabilities	644	785
Total	**9 879**	**7 792**

ENVIRONMENTAL REMEDIATION PROVISIONS

The material components of the environmental remediation provisions consist of costs to sufficiently clean and refurbish contaminated sites to the extent necessary and to treat and where necessary continue surveillance at sites where the environmental remediation exposure is less significant. The provision recorded at December 31, 2012 totals USD 1.1 billion (2011: USD 1.1 billion) of which USD 119 million (2011: USD 59 million) is current.

A substantial portion of the environmental remediation provision relates to the remediation of Basel regional landfills in the adjacent border areas in Switzerland, Germany and France following internal and external investigations completed during 2007 and the subsequent creation of an environmental remediation provision. The provisions have been re-assessed during 2012 and as a result adjusted.

In the United States, Novartis has been named under federal legislation (the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended) as a potentially responsible party (PRP) in respect of certain sites. Novartis actively participates in, or monitors, the clean-up activities at the sites in which it is a PRP. The provision takes into consideration the number of other PRPs at each site and the identity and financial position of such parties in light of the joint and several nature of the liability.

The following table shows the movements in the environmental liability provisions during 2012 and 2011:

	2012 USD millions	2011 USD millions
January 1	**1 118**	**1 126**
Cash payments	–30	–29
Releases	–39	–8
Interest expense arising from discounting provisions	33	29
Additions	10	
Currency translation effects	28	
December 31	**1 120**	**1 118**
Less current liability	–119	–59
Non-current environmental remediation liability provisions at December 31	**1 001**	**1 059**

The expected timing of the related cash outflows as of December 31, 2012 is currently projected as follows:

	Expected cash outflows USD millions
Due within two years	270
Due later than two years, but less than five years	377
Due later than five years but less than ten years	433
Due after ten years	40
Total environmental remediation liability provisions	**1 120**

PROVISIONS FOR PRODUCT LIABILITIES, GOVERNMENTAL INVESTIGATIONS AND OTHER LEGAL MATTERS

Novartis has established provisions for certain product liabilities, governmental investigations and other legal matters, including provisions for expected legal costs. These provisions represent the Group's current best estimate of the total financial effect for the matters listed below and for other less significant matters where there is a probable potential cash outflow. Such potential cash outflows might be fully or partially off-set by insurance in certain instances. Of the matters listed below in which the Group has an adverse damage award, no provision has been made for the USD 30 million Mississippi Chancery Court Average Wholesale Price verdict since, per the Group's current best estimate based on its views as to the merits of the case and its experience in such matters, Novartis currently believes that it ultimately will prevail in the case on appeal. Novartis has also not established provisions for potential damage awards for certain additional legal matters against its subsidiaries which have not yet gone to trial, since Novartis currently believes that it ultimately will prevail in them. These matters include more than 700 product liability cases and certain other legal matters. Plaintiffs' alleged claims in these matters amount to an aggregate of approximately USD 1 billion. In addition, in some of these matters there are claims for punitive damages that are partially unspecified and partially currently unquantifiable. A number of other legal matters are in such early stages that the Group has not made any provisions other than for legal fees since it cannot currently estimate any potential outcome of these cases and potential losses.

LEGAL MATTERS

A number of Novartis subsidiaries are, and will likely continue to be, subject to various legal proceedings that arise from time to time, including proceedings regarding product liability, commercial disputes, employment and wrongful discharge, antitrust, securities, sales and marketing practices, health and safety, environmental, tax, privacy, and intellectual property matters. As a result, the Group may become subject to substantial liabilities that may not be covered by insurance and could affect our business and reputation. While Novartis does not believe that any of these legal proceedings will have a material adverse effect on its financial position, litigation is inherently unpredictable and large judgments sometimes occur. As a consequence, Novartis may in the future incur judgments or enter into settlements of claims that could have a material adverse effect on its results of operations or cash flows.

Governments and regulatory authorities around the world have been stepping up their compliance and law enforcement activities in recent years in key areas, including corruption, marketing practices, insider trading, antitrust, trade restrictions, embargo legislation and data privacy. Responding to such investigations is costly and requires an increasing amount of management's time and attention. In addition, such investigations may affect our reputation, create a risk of potential exclusion from government reimbursement programs in the United States and other countries and may lead to litigation. These factors have contributed to decisions by Novartis and other companies in the healthcare industry, when deemed in their interest, to enter into settlement agreements with governmental authorities around the world prior to any formal decision by the authorities. Those settlements have involved and may continue to involve large cash payments, including the potential repayment of amounts allegedly obtained improperly and other penalties, including treble damages. In addition, settlements of healthcare fraud cases often require companies to enter into corporate integrity agreements, which are intended to regulate company behavior for a period of years. Also, matters underlying governmental investigations and settlements may be the subject of separate private litigation.

Below is a summary of significant legal proceedings to which Novartis or its subsidiaries are a party or were a party and which were concluded in 2012.

GOVERNMENTAL INVESTIGATIONS

Western District of New York (WDNY) investigation

In 2010, NPC became aware of an investigation by the USAO for the WDNY into informed consent issues relating to clinical trials in China and into marketing practices, including the remuneration of healthcare providers, in connection with a number of Novartis products. NPC is cooperating with the investigation which is civil in nature. In the fourth quarter of 2012, the Company learned that the Government is not pursuing further informed consent issues relating to clinical trials in China. The Government continues to investigate marketing practices, including marketing practices concerning *Zometa*.

Southern District of New York (SDNY) investigation

In 2011, Novartis Pharmaceuticals Corporation (NPC) received a subpoena from the United States Attorney's Office (USAO) for the SDNY requesting the production of documents relating to marketing practices, including the remuneration of healthcare providers, in connection with three NPC products (*Lotrel, Starlix* and *Valturna*). NPC is cooperating with the investigation which is civil and criminal in nature.

Northern District of Georgia (NDGA) investigation

In 2011, Alcon Laboratories Inc. (Alcon) received a subpoena from the United States Department of Health & Human Services relating to an investigation into allegations of healthcare fraud. The subpoena requests the production of documents relating to marketing practices, including the remuneration of healthcare providers, in

connection with certain Alcon products (*Vigamox*, *Nevanac*, *Omnipred*, *Econopred*; surgical equipment). Alcon is cooperating with the investigation which is civil in nature and led by the NDGA.

Western District of Kentucky (WDKY) investigation
In 2012, NPC received a subpoena from the USAO for the WDKY requesting the production of documents relating to marketing practices, including remuneration of healthcare providers, in connection with certain NPC products (including *Tekturna* and its combination products). NPC is cooperating with the investigation, which is civil and criminal in nature.

SDNY Specialty Pharmacy investigation
In 2012, NPC received a civil investigative demand from the USAO for the SDNY requesting information regarding its interactions with specialty pharmacies concerning certain NPC products (including *Gleevec* and *Gilenya*). NPC is cooperating with the investigation, which is civil in nature.

Northern District of Texas (NDTX) investigation
In 2012, Alcon was notified that the USAO for the NDTX is conducting an investigation relating to the export of Alcon products to various countries subject to United States trade sanctions, including Iran, and received a grand jury subpoena requesting the production of documents for a period beginning in 2005 relating to this investigation. Alcon is cooperating with the investigation.

European Commission (EC) Dawn Raid at Sandoz France
In 2009, the EC searched the offices of Sandoz S.A.S. in France (Sandoz France), alleging that Sandoz France entered into anti-competitive price coordination practices with other generic pharmaceutical companies and via the French trade association for generic pharmaceutical companies. Sandoz France is cooperating with the EC. No follow-up requests have been received from the EC so far.

EC Fentanyl investigation
In 2010, the EC conducted dawn raids at the Dutch and German offices of Sandoz. On October 18, 2011, the EC decided to initiate proceedings against Sandoz BV, Novartis AG, Janssen-Cilag BV and Johnson & Johnson to assess whether contractual arrangements between Janssen-Cilag BV, Hexal BV and Sandoz BV may have had the object or effect of hindering the entry of generic Fentanyl patches in the Netherlands. The Commission issued a press release announcing the adoption of its decision to initiate proceedings on October 21, 2011. Sandoz BV and Novartis AG are cooperating with the EC.

PRODUCT LIABILITY MATTERS

***Zometa/Aredia* product liability litigation**
NPC and other Novartis subsidiaries are defendants in approximately 700 cases brought in United States courts, in which plaintiffs claim to have experienced osteonecrosis of the jaw after treatment with *Zometa* or *Aredia*, which are used to treat patients whose cancer has spread to the bones.

The majority of the United States cases are consolidated in two venues – a federal multidistrict litigation proceeding and a separate state court proceeding in New Jersey. The first trial out of the state court consolidated proceedings was held in New Jersey in September and October 2010 and resulted in a defense verdict in favor of NPC. On June 13, 2012, the New Jersey Court of Appeals affirmed the judgment in favor of NPC. Plaintiffs petitioned the New Jersey Supreme Court for further review and their petition was subsequently denied. The judgment in favor of NPC is final.

A prior state court case unrelated to the consolidated proceedings held in October 2009 resulted in a plaintiff's verdict, which the Montana Supreme Court affirmed on appeal in December 2010.

The first federal trial took place in November 2010 in the United States District Court for the Middle District of North Carolina and resulted in a plaintiffs' verdict. NPC filed an appeal against this verdict which remains pending. The second federal trial took place in May 2011 in the United States District Court for the Eastern District of New York (EDNY) and resulted in a defense verdict in favor of NPC. Plaintiff filed an appeal against this verdict, and on August 29, 2012, the United States Court of Appeals for the Second Circuit affirmed the verdict in favor of NPC, which is final.

The next federal trial began in the United States District Court for the WDKY on January 9, 2012. On January 31, 2012, the jury returned a verdict in favor of NPC, which was not appealed by plaintiff and which is therefore final. A further federal trial began in the United States District Court for the Eastern District of Missouri on January 23, 2012. On February 1, 2012, the jury returned a verdict in favor of NPC. On March 5, 2012, plaintiff filed a notice of appeal. On April 11, 2012, the United States Court of Appeals for the Eighth Circuit dismissed the appeal; judgment has been entered for NPC, which is final. The next federal trial began in the United States District Court for the Western District of Missouri on March 20, 2012. On April 6, 2012, it resulted in a plaintiff's verdict for compensatory damages of USD 0.2 million. No punitive damages were awarded. NPC filed a motion for judgment as a matter of law on May 7, 2012, which was subsequently denied. On August 31, 2012, NPC filed an appeal against the verdict with the United States Court of Appeals for the Eighth Circuit, which remains pending. A further federal trial started in the United States District Court for the Eastern District of North Carolina on September 19, 2012. On September 21, 2012, this case was dismissed with prejudice by plaintiff. This dismissal is therefore final. On October, 3, 2012, a further federal trial started in the United States District Court for the EDNY. On November 2, 2012, the jury returned a verdict in plaintiff's favor and awarded plaintiff USD 0.45 million in compensatory damages and USD 10 million in punitive damages. The Court has not yet entered judgment. The punitive damages award will be capped by statute at five times the compensatory damages award, and NPC believes that as a matter of law plaintiff is not entitled to punitive damages. On

November 30, 2012, NPC filed a motion to further reduce the punitive damages award. On December 20, 2012, NPC filed a motion for mistrial (seeking a new trial) based on the jury's consideration of evidence outside the record. NPC will continue to challenge the verdict in its entirety and intends to file additional post-trial motions and an appeal if necessary.

The next federal trial is scheduled to begin in the United States District Court for the Middle District of Florida on February 11, 2013.

Further trials are scheduled for 2013.

Hormone Replacement Therapy product liability litigation

NPC and other Novartis subsidiaries are defendants, along with various other pharmaceutical companies in the United States, in more than 30 cases brought in United States courts in which plaintiffs claim to have been injured by hormone replacement therapy products. Discovery is ongoing, but currently inactive as to NPC.

Elidel® product liability litigation

NPC and other Novartis subsidiaries are defendants in more than 20 cases brought in United States courts in which plaintiffs claim to have experienced injuries, mainly various types of cancer, after having been treated with Elidel®, a medicine for atopic dermatitis.

OTHER MATTERS

Average Wholesale Price litigation

Claims have been brought against various pharmaceutical companies, including certain Sandoz entities and NPC, alleging that they fraudulently overstated the Average Wholesale Price (AWP) which is or has been used by state Medicaid agencies to calculate reimbursements to healthcare providers.

In 2011, Sandoz Inc. (Sandoz) reached an agreement in principle to settle the state portion of the New York City and New York Counties federal and state court cases for USD 22 million and the state portion of the Iowa case for USD 3 million. The settlement amount of USD 25 million for the Iowa and the New York settlements together was fully provisioned for in the fourth quarter of 2011. The settlement agreements have been executed by all parties and payments of the Iowa and the New York settlements were made in the first half of 2012. All related cases have been dismissed.

A bench trial against Sandoz in Mississippi Chancery Court ended on April 15, 2011. On September 2, 2011, the court rendered an opinion in favor of Sandoz on the false claims, conspiracy, and anti-kickback provisions but against Sandoz on the other causes of action and awarded plaintiff a total of USD 38.2 million (USD 23.7 million in compensatory damages, USD 2.7 million in civil penalties and USD 11.8 million in punitive damages). On October 4, 2011, the court granted Sandoz' motion to amend the opinion and withdrew the punitive damages award. On March 30, 2012, an evidentiary hearing took place in order to determine whether punitive damages are appropriate and, if so, in what amount punitive damages should be awarded. On June 19, 2012, the court limited the punitive damages award to USD 3.75 million. Judgment was entered on August 7, 2012. On August 17, 2012, the State filed a motion to alter the judgment. On August 30, 2012, the court denied the State's request to alter the judgment. On September 27, 2012, Sandoz filed its notice of appeal. On October 11, 2012, the State filed a notice of cross-appeal.

On July 13, 2012, the Alabama Supreme Court rendered judgment in Sandoz' favor and overturned the February 2009 Montgomery County, Alabama Circuit Court jury verdict against Sandoz in the amount of USD 78 million (compensatory damages of USD 28 million and punitive damages of USD 50 million). This judgment in favor of Sandoz is final.

On October 12, 2012, the Kentucky Court of Appeals ruled in Sandoz' favor and reversed the Franklin Circuit Court's 2009 jury verdict and judgment against Sandoz in the amount of USD 27 million (compensatory damages of USD 16 million and penalties of USD 11 million). The Court of Appeals remanded the case to the Franklin Circuit Court with directions to enter judgment for Sandoz. On November 13, 2012, the Commonwealth of Kentucky filed a petition seeking discretionary review from the Kentucky Supreme Court, which remains pending.

Further trials, including Sandoz and NPC, are currently scheduled for 2013.

CONCLUDED LEGAL MATTERS

Wage and Hour litigation

In 2006, certain pharmaceutical sales representatives filed suit in a state court in California and in the United States District Court for the SDNY against NPC alleging that NPC violated wage and hour laws by misclassifying the pharmaceutical sales representatives as "exempt" employees, and by failing to pay overtime compensation. These actions were part of a number of lawsuits against pharmaceutical companies that challenge the industry's long-term practice of treating pharmaceutical sales representatives as salaried employees. NPC agreed with the plaintiffs to end the ongoing proceedings and to provide a payment of up to USD 99 million for eligible class members; the full amount of USD 99 million was provisioned for in the third quarter of 2011 and in the first quarter of 2012. This settlement resolves the wage and hour claims brought in 2006, as well as additional wage and hour claims covering a more recent time period. On May 31, 2012, the judge granted final approval of the settlement and dismissed the case with prejudice.

***Lucentis* patent litigation**

Novartis Group companies were sued by and sued MedImmune in several European countries, including the United Kingdom, Germany, Switzerland, France and the Netherlands. MedImmune alleged that the sale of *Lucentis* in these countries infringed its

patents and its rights under its Supplementary Protection Certificates (SPC).

In the United Kingdom, a trial took place in May 2011. On July 5, 2011, the United Kingdom court issued its decision and held that Novartis did not infringe MedImmune's patents and that MedImmune's patents were invalid. MedImmune filed an appeal against this decision. A separate trial to hear Novartis' challenge against the validity of MedImmune's United Kingdom SPC took place on February 3, 2012, and the United Kingdom court found the SPC to be invalid. MedImmune appealed this decision. On July 11, 2012, the United Kingdom Court of Appeal held that MedImmune's patent was invalid (and thereby also the SPC extension), upholding the first instance decision. In Germany, the infringement trial took place on October 18, 2011. On November 10, 2011, the German court found that the import and sale of *Lucentis* infringes one of the two MedImmune patents in dispute and the related SPC right in Germany. This decision was appealed. The German invalidity trial on the other MedImmune patent took place on January 24, 2012, and the Federal Patent Court found this patent to be invalid. The trial on the validity of MedImmune's German SPC took place on May 2, 2012, and the Federal Patent Court found the SPC to be invalid. On June 26, 2012, the European Patent Office also held that the MedImmune patent, which forms the basis for the SPCs, is invalid. The parties agreed to a confidential settlement on November 6, 2012 and all actions have been dismissed.

SUMMARY OF PRODUCT LIABILITIES, GOVERNMENTAL INVESTIGATIONS AND OTHER LEGAL MATTERS PROVISION MOVEMENTS

	2012 USD millions	2011 USD millions
January 1	**1 182**	**1 384**
Impact of business combinations	60	
Cash payments	– 362	– 772
Releases of provisions	– 262	– 16
Additions to provisions	389	584
Currency translation effects	– 9	2
December 31	**998**	**1 182**
Less current liability	– 368	– 405
Non-current product liabilities, governmental investigations and other legal matters provisions at December 31	**630**	**777**

Novartis believes that its total provisions for product liability, governmental investigations and other legal matters are adequate based upon currently available information. However, given the inherent difficulties in estimating liabilities, it cannot be guaranteed that additional costs will not be incurred beyond the amounts provided.

21. CURRENT FINANCIAL DEBT

	2012 USD millions	2011 USD millions
Interest-bearing accounts of associates	1 541	1 357
Bank and other financial debt	1 270	2 053
Commercial paper	963	2 156
Current portion of non-current financial debt	2 009	778
Fair value of derivative financial instruments	162	30
Total current financial debt	**5 945**	**6 374**

The consolidated balance sheet values of current financial debt, other than the current portion of non-current financial debt, approximates the estimated fair value due to the short-term nature of these instruments.

The weighted average interest rate on the bank and other current financial debt (including employee deposits from the compensation of associates employed by Swiss entities) was 2.1% in 2012 and 1.7% in 2011.

22. PROVISIONS AND OTHER CURRENT LIABILITIES

	2012 USD millions	2011 USD millions
Taxes other than income taxes	561	578
Restructuring provisions	221	349
Accrued expenses for goods and services received but not invoiced	576	678
Provisions for royalties	452	443
Provisions for revenue deductions	4 072	3 742
Provisions for compensation and benefits including social security	2 222	2 116
Environmental remediation liabilities	119	59
Deferred income	71	70
Provision for product liabilities, governmental investigations and other legal matters	368	405
Accrued share-based payments	262	217
Other payables	1 519	1 422
Total provisions and other current liabilities	**10 443**	**10 079**

Provisions are based upon management's best estimate and adjusted for actual experience. Such adjustments to the historic estimates have not been material.

PROVISION FOR DEDUCTIONS FROM REVENUE

The following table shows the movement of the provision for deductions from revenue:

	2012 USD millions	2011 USD millions
January 1	**3 742**	**3 097**
Impact of business combinations	174	
Additions	12 150	11 713
Payments/utilizations	– 11 938	– 10 749
Changes in offset against gross trade receivables	– 90	– 227
Currency translation effects	34	– 92
December 31	**4 072**	**3 742**

RESTRUCTURING PROVISION MOVEMENTS

	USD millions
January 1, 2011	**241**
Additions	346
Cash payments	– 203
Releases	– 37
Currency translation effects	2
December 31, 2011	**349**
Additions	281
Cash payments	– 299
Releases	– 115
Currency translation effects	5
December 31, 2012	**221**

In 2012, additions to provisions of USD 281 million were incurred in the Pharmaceuticals Division marketing & sales organization in conjunction with the anticipation of patent expirations, in Alcon as a result of continuous integration and in Sandoz due to the integration of the recently acquired company Fougera. Other Group initiatives to further simplify the organization were mainly related to Consumer Health and Sandoz.

In 2011, additions to provisions of USD 346 million were incurred in the Pharmaceuticals Division in conjunction with the transfer, outsourcing, closure of selected research operations, as well as simplifying and streamlining of certain development and support functions and in Alcon in conjunction with the integration. Other initiatives mainly includes costs incurred in conjunction with the Group-wide review of its manufacturing sites, mainly in Switzerland, United Kingdom, United States, Italy and Puerto Rico.

The releases to income in 2012 and 2011 of USD 115 million and USD 37 million, respectively, were mainly due to settlement of liabilities at lower amounts than originally anticipated.

	Additions to provision		Termination costs		Third party costs[1]		Number of employees affected	
Initiative	**2012 USD millions**	**2011 USD millions**	**2012 USD millions**	**2011 USD millions**	**2012 USD millions**	**2011 USD millions**	**2012**	**2011**
Pharmaceuticals Research & Development		151		139		12		1 000
Pharmaceuticals Marketing & Sales organization	190		181		9		1 850	
Alcon integration	32	62	31	47	1	15	320	300
Fougera integration	18		15		3		140	
Various Group initiatives to simplify organizational structure – including manufacturing sites	41	133	28	113	13	20	150	1 300
Total	**281**	**346**	**255**	**299**	**26**	**47**	**2 460**	**2 600**

[1] Third party costs are mainly associated with lease and other obligations due to abandonment of certain facilities.

23. DETAILS TO THE CONSOLIDATED CASH FLOW STATEMENTS

23.1) REVERSAL OF NON-CASH ITEMS

	2012 USD millions	2011 USD millions
Taxes	1 625	1 528
Depreciation, amortization and impairments on		
Property, plant & equipment	1 743	2 141
Intangible assets	3 177	3 647
Financial assets	34	192
Income from associated companies	– 552	– 528
Gains on disposal of property, plant & equipment, intangible, financial and other non-current assets, net	– 294	– 518
Equity-settled compensation expense	746	790
Change in provisions and other non-current liabilities	539	1 295
Net financial income	820	753
Total reversal of non-cash items	**7 838**	**9 300**

23.2) CASH FLOWS FROM CHANGES IN WORKING CAPITAL AND OTHER OPERATING ITEMS INCLUDED IN OPERATING CASH FLOW

	2012 USD millions	2011 USD millions
(Increase) / decrease in inventories	– 701	45
Decrease / (increase) in trade receivables	369	– 732
Increase in trade payables	515	195
Change in other net current assets and other operating cash flow items	– 323	379
Total	**– 140**	**– 113**

23.3) CASH FLOW ARISING FROM ACQUISITIONS AND DIVESTMENTS OF BUSINESSES

The following is a summary of the cash flow impact of those significant transactions described in note 2 and other smaller transactions:

	2012 Acquisitions USD millions	2011 Acquisitions USD millions	2011 Divestments USD millions
Property, plant & equipment	– 126	– 66	16
Currently marketed products	– 521	– 101	
Acquired research & development	– 173	– 7	
Technologies	– 371	– 3	
Software and other intangible assets		– 1	
Financial and other assets including deferred tax assets	– 165	– 7	
Inventories	– 88	– 15	8
Trade accounts receivables and other current assets	– 90	– 52	5
Marketable securities and cash	– 167	– 186	1
Long-term and short-term financial debts	4		
Trade payables and other liabilities including deferred tax liabilities	747	66	– 7
Net identifiable assets acquired or divested	**– 950**	**– 372**	**23**
Acquired / divested liquidity	167	63	– 1
Non-controlling interest	29	19	
Fair value of previously held equity interests	22		
Sub-total	**– 732**	**– 290**	**22**
Goodwill	– 1 026	– 303	
Deferred consideration	17	2	
Net cash flow	**– 1 741**	**– 591**	**22**

Note 2 and 24 provide further information regarding acquisitions and divestments of businesses. All acquisitions were for cash.

24. ACQUISITIONS OF BUSINESSES

ASSETS AND LIABILITIES ARISING FROM ACQUISITIONS

Fair value	2012 USD millions	2011 USD millions
Property, plant & equipment	126	66
Currently marketed products	521	101
Acquired research & development	173	7
Technologies	371	3
Software and other intangible assets		1
Financial and other assets including deferred tax assets	165	7
Inventories	88	15
Trade accounts receivable and other current assets	90	52
Marketable securities and cash	167	186
Long-term and short-term financial debts	– 4	
Trade payables and other liabilities including deferred tax liabilities	– 747	– 66
Net identifiable assets acquired	**950**	**372**
Acquired liquidity	– 167	– 63
Non-controlling interest	– 29	– 19
Goodwill	1 026	303
Net assets recognized as a result of business combinations	**1 780**	**593**

Note 2 details significant acquisition of businesses. The 2012 and 2011 goodwill arising out of the acquisitions reflects mainly the value of future products and the acquired assembled workforce.

25. POST-EMPLOYMENT BENEFITS OF ASSOCIATES

DEFINED BENEFIT PLANS

Apart from the legally required social security schemes, the Group has numerous independent pension and other post-employment benefit plans. In most cases these plans are externally funded in vehicles which are legally separate from the Group. For certain Group companies, however, no independent plan assets exist for the pension and other long-term benefit obligations of associates. In these cases the related unfunded liability is included in the balance sheet.

Defined benefit pension plans cover a significant number of the Group's associates. The defined benefit obligations and related plan assets of all major plans are reappraised annually by independent actuaries. Plan assets are recorded at fair value and their actual return in 2012 was a gain of USD 1 508 million (2011: loss of USD 129 million) for pension plans. The defined benefit obligation of unfunded pension plans was USD 1 282 million at December 31, 2012 (2011: USD 1 120 million) and for unfunded other post-employment plans USD 862 million (2011: USD 870 million).

The following table is a summary of the funded and unfunded pension and other post-employment benefit plans of associates at December 31, 2012 and 2011:

	Pension plans		Other post-employment benefit plans	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Benefit obligation at January 1	**21 730**	**20 568**	**1 241**	**1 247**
Service cost	395	423	44	60
Interest cost	665	732	48	60
Actuarial losses/(gains)	3 080	822	– 14	37
Plan amendments	– 6	18	– 3	– 46
Currency translation effects	488	– 92	2	– 3
Benefit payments	– 1 223	– 1 231	– 50	– 47
Contributions of associates	189	187	3	3
Effect of acquisitions, divestments or transfers	185	303		– 70
Benefit obligation at December 31	**25 503**	**21 730**	**1 271**	**1 241**
Fair value of plan assets at January 1	**18 826**	**19 265**	**222**	**228**
Expected return on plan assets	829	909	14	15
Actuarial gains/(losses)	679	– 1 038	13	– 18
Currency translation effects	408	– 2		
Novartis Group contributions	497	367	35	50
Contributions of associates	189	187	3	3
Plan amendments	– 2	– 2		
Benefit payments	– 1 223	– 1 231	– 50	– 47
Effect of acquisitions, divestments or transfers	79	371		– 9
Fair value of plan assets at December 31	**20 282**	**18 826**	**237**	**222**
Funded status	**– 5 221**	**– 2 904**	**– 1 034**	**– 1 019**
Unrecognized past service cost	1	2	– 70	– 79
Limitation on recognition of fund surplus	– 21	– 51		
Net liability in the balance sheet at December 31	**– 5 241**	**– 2 953**	**– 1 104**	**– 1 098**
Amounts recognized in the consolidated balance sheet				
Prepaid benefit cost	55	38		
Accrued benefit liability	– 5 296	– 2 991	– 1 104	– 1 098

The net periodic benefit cost recorded in the consolidated income statement consists of the following components:

	Pension plans		Other post-employment benefit plans	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Components of net periodic benefit cost				
Service cost	395	423	44	60
Interest cost	665	732	48	60
Expected return on plan assets	– 829	– 909	– 14	– 15
Recognized past service cost	1	3	– 12	– 5
Curtailment and settlement (gains)/losses	– 4	18		
Net periodic benefit cost	**228**	**267**	**66**	**100**

The following table shows the principal actuarial weighted average assumptions used for calculating defined benefit plans and other post-employment benefits of associates:

	Pension plans		Other post-employment benefit plans	
	2012 %	2011 %	2012 %	2011 %
Weighted average assumptions used to determine benefit obligations at December 31				
Discount rate	2.4%	3.2%	3.6%	4.3%
Expected rate of pension increase	0.9%	0.9%		
Expected rate of salary increase	3.3%	3.3%		
Interest on savings account	1.6%	2.5%		
Current average life expectancy for a 65-year-old male/female	21/23 years	20/22 years	19/21 years	20/22 years
Weighted average expected return on assets for the period	**4.6%**	**4.6%**		

Defined benefit pension plans in Switzerland, United States, United Kingdom, Germany and Japan represent about 95% of the Group's total defined benefit pension obligation. In all of these countries the defined benefit pension obligation is significantly impacted by assumptions regarding the discount rate. Furthermore, the rate for pension increases significantly affects the value of most plans in Switzerland, Germany and the United Kingdom. Generational mortality tables are used where this data is available.

The following table shows the sensitivity of the defined benefit pension obligation to the principal actuarial assumptions for plans in Switzerland, United States, United Kingdom, Germany and Japan:

	Change in 2012 year end defined benefit pension obligation USD millions
25 basis point increase in discount rate	– 791
25 basis point decrease in discount rate	838
1 year increase in life expectancy	872
25 basis point increase in rate of pension increase	521
25 basis point decrease in rate of pension increase	– 495
25 basis point increase of interest on savings account	70
25 basis point decrease of interest on savings account	– 68
25 basis point increase in rate of salary increase	68
25 basis point decrease in rate of salary increase	– 69

The following table shows a five-year summary reflecting the funding of defined benefit pensions and the impact of historical deviations between expected and actual return on plan assets and experience adjustments on defined benefit pension obligations.

	2012 USD millions	2011 USD millions	2010 USD millions	2009 USD millions	2008 USD millions
Plan assets	20 282	18 826	19 265	17 611	16 065
Defined benefit obligations	– 25 503	– 21 730	– 20 568	– 18 009	– 17 643
Deficit	**– 5 221**	**– 2 904**	**– 1 303**	**– 398**	**– 1 578**
Differences between expected and actual return on plan assets	679	– 1 038	– 164	981	– 3 006
Experience adjustments on defined benefit obligation	– 16	18	26	12	– 72

25. POST-EMPLOYMENT BENEFITS OF ASSOCIATES (CONTINUED)

The following table shows the weighted average plan asset allocation of funded defined benefit pension plans at December 31, 2012 and 2011:

	Pension plans		
	Long-term target %	2012 %	2011 %
Equity securities	15–35	29	25
Debt securities	30–65	43	49
Real estate	5–20	13	13
Alternative investments	0–20	9	9
Cash and other investments	0–15	6	4
Total		**100**	**100**

Strategic pension plan asset allocations are determined with the objective of achieving an investment return which, together with the contributions paid, is sufficient to maintain reasonable control over the various funding risks of the plans. Based upon the market and economic environments, actual asset allocations may periodically be permitted to deviate from policy targets. Expected return assumptions are reviewed periodically and are based on each plan's strategic plan asset mix. Factors considered in the estimate of the expected return on plan assets are the risk free interest rate together with risk premiums on the plan assets of each pension plan.

The expected future cash flows in respect of pension and other post-employment benefit plans at December 31, 2012 were as follows:

	Pension plans USD millions	Other post-employment benefit plans USD millions
Novartis Group contributions		
2013 (estimated)	463	42
Expected future benefit payments		
2013	1 323	55
2014	1 329	57
2015	1 347	60
2016	1 355	62
2017	1 365	64
2018–2022	6 933	356

The healthcare cost trend rate assumptions for other post-employment benefits are as follows:

Healthcare cost trend rate assumptions used	2012	2011
Healthcare cost trend rate assumed for next year	7.1%	7.7%
Rate to which the cost trend rate is assumed to decline	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	2020	2020

A one percentage point change in the assumed healthcare cost trend rates compared to those used for 2012 would have had the following effects:

	1% point increase USD millions	1% point decrease USD millions
Effects on total of service and interest cost components	14	– 11
Effect on post-employment benefit obligations	195	– 157

The number of Novartis AG shares held by pension and similar benefit funds at December 31, 2012 was 19.8 million shares with a market value of USD 1.2 billion (2011: 19.8 million shares with a market value of USD 1.1 billion).

DEFINED CONTRIBUTION PLANS

In many subsidiaries associates are covered by defined contribution plans and other long-term benefits. Contributions charged to the 2012 consolidated income statement for the defined contribution plans were USD 345 million (2011: USD 337 million).

26. EQUITY-BASED PARTICIPATION PLANS OF ASSOCIATES

The expense related to all equity-based participation plans in the 2012 consolidated income statement was USD 1.0 billion (2011: USD 1.0 billion) resulting in a total carrying amount for liabilities arising from share-based payment transactions of USD 262 million (2011: USD 217 million).

Equity-based participation plans can be separated into the following plans.

NOVARTIS EQUITY PLAN "SELECT"

The Equity Plan "Select" is a global equity incentive plan under which eligible associates, including Executive Committee members, may annually be awarded a grant capped at 200% of target. The equity-based long-term incentive is subject to the achievement of predetermined business and individual performance objectives at grant. No awards are granted for performance ratings below a certain threshold.

The Equity Plan "Select" allows its participants to choose the form of their equity compensation in restricted shares (or, in some jurisdictions, restricted share units (RSUs)), tradable share options, or a combination of both. The vesting period for the plan is three years except for grants prior to 2012 in Switzerland which had a two years vesting period.

In some jurisdictions, RSUs are granted rather than shares. Each RSU is equivalent in value to one Novartis share and is converted into one share at the vesting date. RSUs do not carry any voting or dividend rights, except for the United States where employees receive a dividend equivalent during the vesting period for the 2010 grants. Each restricted share is entitled to voting rights and payment of dividends during the vesting period.

Tradable share options expire on their 10th anniversary from grant date. Each tradable share option granted to associates entitles the holder to purchase after vesting (and before the 10th anniversary from grant date) one Novartis share at a stated exercise price that equals the closing market price of the underlying share at the grant date.

The terms and conditions of the Novartis Equity Plan "Select" outside North America are substantially equivalent to the Novartis Equity Plan "Select" for North America. Share options of the Novartis Equity Plan "Select" for North America have only been tradable since 2004.

NOVARTIS EQUITY PLAN "SELECT" OUTSIDE NORTH AMERICA

The expense recorded in the 2012 consolidated income statement relating to both shares and share options under this plan amounted to USD 122 million (2011: USD 158 million). Participants in this plan were granted in 2012 a total of 2.4 million restricted shares and RSUs at CHF 54.20 (2011: 2.2 million restricted shares and RSUs at CHF 54.70).

The following table shows the assumptions on which the valuation of share options granted during the period was based:

	Novartis Equity Plan "Select" outside North America	
	2012	**2011**
Valuation date	January 19, 2012	January 19, 2011
Expiration date	January 19, 2022	January 19, 2021
Closing share price on grant date	CHF 54.20	CHF 54.70
Exercise price	CHF 54.20	CHF 54.70
Implied bid volatility	14.85%	14.90%
Expected dividend yield	4.82%	4.82%
Interest rate	0.94%	2.06%
Market value of option at grant date	CHF 4.30	CHF 5.06

The following table shows the activity associated with the share options during the period. The weighted average prices in the table below are translated from Swiss Francs into USD at historical rates for the granted, sold, and forfeited or expired figures. The year-end prices are translated using the corresponding year-end rates.

	2012		2011	
	Options (millions)	**Weighted average exercise price (USD)**	**Options (millions)**	**Weighted average exercise price (USD)**
Options outstanding at January 1	**35.5**	**53.5**	**34.7**	**52.3**
Granted	5.4	57.6	5.7	57.0
Sold	– 6.3	50.8	– 3.9	46.4
Forfeited or expired	– 1.4	57.5	– 1.0	56.6
Outstanding at December 31	**33.2**	**54.5**	**35.5**	**53.5**
Exercisable at December 31	**24.4**	**53.5**	**22.2**	**52.4**

All share options were granted at an exercise price which was equal to the market price of the Group's shares at the grant date and for 2002 and 2003 was greater than the market price of the Group's shares at the grant date. The weighted average exercise price during the period the options were sold in 2012 was USD 50.79. The weighted average share price at the dates of sale was USD 55.56.

The following table summarizes information about share options outstanding at December 31, 2012:

	Options outstanding		
Range of exercice prices (USD)	**Number outstanding (millions)**	**Average remaining contractual life (years)**	**Weighted average exercise price (USD)**
45–49	7.1	4.4	46.9
50–54	9.0	6.0	54.4
55–59	17.1	6.5	57.8
Total	**33.2**	**5.9**	**54.5**

NOVARTIS EQUITY PLAN "SELECT" FOR NORTH AMERICA

The expense recorded in the 2012 consolidated income statement relating to both shares and share options under this plan amounted to USD 297 million (2011: USD 263 million). Participants in this plan were granted a total of 5.1 million restricted shares and RSUs at USD 58.33 (2011: 4.1 million restricted shares and RSUs at USD 57.07).

The following table shows the assumptions on which the valuation of share options granted during the period was based:

	Novartis Equity Plan "Select" for North America	
	2012	2011
Valuation date	January 19, 2012	January 19, 2011
Expiration date	January 19, 2022	January 19, 2021
Closing ADS price on grant date	USD 58.33	USD 57.07
Exercise price	USD 58.33	USD 57.07
Implied bid volatility	12.20%	13.80%
Expected dividend yield	4.82%	4.83%
Interest rate	2.09%	3.50%
Market value of option at grant date	USD 4.14	USD 5.94

The following table shows the activity associated with the share options during the period:

	2012		2011	
	ADS options (millions)	Weighted average exercise price (USD)	ADS options (millions)	Weighted average exercise price (USD)
Options outstanding at January 1	**58.5**	**52.1**	**60.0**	**51.1**
Granted	18.5	58.3	11.8	57.1
Sold or exercised	– 17.0	48.3	– 10.2	52.2
Forfeited or expired	– 3.7	56.1	– 3.1	51.6
Outstanding at December 31	**56.3**	**55.1**	**58.5**	**52.1**
Exercisable at December 31	**19.0**	**51.9**	**19.6**	**52.6**

All share options were granted at an exercise price which was equal to the market price of the American Depositary Shares (ADSs) at the grant date. The weighted average exercise price during the period the share options were sold or exercised in 2012 was USD 48.25. The weighted average share price at the dates of sale or exercise was USD 58.48.

The following table summarizes information about ADS options outstanding at December 31, 2012:

	ADS options outstanding		
Range of exercice prices (USD)	Number outstanding (millions)	Average remaining contractual life (years)	Weighted average exercise price (USD)
35–39	0.5	0.1	36.3
45–49	8.7	4.9	46.6
50–54	13.2	6.5	53.8
55–59	33.9	7.8	57.9
Total	**56.3**	**6.9**	**55.1**

LONG-TERM PERFORMANCE PLAN

The Long-Term Performance Plan (LTPP) is an equity plan for key executives designed to foster long-term commitment by aligning the incentives of key executives to the performance of Novartis. The LTPP is offered to selected executives, who are in key positions and have a significant impact on the long-term success of Novartis. It is capped at 200% of target. The rewards are based on rolling three year global performance objectives focused on the Novartis Economic Value Added (NVA) measured annually. The NVA is calculated based on Group operating income adjusted for interest, taxes and cost of capital charge. The performance realization of a plan cycle is obtained right after the end of the third plan year by adding together the annual NVA realizations of all plan years of the plan cycle. The performance ratio for a plan cycle is obtained by dividing the performance realization for the plan cycle with the performance target for the plan cycle, expressing the result as a percentage. The LTPP only allows a payout if the actual NVA exceeds predetermined target thresholds.

At the beginning of every performance period, plan participants are granted RSUs, which are converted into Novartis shares after the performance period.

At the end of the three-year performance period, the Compensation Committee adjusts the number of RSUs earned based on actual performance. RSUs are converted into unrestricted Novartis shares without an additional vesting period. In the United States, awards may also be delivered in cash under the United States deferred compensation plan.

The expense recorded in the 2012 income statement related to this plan amounted to USD 34 million (2011: USD 40 million). On January 19, 2012 a total of 0.4 million RSUs (2011: 0.4 million RSUs) were granted to 139 key executives participating in this plan.

OTHER SHARE AWARDS

Selected associates may exceptionally receive special awards of restricted shares or RSUs. These special Share Awards provide an opportunity to reward outstanding achievements or exceptional performance and aim at retaining key contributors. They are based on a formal internal selection process, in which the individual performance of each candidate is thoroughly assessed at several management levels. In exceptional circumstances, special equity grants may be rewarded to attract special expertise and new talents into the organization. These grants are consistent with market practice and Novartis' philosophy to attract, retain and motivate best–in-class talents around the world.

Restricted special awards generally have a five-year vesting period. Worldwide 787 associates at different levels in the organization were awarded restricted shares in 2012. The expense recorded for such special share awards in the 2012 income statement amounted to USD 24 million (2011: USD 27 million). During 2012, a total of 0.8 million restricted shares and RSUs (2011: 1.5 million restricted shares and RSUs) were granted to executives and selected associates.

In addition, in 2012, Board members received 0.2 million unrestricted shares with a market value of USD 12 million as part of their remuneration.

LEVERAGED SHARE SAVINGS PLANS

A number of associates in certain countries and certain key executives worldwide are encouraged to invest their annual incentive in a share savings plan, which is capped at 200% of target. Under the share savings plan, they will receive their annual incentive awards fully or partially in Novartis shares in lieu of cash. As a reward for their participation in the share savings plan, Novartis matches their investments in shares after a holding period of three or five years.

Novartis currently has three share savings plans:

– Worldwide 30 key executives were invited to participate in a leveraged share savings plan based on their performance in 2011. Instead of cash, their annual incentive was elected to be awarded partly or entirely in shares. The elected number of shares were delivered in 2012 and are subject to a holding period of five years. At the end of the holding period, Novartis will match the invested shares at a ratio of 1-to-1 (i.e. one share awarded for each invested share).
– In Switzerland, the Employee Share Ownership Plan (ESOP) was available to 12 688 associates in 2011. Participants within this plan may choose to receive the incentive (i) 100% in shares, (ii) 50% in shares and 50% in cash or (iii) 100% in cash. After expiration of a three-year holding period of Novartis shares invested under the ESOP, each participant will receive one free matching share for every two Novartis shares invested. A total of 5 050 associates chose to receive shares under the ESOP for their performance in 2011 and the shares were delivered in 2012.
– In the United Kingdom, 2 743 associates can invest up to 5% of their monthly salary in shares (up to a maximum of GBP 125) and also may be invited to invest all or part of their net annual incentive in shares. Two invested shares are matched with one share with a holding period of three years. During 2012, 1 576 associates elected to participate in this plan.

Associates may only participate in one of these plans in any given year.

The expense recorded in the 2012 income statement related to these plans amounted to USD 459 million (2011: USD 429 million). During 2012, a total of 5.7 million shares (2011: 5.4 million shares) were granted to participants of these plans.

SUMMARY OF NON-VESTED SHARE MOVEMENTS

The table below provides a summary of non-vested share movements (restricted shares, RSUs and ADSs) for all plans:

	2012		2011	
	Number of shares in millions	Fair value in USD millions	Number of shares in millions	Fair value in USD millions
Non-vested shares at January 1	**20.8**	**1 180.1**	**17.7**	**1 015.7**
Granted	16.3	935.3	14.3	823.9
Vested	– 12.0	– 701.2	– 10.0	– 590.1
Forfeited	– 1.4	– 84.5	– 1.2	– 69.4
Non-vested shares at December 31	**23.7**	**1 329.7**	**20.8**	**1 180.1**

ALCON, INC., EQUITY PLANS GRANTED TO ASSOCIATES PRIOR TO THE MERGER

The expense recorded in the 2012 consolidated income statement relating to equity-based compensation awards granted to Alcon, Inc., associates prior to the merger on April 8, 2011 amounted to USD 55 million (2011: USD 98 million). There were no grants in 2012 (2011: 1.9 million converted Novartis RSUs).

At the completion of the merger of Alcon, Inc., into Novartis on April 8, 2011, all awards outstanding under the Alcon equity plans were converted into awards based upon Novartis shares with a conversion factor of 3.0727 as defined in the Merger Agreement.

SHARE OPTIONS AND SHARE-SETTLED APPRECIATION RIGHTS

Share options entitle the recipient to purchase Novartis shares at the closing market price of the former Alcon, Inc., share on the day of grant divided by the conversion factor.

Share-settled appreciation rights (SSAR) entitle the participant to receive, in the form of Novartis shares, the difference between the values of the former Alcon, Inc., share at the date of grant, converted into Novartis shares using the conversion factor, and the Novartis share price at the date of exercise.

The following table shows the activity associated with the converted Novartis share options and SSARs during 2012 and 2011:

	Number of options (millions)	Weighted average exercise price (USD)	Number of SSARs (millions)	Weighted average exercise price (USD)
Outstanding at January 1, 2011	**9.7**	**22.0**	**11.7**	**36.3**
Exercised	– 5.2	20.7	– 3.3	41.8
Outstanding at December 31, 2011	**4.5**	**23.5**	**8.4**	**34.2**
Exercisable at December 31, 2011	**4.0**	**22.9**	**3.3**	**43.4**
Outstanding at January 1, 2012	**4.5**	**23.5**	**8.4**	**34.2**
Exercised	– 2.5	20.9	– 4.6	31.9
Outstanding at December 31, 2012	**2.0**	**26.7**	**3.8**	**36.3**
Exercisable at December 31, 2012	**1.9**	**26.7**	**3.8**	**36.3**

RESTRICTED SHARE UNITS

Restricted Share Units (RSUs) entitle the recipient to receive a specified number of Novartis shares on the date of vesting. RSUs will vest and become transferable upon satisfaction of the conditions set forth in the restricted share unit award agreements, generally three years following the grant date. The compensation expense is recognized over the required service period, generally three years following the day of grant. Holders of RSUs have no voting rights and receive dividend equivalents prior to vesting.

At December 31, 2012, there were 3.4 million Novartis RSUs outstanding with a fair value of USD 218 million.

27. RELATED PARTIES

GENENTECH/ROCHE

Novartis has two agreements with Genentech, Inc., USA, a subsidiary of Roche Holding AG which is indirectly included in the consolidated financial statements using equity accounting since Novartis holds 33.3% of the outstanding voting shares of Roche.

LUCENTIS

Novartis has licensed the exclusive rights to develop and market *Lucentis* outside the United States for indications related to diseases of the eye. As part of this agreement, Novartis paid Genentech/Roche an initial milestone and shared the cost for the subsequent development by making additional milestone payments upon the achievement of certain clinical development points and product approval. Novartis also pays royalties on the net sales of *Lucentis* products outside the United States. *Lucentis* sales of USD 2.4 billion (2011: USD 2.0 billion) have been recognized by Novartis.

XOLAIR

In February 2004, Novartis Pharma AG, Genentech, Inc., and Tanox, Inc., finalized a three-party collaboration to govern the development and commercialization of certain anti-IgE antibodies including *Xolair* and TNX-901. Under this agreement, all three parties co-developed *Xolair*. On August 2, 2007, Genentech, Inc. completed the acquisition of Tanox, Inc. and has taken over its rights and obligations. Novartis and Genentech/Roche are co-promoting *Xolair* in the United States where Genentech/Roche records all sales. Novartis records sales outside of the United States.

Novartis markets *Xolair* and records all sales and related costs outside the United States as well as co-promotion costs in the United States. Genentech/Roche and Novartis share the resulting profits from sales in the United States, Europe and other countries, according to agreed profit-sharing percentages. In 2012, Novartis recognized total sales of *Xolair* of USD 504 million (2011: USD 478 million) including sales to Genentech/Roche for the United States market.

The net expense for royalties, cost sharing and profit sharing arising out of the *Lucentis* and *Xolair* agreements with Genentech/Roche totaled USD 514 million in 2012 (2011: USD 396 million).

Furthermore, Novartis has several patent license, supply and distribution agreements with Roche and several Novartis entities hold Roche bonds totaling USD 20 million at December 31, 2012 (2011: USD 20 million).

EXECUTIVE OFFICER AND NON-EXECUTIVE DIRECTOR COMPENSATION

During 2012, there were 12 Executive Committee members and Permanent Attendees ("Executive Officers"), including those who stepped down (12 members in 2011 also including those who stepped down).

The total compensation for members of the Executive Committee and the 12 Non-Executive Directors (11 in 2011) using the Group's accounting policies for equity-based compensation and pension benefits was as follows:

	Executive Officers		Non-Executive Directors		Total	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Short-term benefits other than equity-based amounts	14.2	13.7	8.1	11.7	22.3	25.4
Post-employment benefits	2.1	1.9	0.2	0.2	2.3	2.1
Termination benefits	2.2	5.1			2.2	5.1
Equity-based compensation	54.5	53.3	16.4	28.2	70.9	81.5
Total	**73.0**	**74.0**	**24.7**	**40.1**	**97.7**	**114.1**

The annual incentive award, which is fully included in equity-based compensation even when paid out in cash, is granted in January in the year following the reporting period.

The above table excludes amounts for any grants made to any of the current Executive Officers and non-Executive Directors by Alcon, Inc., prior to its merger into Novartis AG on April 8, 2011, since these were granted by this company's independent Compensation Committee.

The disclosures required by the Swiss Code of Obligations on Board and Executive compensation are shown in note 12 to the Novartis AG financial statements.

During 2012, a non-executive director has exercised an option and acquired Group assets at fair market values, based on independent external valuation reports, of CHF 11.6 million (approximately USD 12.0 million).

28. COMMITMENTS AND CONTINGENCIES

LEASING COMMITMENTS

The Group has entered into various fixed term operational leases, mainly for cars and real estate. As of December 31, 2012 the Group's commitments with respect to these leases were as follows:

	2012 USD millions
2013	372
2014	283
2015	184
2016	169
2017	124
Thereafter	2 013
Total	**3 145**
Expense of current year	**394**

RESEARCH & DEVELOPMENT COMMITMENTS

The Group has entered into long-term research agreements with various institutions which provide for potential milestone payments and other payments by Novartis that may be capitalized. As of December 31, 2012 the Group's commitments to make payments under those agreements were as follows:

	Unconditional commitments 2012 USD millions	Potential milestone payments 2012 USD millions	Total 2012 USD millions
2013	48	456	504
2014	41	312	353
2015	38	214	252
2016	33	329	362
2017	26	437	463
Thereafter	33	266	299
Total	**219**	**2 014**	**2 233**

OTHER COMMITMENTS

The Novartis Group entered into various purchase commitments for services and materials as well as for equipment in the ordinary course of business. These commitments are generally entered into at current market prices and reflect normal business operations.

CONTINGENCIES

Group companies have to observe the laws, government orders and regulations of the country in which they operate.

The Group's potential environmental remediation liability is assessed based on a risk assessment and investigation of the various sites identified by the Group as at risk for environmental remediation exposure. The Group's future remediation expenses are affected by a number of uncertainties. These uncertainties include, but are not limited to, the method and extent of remediation, the percentage of material attributable to the Group at the remediation sites relative to that attributable to other parties, and the financial capabilities of the other potentially responsible parties.

A number of Group companies are currently involved in administrative proceedings, litigations and investigations arising out of the normal conduct of their business. These litigations include certain legal and product liability claims. Whilst provisions have been made for probable losses that management deems to be reasonable or appropriate there are uncertainties connected with these estimates. Note 20 contains a more extensive discussion of these matters.

In the opinion of management, however, the outcome of these actions will not materially affect the Group's financial position but could be material to the results of operations or cash flow in a given period.

29. FINANCIAL INSTRUMENTS – ADDITIONAL DISCLOSURES

BALANCE SHEET DISCLOSURES	Note	2012 USD millions[1]	2011 USD millions[1]
Cash and cash equivalents	16	**5 552**	**3 709**
Financial assets – measured at fair value through other comprehensive income			
Available-for-sale marketable securities			
Debt securities	16	1 084	1 131
Equity securities	16	68	73
Fund investments	16	23	32
Total available-for-sale marketable securities		**1 175**	**1 236**
Available-for-sale long-term financial investments			
Equity securities	13	661	592
Fund investments	13	13	12
Total available-for-sale long-term financial investments		**674**	**604**
Total financial assets – measured at fair value through other comprehensive income		**1 849**	**1 840**
Financial assets – measured at amortized costs			
Trade receivables and other current assets (excluding pre-payments)	15/17	12 533	12 373
Accrued interest on debt securities and time deposits	16	12	12
Time deposits with original maturity more than 90 days	16	1 240	
Long-term loans and receivables, advances, security deposits	13	443	334
Total financial assets – measured at amortized costs		**14 228**	**12 719**
Financial assets – measured at fair value through the consolidated income statement			
Derivative financial instruments	16	140	118
Total financial assets – measured at fair value through the consolidated income statement		**140**	**118**
Total financial assets		**21 769**	**18 386**
Financial liabilities – measured at amortized costs			
Current financial debt			
Interest bearing accounts of associates	21	1 541	1 357
Bank and other financial debt	21	1 270	2 053
Commercial paper	21	963	2 156
Currrent portion of non-current debt	21	2 009	778
Total current financial debt		**5 783**	**6 344**
Non-current financial debt			
Straight bonds	19	14 783	13 483
Liabilities to banks and other financial institutions	19	1 004	1 146
Finance lease obligations	19	3	4
Current portion of non-current debt	19	– 2 009	– 778
Total non-current financial debt		**13 781**	**13 855**
Trade payables		**5 593**	**4 989**
Total financial liabilites – measured at amortized costs		**25 157**	**25 188**
Financial liabilities – measured at fair value through the consolidated income statement			
Contingent consideration	20	573	482
Derivative financial instruments	21	162	30
Total financial liabilities – measured at fair value through the consolidated income statement		**735**	**512**
Total financial liabilities		**25 892**	**25 700**

[1] Except for straight bonds (see note 19) the carrying amount is a reasonable approximation of fair value.

DERIVATIVE FINANCIAL INSTRUMENTS

The following tables show the contract or underlying principal amounts and fair values of derivative financial instruments analyzed by type of contract at December 31, 2012 and 2011. Contract or underlying principal amounts indicate the volume of business outstanding at the consolidated balance sheet date and do not represent amounts at risk. The fair values are determined by reference to market prices or standard pricing models that used observable market inputs at December 31, 2012 and 2011.

	Contract or underlying principal amount		Positive fair values		Negative fair values	
	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions	2012 USD millions	2011 USD millions
Currency related instruments						
Forward foreign exchange rate contracts	10 517	6 456	120	105	– 160	– 12
Over-the-Counter currency options	2 644	2 102	20	13	– 1	– 18
Total of currency related instruments	**13 161**	**8 558**	**140**	**118**	**– 161**	**– 30**
Interest rate related instruments						
Interest rate swaps	33				– 1	
Total of interest rate related instruments	**33**				**– 1**	
Total derivative financial instruments included in marketable securities and in current financial debts	**13 194**	**8 558**	**140**	**118**	**– 162**	**– 30**

The following table shows by currency contract or underlying principal amount the derivative financial instruments at December 31, 2012 and 2011:

December 31, 2012	EUR USD millions	USD USD millions	JPY USD millions	Other USD millions	Total USD millions
Currency related instruments					
Forward foreign exchange rate contracts	3 760	3 169	704	2 884	10 517
Over-the-Counter currency options		2 125		519	2 644
Total of currency related instruments	**3 760**	**5 294**	**704**	**3 403**	**13 161**
Interest rate related instruments					
Interest rate swaps				33	33
Total of interest rate related instruments				**33**	**33**
Total derivative financial instruments	**3 760**	**5 294**	**704**	**3 436**	**13 194**

December 31, 2011	EUR USD millions	USD USD millions	JPY USD millions	Other USD millions	Total USD millions
Currency related instruments					
Forward foreign exchange rate contracts	3 706	1 746	255	749	6 456
Over-the-Counter currency options		2 000		102	2 102
Total of currency related instruments	**3 706**	**3 746**	**255**	**851**	**8 558**
Total derivative financial instruments	**3 706**	**3 746**	**255**	**851**	**8 558**

DERIVATIVE FINANCIAL INSTRUMENTS EFFECTIVE FOR HEDGE ACCOUNTING PURPOSES

At the end of 2012 and 2011, there were no open hedging instruments for anticipated transactions.

FAIR VALUE BY HIERARCHY

As required by IFRS, financial assets and liabilities recorded at fair value in the consolidated financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. There are three hierarchical levels, based on an increasing amount of subjectivity associated with the inputs to derive fair valuation for these assets and liabilities, which are as follows:

The types of assets carried at Level 1 fair value are equity and debt securities listed in active markets.

The assets generally included in Level 2 fair value hierarchy are foreign exchange and interest rate derivatives and certain debt securities. Foreign exchange derivatives and interest rate derivatives are valued using corroborated market data. The liabilities generally included in this fair value hierarchy consist of foreign exchange and interest rate derivatives.

Level 3 inputs are unobservable for the asset or liability. The assets generally included in this fair value hierarchy are various investments in hedge funds and unquoted equity security investments of the Novartis Venture Funds investment activities. There were no liabilities carried at fair value in this category.

2012	Level 1 USD millions	Level 2 USD millions	Level 3 USD millions	Valued at amortized cost USD millions	Total USD millions
Available-for-sale marketable securities					
Debt securities	1 056	28			1 084
Equity securities	45		23		68
Fund investments			23		23
Total available-for-sale marketable securities	**1 101**	**28**	**46**		**1 175**
Time deposits with original maturity more than 90 days				1 240	1 240
Derivative financial instruments		140			140
Accrued interest on debt securities				12	12
Total marketable securities, time deposits and derivative financial instruments	**1 101**	**168**	**46**	**1 252**	**2 567**
Financial investments and long-term loans					
Available-for-sale financial investments	302		359		661
Fund investments			13		13
Long-term loans and receivables, advances, security deposits				443	443
Total financial investments and long-term loans	**302**		**372**	**443**	**1 117**
Financial liabilities					
Derivative financial instruments		– 162			– 162
Total financial liabilities at fair value	**0**	**– 162**	**0**	**0**	**– 162**

2011	Level 1 USD millions	Level 2 USD millions	Level 3 USD millions	Valued at amortized cost USD millions	Total USD millions
Available-for-sale marketable securities					
Debt securities	1 103	28			1 131
Equity securities	53		20		73
Fund investments			32		32
Total available-for-sale marketable securities	**1 156**	**28**	**52**		**1 236**
Derivative financial instruments		118			118
Accrued interest on debt securities				12	12
Total marketable securities, time deposits and derivative financial instruments	**1 156**	**146**	**52**	**12**	**1 366**
Financial investments and long-term loans					
Available-for-sale financial investments	261		331		592
Fund investments			12		12
Long-term loans and receivables, advances, security deposits				334	334
Total financial investments and long-term loans	**261**		**343**	**334**	**938**
Financial liabilities					
Derivative financial instruments		– 30			– 30
Total financial liabilities at fair value		**– 30**			**– 30**

The analysis above includes all financial instruments including those measured at amortized cost or at cost.

The change in carrying values associated with level 3 financial instruments using significant unobservable inputs during the year ended December 31 are set forth below:

2012	Equity securities USD millions	Fund investments USD millions	Available-for-sale financial investments USD millions	Total USD millions
January 1	**20**	**44**	**331**	**395**
Gains recognized in the consolidated income statement			101	101
Impairments and amortizations		– 1	– 29	– 30
Gains/(losses) recognized in the consolidated statement of comprehensive income	2	2	– 13	– 9
Purchases	1		99	100
Proceeds from sales		– 10	– 150	– 160
Reclassification			17	17
Currency translation effects		1	3	4
December 31	**23**	**36**	**359**	**418**
Total of gains and impairments, net recognized in the consolidated income statement for assets held at December 31, 2012		– 1	72	71

2011	Equity securities USD millions	Fund investments USD millions	Available-for-sale financial investments USD millions	Total USD millions
January 1	**20**	**67**	**348**	**435**
Gains recognized in the consolidated income statement		1	23	24
Impairments and amortizations		– 3	– 24	– 27
Gains/(losses) recognized in the consolidated statement of comprehensive income	1	2	– 7	– 4
Purchases			74	74
Redemptions		– 24		– 24
Proceeds from sales	– 1		– 82	– 83
Currency translation effects		1	– 1	
December 31	**20**	**44**	**331**	**395**
Total of gains and impairments, net recognized in the consolidated income statement for assets held at December 31, 2011		– 2	– 1	– 3

Gains and losses associated with level 3 available-for-sale marketable securities are recorded in the consolidated income statement under "Other financial income and expense" and gains and losses associated with level 3 available-for-sale financial investments are recorded in the consolidated income statement under "Other expense" or "Other income", respectively.

If the pricing parameters for the level 3 input were to change for equity securities and fund investments by 5% and for available-for-sale financial investments by 10% positively or negatively, respectively, this would change the amounts recorded in the consolidated statement of comprehensive income by USD 3 million or USD 36 million, respectively (2011: USD 3 million and USD 33 million).

NATURE AND EXTENT OF RISKS ARISING FROM FINANCIAL INSTRUMENTS

MARKET RISK

Novartis is exposed to market risk, primarily related to foreign currency exchange rates, interest rates and the market value of the investments of liquid funds. The Group actively monitors and seeks to reduce, where it deems it appropriate to do so, fluctuations in these exposures. It is the Group's policy and practice to enter into a variety of derivative financial instruments to manage the volatility of these exposures and to enhance the yield on the investment of liquid funds. It does not enter any financial transactions containing a risk that cannot be quantified at the time the transaction is concluded. In addition, it does not sell short assets it does not have, or does not know it will have, in the future. The Group only sells existing assets or enters into transactions and future transactions (in the case of anticipatory hedges) that it confidently expects it will have in the future, based on past experience. In the case of liquid funds, the Group writes call options on assets it has or it writes put options on positions it wants to acquire and has the liquidity to acquire. The Group expects that any loss in value for these instruments generally would be offset by increases in the value of the underlying transactions.

FOREIGN CURRENCY EXCHANGE RATE RISK

The Group uses the USD as its reporting currency. As a result, the Group is exposed to foreign currency exchange movements, primarily in European, Japanese and other Asian and Latin American currencies. Consequently, it enters into various contracts that reflect the changes in the value of foreign currency exchange rates to preserve the value of assets, commitments and anticipated transactions. Novartis also uses forward contracts and foreign currency option contracts to hedge certain anticipated net revenues in foreign currencies.

Net investments in subsidiaries in foreign countries are long-term investments. Their fair value changes through movements of foreign currency exchange rates. The Group only hedges the net investments in foreign subsidiaries in exceptional cases.

COMMODITY PRICE RISK

The Group has only a very limited exposure to price risk related to anticipated purchases of certain commodities used as raw materials by the Group's businesses. A change in those prices may alter the gross margin of a specific business, but generally by not more than 10% of the margin and thus below the Group's risk management tolerance levels. Accordingly, the Group does not enter into significant commodity futures, forward and option contracts to manage fluctuations in prices of anticipated purchases.

INTEREST RATE RISK

The Group addresses its net exposure to interest rate risk mainly through the ratio of its fixed rate financial debt to variable rate financial debt contained in its total financial debt portfolio. To manage this mix, Novartis may enter into interest rate swap agreements, in which it exchanges periodic payments based on a notional amount and agreed upon fixed and variable interest rates.

EQUITY RISK

The Group purchases equities as investments of its liquid funds. As a policy, it limits its holdings in an unrelated company to less than 5% of its liquid funds. Potential investments are thoroughly analyzed. Call options are written on equities that the Group owns, and put options are written on equities which the Group wants to buy and for which cash has been reserved.

CREDIT RISK

Credit risks arise from the possibility that customers may not be able to settle their obligations as agreed. To manage this risk the Group periodically assesses the financial reliability of customers, taking into account their financial position, past experience and other factors. Individual risk limits are set accordingly.

The Group's largest customer accounts for approximately 10% of net sales, and the second and third largest customer account for 9% and 8% of net sales (2011: 9%, 7% and 7% respectively). No other customer accounts for 4% or more of net sales, in either year.

The highest amounts of trade receivables outstanding were for these same three customers. They amounted to 8%, 7% and 6%, respectively, of the Group's trade receivables at December 31, 2012. There is no other significant concentration of credit risk (2011: 10%, 6% and 6% respectively).

COUNTERPARTY RISK

Counterparty risk encompasses issuer risk on marketable securities, settlement risk on derivative and money market contracts and credit risk on cash and time deposits. Issuer risk is reduced by only buying securities which are at least AA- rated. Settlement and credit risk is reduced by the policy of entering into transactions with counterparties that are usually at least AA- rated banks or financial institutions. For short-term investments less than six months the counterparty must be at least A-1/P-1/F-1 rated. Exposure to these risks is closely monitored and kept within predetermined parameters. Novartis has policies that limit the amount of credit exposure to any financial institution. The limits are regularly assessed and determined based upon credit analysis including financial statement and capital adequacy ratio reviews. In addition, reverse repurchasing agreements are contracted.

The Group's cash and cash equivalents are held with major regulated financial institutions, the three largest ones hold approximately 19.8%, 15.5% and 10.9%, respectively (2011: 31.8%, 12.5% and 12.1%, respectively).

The Group does not expect any losses from non-performance by these counterparties and does not have any significant grouping of exposures to financial sector or country risk.

LIQUIDITY RISK

Liquidity risk is defined as the risk that the Group could not be able to settle or meet its obligations on time or at a reasonable price. Group Treasury is responsible for liquidity, funding as well as settlement management. In addition, liquidity and funding risks, related processes and policies are overseen by management. Novartis manages its liquidity risk on a consolidated basis based on business needs, tax, capital or regulatory considerations, if applicable, through numerous sources of financing in order to maintain flexibility. Management monitors the Group's net debt or liquidity position through rolling forecasts on the basis of expected cash flows.

The following table sets forth how management monitors net debt or liquidity based on details of the remaining contractual maturities of current financial assets and liabilities excluding trade receivables and payables and contingent considerations at December 31, 2012 and 2011:

December 31, 2012	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Current assets						
Marketable securities and time deposits		1 240	26	543	606	2 415
Derivative financial instruments and accrued interest	36	106	10			152
Cash and cash equivalents	3 852	1 700				5 552
Total current financial assets	**3 888**	**3 046**	**36**	**543**	**606**	**8 119**
Non-current liabilities						
Financial debt				– 7 829	– 5 952	– 13 781
Financial debt – undiscounted				*– 7 848*	*– 6 002*	*– 13 850*
Total non-current financial debt				**– 7 829**	**– 5 952**	**– 13 781**
Current liabilities						
Financial debt	– 2 607	– 764	– 2 412			– 5 783
Financial debt – undiscounted	*– 2 607*	*– 764*	*– 2 413*			*– 5 784*
Derivative financial instruments	– 60	– 54	– 48			– 162
Total current financial debt	**– 2 667**	**– 818**	**– 2 460**			**– 5 945**
Net debt	**1 221**	**2 228**	**– 2 424**	**– 7 286**	**– 5 346**	**– 11 607**

December 31, 2011	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Current assets						
Marketable securities			36	638	562	1 236
Derivative financial instruments and accrued interest on derivative financial instruments	61	15	54			130
Cash and cash equivalents	3 709					3 709
Total current financial assets	**3 770**	**15**	**90**	**638**	**562**	**5 075**
Non-current liabilities						
Financial debt				– 9 874	– 3 981	– 13 855
Financial debt – undiscounted				*– 9 904*	*– 4 005*	*– 13 909*
Total non-current financial debt				**– 9 874**	**– 3 981**	**– 13 855**
Current liabilities						
Financial debt	– 4 039	– 1 100	– 1 205			– 6 344
Financial debt – undiscounted	*– 4 039*	*– 1 100*	*– 1 205*			*– 6 344*
Derivative financial instruments	– 7	– 7	– 16			– 30
Total current financial debt	**– 4 046**	**– 1 107**	**– 1 221**			**– 6 374**
Net debt	**– 276**	**– 1 092**	**– 1 131**	**– 9 236**	**– 3 419**	**– 15 154**

29. FINANCIAL INSTRUMENTS – ADDITIONAL DISCLOSURES (CONTINUED)

The consolidated balance sheet amounts of financial liabilities included in the above analysis are not materially different to the contractual amounts due on maturity. The positive and negative fair values on derivative financial instruments represent the net contractual amounts to be exchanged at maturity.

The Group's contractual undiscounted potential cash flows from derivative financial instruments to be settled on a gross basis are as follows:

December 31, 2012	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Total USD millions
Derivative financial instruments and accrued interest on derivative financial instruments				
Potential outflows in various currencies – from financial derivative liabilities	– 3 483	– 3 691	– 2 330	– 9 504
Potential inflows in various currencies – from financial derivative assets	3 458	3 714	2 285	9 457

December 31, 2011	Due or due within one month USD millions	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Total USD millions
Derivative financial instruments and accrued interest on derivative financial instruments				
Potential outflows in various currencies – from financial derivative liabilities	– 4 315	– 738	– 1 208	– 6 261
Potential inflows in various currencies – from financial derivative assets	4 366	738	1 241	6 345

December 31, 2012	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Contractual interest on non-current liabilities	– 236	– 275	– 1 368	– 1 082	– 2 961
Trade payables	– 5 593				

December 31, 2011	Due later than one month but less than three months USD millions	Due later than three months but less than one year USD millions	Due later than one year but less than five years USD millions	Due after five years USD millions	Total USD millions
Contractual interest on non-current liabilities	– 236	– 247	– 1 410	– 637	– 2 530
Trade payables	– 4 989				– 4 989

CAPITAL RISK MANAGEMENT

Novartis strives to maintain a strong credit rating. In managing its capital, Novartis focuses on a strong balance sheet. Credit agencies in 2012 maintained their ratings for Novartis. Moody's rated the Group as Aa2 for long-term maturities and P-1 for short-term maturities and Standard & Poor's had a rating of AA- for long-term and A-1+ for short-term maturities. Fitch had a long-term rating of AA and a short-term rating of F1+.

The 2012 year-end debt/equity ratio decreased to 0.28:1 from 0.31:1 in 2011 principally due to less current financial debt being outstanding under the commercial paper programs.

VALUE AT RISK

The Group uses a value at risk (VAR) computation to estimate the potential ten-day loss in the fair value of its financial instruments.

A 10-day period is used because of an assumption that not all positions could be undone in one day given the size of the positions. The VAR computation includes the Group's financial debt, short-term and long-term investments, foreign currency forwards, swaps and options as well as anticipated transactions. Foreign currency trade payables and receivables as well as net investments in foreign subsidiaries are included in the computation, however contingent consideration, finance lease obligations and other current assets are excluded.

The VAR estimates are made assuming normal market conditions, using a 95% confidence interval. The Group uses a "Delta Normal" model to determine the observed inter-relationships between movements in interest rates, stock markets and various currencies. These inter-relationships are determined by observing interest rate, stock market movements and forward foreign currency rate movements over a 60 day period for the calculation of VAR amounts.

The estimated potential 10-day loss in pre-tax income from the Group's foreign currency instruments, the estimated potential 10-day loss of its equity holdings, and the estimated potential 10-day loss in fair value of its interest rate sensitive instruments (primarily financial debt and investments of liquid funds under normal market conditions) as calculated in the VAR model are the following:

	2012 USD millions	2011 USD millions
All financial instruments	183	235
Analyzed by components:		
Instruments sensitive to foreign currency exchange rates	61	145
Instruments sensitive to equity market movements	40	56
Instruments sensitive to interest rates	86	102

The average, high, and low VAR amounts are as follows:

2012	Average USD millions	High USD millions	Low USD millions
All financial instruments	262	351	183
Analyzed by components:			
Instruments sensitive to foreign currency exchange rates	141	255	61
Instruments sensitive to equity market movements	41	59	30
Instruments sensitive to interest rates	93	129	57

2011	Average USD millions	High USD millions	Low USD millions
All financial instruments	214	281	180
Analyzed by components:			
Instruments sensitive to foreign currency exchange rates	98	219	50
Instruments sensitive to equity market movements	49	74	28
Instruments sensitive to interest rates	154	190	96

The VAR computation is a risk analysis tool designed to statistically estimate the maximum potential ten day loss from adverse movements in foreign currency exchange rates, equity prices and interest rates under normal market conditions. The computation does not purport to represent actual losses in fair value on earnings to be incurred by the Group, nor does it consider the effect of favorable changes in market rates. The Group cannot predict actual future movements in such market rates and it does not claim that these VAR results are indicative of future movements in such market rates or to be representative of any actual impact that future changes in market rates may have on the Group's future results of operations or financial position.

In addition to these VAR analyses, the Group uses stress testing techniques that aim to reflect a worst case scenario on the financial assets monitored by Group Treasury. For these calculations, the Group uses the six-months period with the worst performance observed over the past 20 years in each category. For 2012 and 2011, the worst case loss scenario was calculated as follows:

	2012 USD millions	2011 USD millions
All financial instruments	284	406
Analyzed by components:		
Instruments sensitive to foreign currency exchange rates	212	328
Instruments sensitive to equity market movements	26	31
Instruments sensitive to interest rates	46	47

In the Group's risk analysis, Novartis considered this worst case scenario acceptable as it could reduce income, but would not endanger the solvency or the investment grade credit standing of the Group.

30. EVENTS SUBSEQUENT TO THE DECEMBER 31, 2012 BALANCE SHEET DATE

DIVIDEND PROPOSAL FOR 2012 AND APPROVAL OF THE GROUP'S 2012 CONSOLIDATED FINANCIAL STATEMENTS

On January 22, 2013, the Novartis AG Board of Directors proposed the acceptance of the 2012 consolidated financial statements of the Novartis Group for the approval by the Annual General Meeting on February 22, 2013. Furthermore, on January 17, 2013, the Board proposed a dividend of CHF 2.30 per share to be approved at the Annual General Meeting on February 22, 2013. If approved, total dividend payments would amount to approximately USD 6.2 billion (2011: USD 6.0 billion).

31. PRINCIPAL GROUP SUBSIDIARIES AND ASSOCIATED COMPANIES

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
Argentina			
Novartis Argentina S.A., Buenos Aires	ARS 231.3 m	100	◆▲
Alcon Laboratorios Argentina S.A., Buenos Aires	ARS 80.0 m	100	◆
Sandoz S.A., Buenos Aires	ARS 131.8 m	100	◆▼
Australia			
Novartis Australia Pty Ltd., North Ryde, NSW	AUD 11.0 m	100	■
Novartis Pharmaceuticals Australia Pty Ltd., North Ryde, NSW	AUD 3.8 m	100	◆▲
Alcon Laboratories (Australia) Pty Ltd., Frenchs Forest, NSW	AUD 2.6 m	100	◆
CIBA Vision Australia Pty Ltd., Bella Vista, NSW	AUD 3.0 m	100	◆
Sandoz Pty Ltd., North Ryde, NSW	AUD 11.6 m	100	◆
Novartis Consumer Health Australasia Pty Ltd., Melbourne, Victoria	AUD 7.6 m	100	◆▼
Novartis Animal Health Australasia Pty Ltd., North Ryde, NSW	AUD 3.0 m	100	◆▲
Austria			
Novartis Austria GmbH, Vienna	EUR 1.0 m	100	■
Novartis Pharma GmbH, Vienna	EUR 1.1 m	100	◆
Sandoz GmbH, Kundl	EUR 32.7 m	100	■◆▼▲
EBEWE Pharma Ges.m.b.H Nfg., Unterach am Attersee	EUR 1.0 m	100	◆▼▲
Bangladesh			
Novartis (Bangladesh) Limited, Dhaka	BDT 162.5 m	60	◆▼
Belgium			
N.V. Novartis Pharma S.A., Vilvoorde	EUR 7.1 m	100	◆
S.A. Alcon-Couvreur N.V., Puurs	EUR 360.6 m	100	◆▼
N.V. Alcon S.A., Vilvoorde	EUR 141 856	100	◆
N.V. Sandoz S.A., Vilvoorde	EUR 19.2 m	100	◆
N.V. Novartis Consumer Health S.A., Vilvoorde	EUR 4.3 m	100	◆
Bermuda			
Triangle International Reinsurance Ltd., Hamilton	CHF 1.0 m	100	■
Novartis Securities Investment Ltd., Hamilton	CHF 30 000	100	■
Novartis International Pharmaceutical Ltd., Hamilton	CHF 20 000	100	■◆▼▲
Trinity River Insurance Co.Ltd., Hamilton	USD 370 000	100	■
Brazil			
Novartis Biociências S.A., São Paulo	BRL 265.0 m	100	◆▼
Sandoz do Brasil Indústria Farmacêutica Ltda., Cambé, PR	BRL 190.0 m	100	◆▼▲
Novartis Saúde Animal Ltda., São Paulo	BRL 50.7 m	100	◆▼
Canada			
Novartis Pharmaceuticals Canada Inc., Dorval/ Quebec	CAD 0[2]	100	◆▲
Alcon Canada Inc., Mississauga, Ontario	CAD 0[2]	100	◆
CIBA Vision Canada Inc., Mississauga, Ontario	CAD 1	100	◆▼
Sandoz Canada Inc., Boucherville, Quebec	CAD 76.8 m	100	◆▼▲
Novartis Consumer Health Canada Inc., Mississauga, Ontario	CAD 2	100	◆
Novartis Animal Health Canada Inc., Charlottetown, Prince Edward Island	CAD 2	100	◆▲
Chile			
Novartis Chile S.A., Santiago de Chile	CLP 2.0 bn	100	◆
Alcon Laboratorios Chile Limitada, Santiago de Chile	CLP 2.0 bn	100	◆
China			
Beijing Novartis Pharma Co., Ltd., Beijing	USD 30.0 m	100	◆▼
Novartis Pharmaceuticals (HK) Limited, Hong Kong	HKD 200	100	◆
China Novartis Institutes for BioMedical Research Co. Ltd., Shanghai	USD 133.0 m	100	▲
Suzhou Novartis Pharma Technology Co. Ltd., Changshu	USD 97.4 m	100	▼
Shanghai Novartis Trading Ltd., Shanghai	USD 2.5 m	100	◆
Alcon Hong Kong Limited, Hong Kong	HKD 77 000	100	◆
Alcon (China) Ophthalmic Product Co., Ltd., Beijing	USD 2.2 m	100	◆
Sandoz (China) Pharmaceutical Co., Ltd., Zhongshan	USD 22.0 m	100	◆▼
Novartis Vaccines and Diagnostics (HK) Ltd., Hong Kong	HKD 80.0 m	100	◆▼
Zhejiang Tianyuan Bio-Pharmaceutical Co., Ltd., Hangzhou	CNY 46.8 m	85	◆▼
Shanghai Novartis Animal Health Co., Ltd., Shanghai	CHF 21.6 m	100	◆▼

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
Colombia			
Novartis de Colombia S.A., Santafé de Bogotá	COP 7.9 bn	100	◆▼
Laboratorios Alcon de Colombia S.A., Santafé de Bogotá	COP 20.9 m	100	◆
Croatia			
Sandoz d.o.o., Zagreb	HRK 25.6 m	100	◆
Czech Republic			
Novartis s.r.o., Prague	CZK 51.5 m	100	◆
Sandoz s.r.o., Prague	CZK 44.7 m	100	◆
Denmark			
Novartis Healthcare A/S, Copenhagen	DKK 14.0 m	100	◆
Sandoz A/S, Copenhagen	DKK 8.0 m	100	◆
Ecuador			
Novartis Ecuador S.A., Quito	USD 4.0 m	100	◆
Egypt			
Novartis Pharma S.A.E., Cairo	EGP 33.8 m	99	◆▼
Finland			
Novartis Finland Oy, Espoo	EUR 459 000	100	◆
Alcon Finland Oy, Vantaa	EUR 84 094	100	◆
France			
Novartis Groupe France S.A., Rueil-Malmaison	EUR 103.0 m	100	■
Novartis Pharma S.A.S., Rueil-Malmaison	EUR 43.4 m	100	◆▼▲
Laboratoires Alcon S.A., Rueil-Malmaison	EUR 12.9 m	100	◆▼
Sandoz S.A.S., Levallois-Perret	EUR 5.4 m	100	◆
Novartis Vaccines and Diagnostics S.A.S., Suresnes	EUR 1.5 m	100	◆
Novartis Santé Familiale S.A.S., Rueil-Malmaison	EUR 21.9 m	100	◆▼
Novartis Santé Animale S.A.S., Rueil-Malmaison	EUR 900 000	100	◆▼
Germany			
Novartis Deutschland GmbH, Wehr	EUR 155.5 m	100	■
Novartis Pharma GmbH, Nuremberg	EUR 25.6 m	100	◆▲
Novartis Pharma Produktions GmbH, Wehr	EUR 2.0 m	100	▼
Alcon Pharma GmbH, Freiburg	EUR 511 292	100	◆
WaveLight GmbH, Erlangen	EUR 6.6 m	100	◆
CIBA Vision GmbH, Grosswallstadt	EUR 15.4 m	100	◆▼▲
Sandoz International GmbH, Holzkirchen	EUR 100 000	100	■
Sandoz Pharmaceuticals GmbH, Holzkirchen	EUR 5.1 m	100	◆
Sandoz Industrial Products GmbH, Frankfurt a. M.	EUR 2.6 m	100	◆▼
1 A Pharma GmbH, Oberhaching	EUR 26 000	100	◆
Salutas Pharma GmbH, Barleben	EUR 42.1 m	100	◆▼
Hexal AG, Holzkirchen	EUR 93.7 m	100	■◆▼▲
Novartis Vaccines and Diagnostics GmbH, Marburg	EUR 5.0 m	100	◆▼▲
Novartis Vaccines Vertriebs GmbH, Holzkirchen	EUR 25 564	100	◆
Novartis Consumer Health GmbH, Munich	EUR 14.6 m	100	◆▼▲
Novartis Tiergesundheit GmbH, Munich	EUR 256 000	100	◆
LTS Lohmann Therapie-Systeme AG, Andernach	EUR 31.2 m	43	■
Gibraltar			
Novista Insurance Limited, Gibraltar	CHF 130.0 m	100	■
Greece			
Novartis (Hellas) S.A.C.I., Metamorphosis/Athens	EUR 23.4 m	100	◆
Alcon Laboratories Hellas Commercial & Industrial S.A., Maroussi/Athens	EUR 5.7 m	100	◆
Hungary			
Novartis Hungary Healthcare Limited Liability Company, Budapest	HUF 545.6 m	100	◆
Sandoz Hungary Limited Liability Company, Budapest	HUF 883.0 m	100	◆
India			
Novartis India Limited, Mumbai	INR 159.8 m	76	◆▼
Novartis Healthcare Private Limited, Mumbai	INR 60.0 m	100	▲
Alcon Laboratories (India) Private Limited, Bangalore	INR 1.1 bn	100	◆
Sandoz Private Limited, Mumbai	INR 32.0 m	100	◆▼
Indonesia			
PT Novartis Indonesia, Jakarta	IDR 7.7 bn	100	◆▼
PT CIBA Vision Batam, Batam	IDR 11.9 bn	100	▼
Ireland			
Novartis Ireland Limited, Dublin	EUR 25 000	100	◆
Novartis Ringaskiddy Limited, Ringaskiddy, County Cork	EUR 2.0 m	100	▼
Alcon Laboratories Ireland Limited, Cork City	EUR 541 251	100	▼

31. PRINCIPAL GROUP SUBSIDIARIES AND ASSOCIATED COMPANIES (CONTINUED)

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
Italy			
Novartis Farma S.p.A., Origgio	EUR 18.2 m	100	■◆▼▲
Alcon Italia S.p.A., Milan	EUR 1.3 m	100	◆
CIBA Vision S.r.l., Marcon	EUR 2.4 m	100	◆
Sandoz S.p.A., Origgio	EUR 679 900	100	◆
Sandoz Industrial Products S.p.A., Rovereto	EUR 2.6 m	100	▼
Novartis Vaccines and Diagnostics S.r.l., Siena	EUR 41.5 m	100	◆▼▲
Novartis Consumer Health S.p.A., Origgio	EUR 2.9 m	100	◆
Japan			
Novartis Holding Japan K.K., Tokyo	JPY 10.0 m	100	■
Novartis Pharma K.K., Tokyo	JPY 6.0 bn	100	◆▲
Alcon Japan Ltd., Tokyo	JPY 500.0 m	100	◆
CIBA Vision K.K., Tokyo	JPY 100.0 m	100	◆
Sandoz K.K., Tokyo	JPY 100.0 m	100	◆▼▲
Novartis Animal Health K.K., Tokyo	JPY 50.0 m	100	◆▲
Luxembourg			
Novartis Investments S.à r.l., Luxembourg-Ville	USD 2.6 bn	100	■
Novartis Finance S.A., Luxembourg-Ville	USD 100 000	100	■
Malaysia			
Novartis Corporation (Malaysia) Sdn. Bhd., Kuala Lumpur	MYR 3.3 m	100	◆
Alcon Laboratories (Malaysia) Sdn. Bhd., Petaling Jaya	MYR 1.0 m	100	◆
CIBA Vision Johor Sdn. Bhd., Gelang Patah	MYR 5.0 m	100	▼
Mexico			
Novartis Farmacéutica, S.A. de C.V., Mexico City	MXN 205.0 m	100	◆▼
Alcon Laboratorios, S.A. de C.V., Mexico City	MXN 5.9 m	100	◆▼
Sandoz S.A. de C.V., Mexico City	MXN 468.2 m	100	◆▼
Netherlands			
Novartis Netherlands B.V., Arnhem	EUR 1.4 m	100	■
Novartis Pharma B.V., Arnhem	EUR 4.5 m	100	◆
Alcon Nederland B.V., Breda	EUR 18 151	100	◆
Sandoz B.V., Almere	EUR 907 570	100	◆▼
Novartis Consumer Health B.V., Breda	EUR 23 830	100	◆▼
New Zealand			
Novartis New Zealand Ltd., Auckland	NZD 820 000	100	◆
Norway			
Novartis Norge AS, Oslo	NOK 1.5 m	100	◆
Pakistan			
Novartis Pharma (Pakistan) Limited, Karachi	PKR 1.8 bn	100	◆▼
Panama			
Novartis Pharma (Logistics), Inc., Ciudad de Panama	USD 10 000	100	◆
Peru			
Novartis Biosciences Peru S.A., Lima	PEN 6.1 m	100	◆
Philippines			
Novartis Healthcare Philippines, Inc., Makati/Manila	PHP 298.8 m	100	◆
Sandoz Philippines Corporation, Manila	PHP 30.0 m	100	◆▼
Poland			
Novartis Poland Sp. z o.o., Warszawa	PLN 44.2 m	100	◆
Alcon Polska Sp. z o.o., Warszawa	PLN 750 000	100	◆
Sandoz Polska Sp. z o.o., Warszawa	PLN 25.6 m	100	◆
Lek S.A., Strykow	PLN 11.4 m	100	◆▼
Portugal			
Novartis Portugal SGPS Lda., Sintra	EUR 500 000	100	■
Novartis Farma – Produtos Farmacêuticos S.A., Sintra	EUR 2.4 m	100	◆
Alcon Portugal-Produtos e Equipamentos Oftalmologicos Lda., Paco d'Arcos	EUR 4.5 m	100	◆
Sandoz Pharmacéutica Ltd., Sintra	EUR 5.0 m	100	◆
Novartis Consumer Health – Produtos Farmacêuticos e Nutrição Lda., Sintra	EUR 100 000	100	◆
Puerto Rico			
Ex-Lax, Inc., Humacao	USD 10 000	100	▼
Alcon (Puerto Rico) Inc., Catano	USD 15.5	100	◆
Romania			
Sandoz S.R.L., Targu-Mures	RON 105.2 m	100	◆▼

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
Russian Federation			
Novartis Pharma LLC, Moscow	RUB 20.0 m	100	◆
Alcon Farmacevtika LLC, Moscow	RUB 44.1 m	100	◆
ZAO Sandoz, Moscow	RUB 57.4 m	100	◆
Novartis Neva LLC, St. Petersburg	RUB 500.0 m	100	▼
Novartis Consumer Health LLC, Moscow	RUB 80.0 m	100	◆
Saudi Arabia			
Saudi Pharmaceutical Distribution Co. Ltd., Riyadh	SAR 26.8 m	75	◆
Singapore			
Novartis (Singapore) Pte Ltd., Singapore	SGD 100 000	100	◆
Novartis Singapore Pharmaceutical Manufacturing Pte Ltd., Singapore	SGD 45.0 m	100	▼
Novartis Asia Pacific Pharmaceuticals Pte Ltd., Singapore	SGD 1.0 m	100	◆
Novartis Institute for Tropical Diseases Pte Ltd., Singapore	SGD 2 004	100	▲
Alcon Singapore Manufacturing Pte Ltd., Singapore	SGD 101 000	100	▼
CIBA Vision (Singapore) Pte Ltd., Singapore	SGD 400 000	100	◆
CIBA Vision Asian Manufacturing and Logistics Pte Ltd., Singapore	SGD 1.0 m	100	▼
Slovakia			
Novartis Slovakia s.r.o., Bratislava	EUR 2.0 m	100	◆
Slovenia			
Lek Pharmaceuticals d.d., Ljubljana	EUR 48.4 m	100	■◆▼▲
Sandoz Pharmaceuticals d.d., Ljubljana	EUR 1.5 m	100	◆
South Africa			
Novartis South Africa (Pty) Ltd., Kempton Park	ZAR 86.3 m	100	◆
Alcon Laboratories (South Africa) (Pty) Ltd., Bryanston, Gauteng	ZAR 201 820	100	◆
Sandoz South Africa (Pty) Ltd., Kempton Park	ZAR 3.0 m	100	◆▼
South Korea			
Novartis Korea Ltd., Seoul	KRW 24.5 bn	99	◆
Alcon Korea Ltd., Seoul	KRW 33.8 bn	100	◆
Spain			
Novartis Farmacéutica, S.A., Barcelona	EUR 63.0 m	100	■◆▼
Alcon Cusi S.A., El Masnou	EUR 11.6 m	100	◆▼
CIBA Vision, S.A., Barcelona	EUR 1.4 m	100	◆
Sandoz Farmacéutica, S.A., Madrid	EUR 270 450	100	◆
Sandoz Industrial Products, S.A., Les Franqueses del Vallés/Barcelona	EUR 9.3 m	100	◆▼▲
Bexal Farmacéutica, S.A., Madrid	EUR 1.0 m	100	◆
Novartis Vaccines and Diagnostics, S.L., Barcelona	EUR 675 450	100	◆
Novartis Consumer Health, S.A., Barcelona	EUR 876 919	100	◆
Sweden			
Novartis Sverige Participations AB, Täby/Stockholm	SEK 1.0 m	100	■
Novartis Sverige AB, Täby/Stockholm	SEK 5.0 m	100	◆
Alcon Sverige AB, Bromma	SEK 100 000	100	◆
CIBA Vision Nordic AB, Askim/Göteborg	SEK 2.5 m	100	◆
Switzerland			
Novartis International AG, Basel	CHF 10.0 m	100	■
Novartis Holding AG, Basel	CHF 100.2 m	100	■
Novartis Research Foundation, Basel	CHF 29.3 m	100	■
Novartis Foundation for Management Development, Basel	CHF 100 000	100	■
Novartis Foundation for Employee Participation, Basel	CHF 100 000	100	■
Novartis Sanierungsstiftung, Basel	CHF 2.0 m	100	■
Novartis Pharma AG, Basel	CHF 350.0 m	100	■◆▼▲
Novartis Pharma Services AG, Basel	CHF 20.0 m	100	◆
Novartis Pharma Schweizerhalle AG, Muttenz	CHF 18.9 m	100	▼
Novartis Pharma Stein AG, Stein	CHF 251 000	100	▼▲
Novartis Pharma Schweiz AG, Bern	CHF 5.0 m	100	◆▲
Alcon Switzerland SA, Hünenberg	CHF 100 000	100	◆
Alcon Pharmaceuticals Ltd., Fribourg	CHF 200 000	100	■◆
ESBATech, a Novartis Company GmbH, Schlieren	CHF 14.0 m	100	▲
Sandoz AG, Basel	CHF 5.0 m	100	■◆▲
Sandoz Pharmaceuticals AG, Steinhausen	CHF 100 000	100	◆
Novartis Vaccines and Diagnostics AG, Basel	CHF 800 000	100	■▲
Novartis Vaccines and Diagnostics Services AG, Basel	CHF 100 000	100	■▼

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
Switzerland (continued)			
Novartis Consumer Health S.A., Nyon	CHF 30.0 m	100	■◆▼▲
Novartis Consumer Health Schweiz AG, Bern	CHF 250 000	100	◆
Novartis Animal Health AG, Basel	CHF 101 000	100	■◆▼▲
Novartis Centre de Recherche Santé Animale S.A., St. Aubin	CHF 250 000	100	▲
Roche Holding AG, Basel	CHF 160.0 m	33/6[3]	■
Taiwan			
Novartis (Taiwan) Co., Ltd., Taipei	TWD 170.0 m	100	◆▼
Thailand			
Novartis (Thailand) Limited, Bangkok	THB 230.0 m	100	◆
Alcon Laboratories (Thailand) Ltd., Bangkok	THB 2.1 m	100	◆
Turkey			
Novartis Saglik, Gida ve Tarim Ürünleri Sanayi ve Ticaret A.S., Istanbul	TRY 98.0 m	100	◆▼
Alcon Laboratuvarlari Ticaret A.S., Istanbul	TRY 25.2 m	100	◆
Sandoz Ilaç Sanayi ve Ticaret A.S., Istanbul	TRY 160.0 m	100	◆▼
United Kingdom			
Novartis UK Limited, Frimley/Camberley	GBP 25.5 m	100	■
Novartis Pharmaceuticals UK Limited, Frimley/Camberley	GBP 5.4 m	100	◆▼▲
Novartis Grimsby Limited, Frimley/Camberley	GBP 230 m	100	▼
Alcon Laboratories (UK) Limited, Frimley/Camberley	GBP 9.1 m	100	◆
Alcon Eye Care (UK) Limited, Frimley/Camberley	GBP 550 000	100	◆
Sandoz Limited, Frimley/Camberley	GBP 2.0 m	100	◆
Novartis Vaccines and Diagnostics Limited, Frimley/Camberley	GBP 100	100	◆▼
Novartis Consumer Health UK Limited, Horsham	GBP 25 000	100	◆▼
Novartis Animal Health UK Limited, Frimley/Camberley	GBP 100 000	100	◆▲
United States of America			
Novartis Corporation, East Hanover, NJ	USD 98.6 m	100	■
Novartis Finance Corporation, New York, NY	USD 2.0 bn	100	■
Novartis Capital Corporation, New York, NY	USD 1	100	■
Novartis Pharmaceuticals Corporation, East Hanover, NJ	USD 5.2 m	100	◆▼▲
Novartis Institutes for BioMedical Research, Inc., Cambridge, MA	USD 1	100	▲
Novartis Institute for Functional Genomics, Inc., San Diego, CA	USD 21 000	100	▲
Genoptix, Inc., Carlsbad, CA	USD 1	100	◆▲
Alcon Laboratories, Inc., Fort Worth, TX	USD 1 000	100	■◆▼
Alcon Refractive Horizons, LLC, Fort Worth, TX	USD 10	100	▼

As at December 31, 2012	Share/paid-in capital[1]	Equity interest %	Activities
United States of America (continued)			
Alcon Research, Ltd., Fort Worth, TX	USD 2.5 bn	100	▼▲
Alcon LenSx, Inc., Alisio Viejo, CA	USD 100	100	▼
CIBA Vision Corporation, Duluth, GA	USD 301.3 m	100	■◆▼▲
Sandoz Inc., Princeton, NJ	USD 25 000	100	◆▼▲
Fougera Pharmaceuticals, Inc., Melville, NY	USD 1	100	◆▲
Eon Labs, Inc., Princeton, NJ	USD 1	100	◆▼
Falcon Pharmaceuticals, Ltd., Forth Worth, TX	USD 10	100	◆
Novartis Vaccines and Diagnostics, Inc., Cambridge, MA	USD 3.0	100	◆▼▲
Novartis Consumer Health, Inc., Parsippany, NJ	USD 0[2]	100	◆▼▲
Novartis Animal Health US, Inc., Greensboro, NC	USD 100	100	◆▼▲
Idenix Pharmaceuticals, Inc., Cambridge, MA	USD 133 883	25	■
Venezuela			
Novartis de Venezuela, S.A., Caracas	VEF 1.4 m	100	◆
Alcon Pharmaceutical, C.A., Caracas	VEF 5.5 m	100	◆

In addition, the Group is represented by subsidiaries, associated companies or joint ventures in the following countries: Algeria, Bosnia/Herzegovina, Bulgaria, Cayman Islands, Costa Rica, Dominican Republic, Guatemala, the Former Yugoslav Republic of Macedonia, Morocco, Ukraine and Uruguay.

[1] Share/paid-in capital may not reflect the taxable share/paid-in capital amount and does not include any paid-in surplus.
[2] Shares without par value
[3] Approximately 33% of voting shares; approximately 6% of total net income and equity attributable to Novartis
m = million; bn = billion

The following describe the various types of entities within the Group:
■ **Holding/Finance:** This entity is a holding company and/or performs finance functions for the Group.
◆ **Sales:** This entity performs sales and marketing activities for the Group.
▼ **Production:** This entity performs manufacturing and/or production activities for the Group.
▲ **Research:** This entity performs research and development activities for the Group.

32. RISK ASSESSMENT DISCLOSURES REQUIRED BY SWISS LAW

The Risk Committee of the Board ensures the Group has implemented an appropriate and effective risk management system and process. It reviews with management and internal audit the identification, prioritization and management of the risks, the accountabilities and roles of the functions involved with risk management, the risk portfolio and the related actions implemented by management. The Risk Committee informs the Board of Directors on a periodic basis.

The Corporate Risk Management function coordinates and aligns the risk management processes, and reports to the Risk Committee on a regular basis on risk assessment and risk management. Organizational and process measures have been designed to identify and mitigate risks at an early stage. Organizationally, the responsibility for risk assessment and management is allocated to the Divisions, with specialized Corporate Functions such as Financial Reporting & Accounting, Treasury, Group Quality Operations, Corporate Health, Safety and Environment, and Business Continuity providing support and controlling the effectiveness of the risk management by the Divisions.

Financial risk management is described in more detail in Note 29 to the Group's consolidated financial statements.

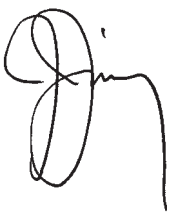
REPORT OF NOVARTIS MANAGEMENT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and management of the Group are responsible for establishing and maintaining adequate internal control over financial reporting. The Novartis Group's internal control system was designed to provide reasonable assurance to the Novartis Group's management and Board of Directors regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Novartis Group management assessed the effectiveness of the Group's internal control over financial reporting as of December 31, 2012. In making this assessment, it used the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on its assessment, management has concluded that, as of December 31, 2012, the Novartis Group's internal control over financial reporting was effective based on those criteria.

PricewaterhouseCoopers AG, Switzerland, an independent registered public accounting firm, has issued an opinion on the effectiveness of the Group's internal control over financial reporting which is included in this financial report on the following pages 256 and 257.



Joseph Jimenez
Chief Executive Officer

Jonathan Symonds
Chief Financial Officer

Basel, January 22, 2013

REPORT OF THE STATUTORY AUDITOR ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NOVARTIS AG AND INTERNAL CONTROL OVER FINANCIAL REPORTING

TO THE GENERAL MEETING OF NOVARTIS AG, BASEL

REPORT OF THE STATUTORY AUDITOR ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NOVARTIS AG

As statutory auditor, we have audited the consolidated financial statements of Novartis AG and its consolidated subsidiaries ("Novartis Group"), which comprise the consolidated income statements, consolidated statements of comprehensive income, consolidated statements of changes in equity, consolidated balance sheets, consolidated cash flow statements and notes (pages 190 to 254) for the year ended December 31, 2012.

Board of Directors' Responsibility

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards, International Standards on Auditing and the standards of the Public Company Accounting Oversight Board of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements for the year ended December 31, 2012 present fairly, in all material respects, the financial position, the results of operations and the cash flows in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board and comply with Swiss law.

REPORT ON OTHER LEGAL REQUIREMENTS

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

REPORT ON THE EFFECTIVENESS OF INTERNAL CONTROL OVER FINANCIAL REPORTING

We have also audited the effectiveness of Novartis Group's internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The Board of Directors and management of Novartis Group are responsible for maintaining effective internal control over financial reporting and management is responsible for the assessment of the effectiveness of internal control over financial reporting included in the accompanying *Report of Novartis Management on Internal Control Over Financial Reporting* in this financial report on page 255. Our responsibility is to express an opinion on the effectiveness of Novartis Group's internal control over financial reporting based on our integrated audit.

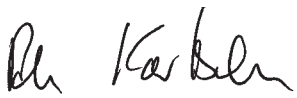
We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also includes performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the applicable accounting standards. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the applicable accounting standards, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Novartis Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control – Integrated Framework* issued by the COSO.

PricewaterhouseCoopers AG



Peter M. Kartscher
Audit expert
Auditor in charge

Michael P. Nelligan
Global relationship partner

Basel, January 22, 2013

INCOME STATEMENTS

(For the years ended December 31, 2012 and 2011)

	Note	2012 CHF millions	2011 CHF millions
Income			
Income from financial assets		5 221	5 284
Gain from disposal of intangible assets		76	356
License fees		1 491	1 419
Other income		3	4
Total income		**6 791**	**7 063**
Expenses			
Financial expense		– 306	– 326
Administrative expenses		– 21	– 21
Amortization of intangible assets	3	– 1 153	– 1 153
Other expenses		– 25	– 69
Taxes		– 145	– 123
Total expenses		**– 1 650**	**– 1 692**
Net income		**5 141**	**5 371**

The notes form an integral part of these unconsolidated financial statements.

BALANCE SHEETS (PRIOR TO PROFIT APPROPRIATION)

(At December 31, 2012 and 2011)

	Note	2012 CHF millions	2011 CHF millions
Assets			
Non-current assets			
Goodwill and other intangible assets	3	20 220	21 407
Financial assets-subsidiaries and associated companies	4	19 654	20 881
Total non-current assets		**39 874**	**42 288**
Current assets			
Receivables			
– subsidiaries		11 105	9 428
– others		47	46
Marketable securities	5	101	2 183
Total current assets		**11 253**	**11 657**
Total assets		**51 127**	**53 945**
Equity and liabilities			
Equity			
Total share capital	6	**1 353**	**1 373**
Reserves			
Legal reserves	7		
– General reserve		320	320
– Capital contribution reserve		198	198
– Reserve for treasury shares		3 214	5 744
Free reserves	8	39 262	39 271
Total reserves		**42 994**	**45 533**
Unappropriated earnings			
Net income of the year		5 141	5 371
Total unappropriated earnings		**5 141**	**5 371**
Total equity		**49 488**	**52 277**
Liabilities			
Bonds	9	795	794
Provisions		518	534
Accounts payable and accrued liabilities			
– subsidiaries		81	116
– others		245	224
Total liabilities		**1 639**	**1 668**
Total equity and liabilities		**51 127**	**53 945**

The notes form an integral part of these unconsolidated financial statements.

1. INTRODUCTION

The financial statements of Novartis AG comply with the requirements of the Swiss law for companies, the Code of Obligations (SCO).

2. ACCOUNTING POLICIES

EXCHANGE RATE DIFFERENCES

Current assets and current liabilities denominated in foreign currencies are converted at year-end exchange rates. Realized exchange gains and losses as well as all unrealized exchange losses arising from these as well as those from business transactions are recorded in the income statement.

GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill and other intangible assets are capitalized and amortized over a period of between five and twenty years. Goodwill and other intangible assets are reviewed for impairment on a yearly basis. If necessary an impairment loss is recognized.

FINANCIAL ASSETS

These are valued at acquisition cost less adjustments for foreign currency losses and any other impairment of value.

MARKETABLE SECURITIES

These are valued at the lower of cost and market value.

BONDS

These are valued on an amortized cost basis such that additional interest is accrued over the duration of the bonds so that at maturity the balance sheet amount will equal the amount that is due to be paid.

PROVISIONS

Provisions are made to cover general business risks of the Group.

3. GOODWILL AND OTHER INTANGIBLE ASSETS

At the Extraordinary General Meeting (EGM) on April 8, 2011 Novartis AG shareholders approved the retrospective merger as of January 1, 2011 of Novartis AG with Alcon, Inc. which was a Swiss company. Based on the EGM approval and on the merger agreement, Alcon, Inc. assets and liabilities have been integrated into Novartis AG at book value.

Goodwill	2012 CHF millions	2011 CHF millions
Cost		
January 1	**22 384**	
Arising on Alcon, Inc. merger with Novartis AG		39 101
Disposals as a result of a Novartis Group internal legal company reorganizations	– 34	– 16 717
December 31	**22 350**	**22 384**
Accumulated amortization		
January 1	**– 1 140**	
Amortization charges	– 1 140	– 1 140
December 31	**– 2 280**	**– 1 140**
Net book value at December 31	**20 070**	**21 244**
Other intangible assets		
Cost		
January 1 and December 31	**242**	**242**
Accumulated amortization		
January 1	**– 79**	**– 66**
Amortization charges	– 13	– 13
December 31	**– 92**	**– 79**
Net book value at December 31	**150**	**163**
Goodwill and other intangible assets		
Net book value at December 31	**20 220**	**21 407**

4. FINANCIAL ASSETS

Included in financial assets are CHF 14 395 million (2011: CHF 14 412 million) of investments in subsidiaries and associated companies and CHF 5 259 million (2011: CHF 6 469 million) of loans to subsidiaries.

The principal direct and indirect subsidiaries and other holdings of Novartis AG are shown in note 31 to the Group's consolidated financial statements.

5. MARKETABLE SECURITIES

Included in marketable securities are Novartis AG treasury shares with a net book value of CHF 25 million (2011: CHF 2 108 million) (see notes 6 and 7 below). This position also includes time deposits of CHF 72 million (2011: CHF 72 million) to cover a guarantee and so is restricted in its use.

6. SHARE CAPITAL

	Number of shares				
	Dec 31, 2010	Movement in year	Dec 31, 2011	Movement in year	Dec 31, 2012
Total Novartis AG shares	**2 637 623 000**	**108 000 000**	**2 745 623 000**	**– 39 430 000**	**2 706 193 000**
Treasury shares held by Novartis AG and its subsidiaries (excluding foundations)					
Treasury shares held by Novartis AG	107 988 000	– 17 250 542	90 737 458	– 39 430 000	51 307 458
Treasury shares held by subsidiaries	58 893 837	8 541 945	67 435 782	– 7 883 490	59 552 292
Total treasury shares held by Novartis AG and its subsidiaries (excluding foundations)	**166 881 837**	**– 8 708 597**	**158 173 240**	**– 47 313 490**	**110 859 750**

The Novartis AG share capital consists of registered shares with a nominal value of CHF 0.50 each.

The total share capital decreased from CHF 1 372.8 million at December 31, 2011 to CHF 1 353.1 million at December 31, 2012 due to a share capital reduction as a result of the cancellation of 39.4 million repurchased shares with a nominal value of CHF 19.7 million. The cancellation was approved at the Annual General Meeting of February 23, 2012 and became effective on May 3, 2012.

During 2011, the number of issued shares increased by 108 million to 2 745.6 million at December 31, 2011 as a result of shares exchanged for acquiring the remaining outstanding interests in Alcon Inc. approved at the Extraordinary General Meeting on April 8, 2011. This increased the amount of the issued share capital by CHF 54.0 million to CHF 1 372.8 million at December 31, 2011.

Treasury share purchases during 2012 totaled 6.3 million (2011: 60.1 million) with an average purchase price of CHF 51 (2011: CHF 52), treasury share sales totaled 3.8 million (2011: 5.3 million) with an average sale price of CHF 55 (2011: CHF 51) and share-based compensation transactions totaled 10.4 million shares (2011: 6.8 million shares). During 2011, treasury shares used for the Alcon merger totaled 164.7 million (108.0 million shares issued on April 8, 2011 plus 56.7 million shares already held as treasury shares).

The number of treasury shares held by the Company and its subsidiaries meet the definitions and requirements of Art. 659b SCO.

At December 31, 2012, treasury shares held by Novartis AG and its subsidiaries totaled 110 859 750, of which 99 859 750 are non-dividend bearing. The remaining balance are dividend bearing and held principally for share-based compensation purposes. It should be noted that the Novartis Group's consolidated financial statements comply with IFRS. This requires consolidation of entities, mainly foundations, which do not qualify as subsidiaries in the sense of Article 659b SCO.

7. LEGAL RESERVES

GENERAL RESERVE

	2012 CHF millions	2011 CHF millions
January 1 and December 31	**320**	**320**

CAPITAL CONTRIBUTION RESERVE

	2012 CHF millions	2011 CHF millions
January 1	**198**	
Created as a result of Alcon, Inc. merger with Novartis AG		198
December 31	**198**	**198**

RESERVE FOR TREASURY SHARES HELD BY THE GROUP

	2012 CHF millions	2011 CHF millions
January 1	**5 744**	**3 374**
Reduction due to cancellation of treasury shares (CHF 2 081 million of repurchased shares less their nominal value of CHF 20 million)	– 2 061	
Transfer to/from free reserves	– 469	2 370
December 31	**3 214**	**5 744**

The general reserve must be accumulated until it is at least 20% of the share capital of Novartis AG in order to comply with the SCO.

Novartis AG has met the legal requirements for legal reserves under Articles 659 et. seq. and 663b.10 SCO for the treasury shares detailed in note 5.

8. FREE RESERVES

	2012 CHF millions	2011 CHF millions
January 1	**39 271**	**40 065**
Transfer to/from unappropriated earnings	– 478	1 576
Transfer from/to reserve for treasury shares	469	– 2 370
December 31	**39 262**	**39 271**

9. CHF 800 MILLION BONDS 3.625% 2008/2015

On June 26, 2008 Novartis AG issued CHF 800 million of bonds bearing interest at 3.625% per annum and due on June 26, 2015. The bonds were issued at 100.35% and proceeds received after deducting related costs amounted to CHF 787.9 million. The bonds are valued on an amortized cost basis.

10. CONTINGENT LIABILITIES

	Dec 31, 2012 CHF millions	Dec 31, 2011 CHF millions
Guarantees in favor of subsidiaries to cover capital and interest of bonds and commercial paper programs – total maximum amount CHF 25 247 million (2011: CHF 24 486 million)	13 674	13 950
Other guarantees in favor of subsidiaries, associated companies and others – total maximum amount CHF 2 688 million (2011: CHF 2 989 million)	1 220	1 711
Total contingent liabilities	**14 894**	**15 661**

11. REGISTRATION, VOTING RESTRICTIONS AND MAJOR SHAREHOLDERS

The Company's Articles of Incorporation state that no person or entity shall be registered with the right to vote for more than 2% of the share capital as set forth in the Commercial Register. In particular cases the Board of Directors may allow exemptions from the limitation for registration in the share register.

According to the share register, shareholders owning 2% or more of the Company's capital at December 31, excluding treasury shares held by Novartis AG and other Novartis subsidiaries, are as follows:

	% holding of share capital December 31, 2012	% holding of share capital December 31, 2011
Novartis Foundation for Employee Participation, Basel, Switzerland	4.0	4.1
Emasan AG, Basel, Switzerland	3.3	3.2

In addition, Novartis AG was informed through a notification that Norges Bank (Central Bank of Norway), Oslo, Norway, holds 2.3%.

Furthermore, there are the following other significant shareholders:

Shareholders registered as nominees:
- JPMorgan Chase Bank, New York, United States, holds 11.4% (2011: 10.9%).
- Nortrust Nominees, London, United Kingdom, holds 3.3% (2011: 3.2%).
- The Bank of New York Mellon, New York, United States, holds 5.0% (2011: 4.3%) through its Nominees Mellon Bank, Everett, United States, with a holding of 3.3% and The Bank of New York Mellon, Brussels, Belgium, with a holding of 1.7%.

Shareholder acting as American Depositary Share (ADS) depositary:
- JPMorgan Chase Bank, New York, United States, holds 11.7% (2011: 11.0%).

Shareholders disclosed through notifications filed with Novartis AG and the SIX Swiss Exchange:
- Capital Group Companies, Inc., Los Angeles, United States, holds between 3% and 5%.
- BlackRock, Inc., New York, United States, holds between 3% and 5%.

12. EXECUTIVE AND BOARD OF DIRECTORS COMPENSATION DISCLOSURES

Novartis AG's financial statements have been prepared in accordance with the requirements of Swiss company law, the Swiss Code of Obligations (SCO). This note therefore differs in certain significant respects from compensation disclosures in note 27 to the Group's consolidated financial statements, which have been prepared in accordance with International Financial Reporting Standards (IFRS), mainly due to different expense recognition rules being applied.

12.1) COMPENSATION OF MEMBERS OF THE EXECUTIVE COMMITTEE

GENERAL PRINCIPLES

The compensation policies, performance management process and incentive plans apply equally to the members of the Executive Committee.

Decisions concerning the compensation of the members of the Executive Committee are based on an evaluation of the individual performance of the members of the Executive Committee as well as on the performance of their respective business area or function. Compensation of the members of the Executive Committee is highly linked to Novartis' performance against performance objectives. The financial criteria for short-term performance appraisal of the CEO include growth objectives for net sales, operating income, net income, free cash-flow, earnings per share as well as market share. For long-term performance appraisal, the financial criterion is the Novartis Economic Value Added (NVA). NVA is a measure of the Group's performance taking into account Group operating income adjusted for interest, taxes and charge for the cost of capital or, more simply, the value created in excess of the expected return of the company's investors (i.e. the shareholders and debt holders). See also page 186 of the Financial Report for information regarding NVA calculation.

The metrics of performance objectives are designed to appropriately balance short-term and long-term objectives. On the one hand, objectives are set at ambitious levels each year to motivate a high degree of business performance with emphasis on longer term financial objectives. On the other hand, they are also designed to avoid inappropriate or excessive risk.

COMPENSATION FOR PERFORMANCE IN 2012 AND 2011

The following compensation tables disclose the compensation granted to the CEO and the members of the Executive Committee for performance in 2012 with comparatives to 2011. The following paragraphs describe the principles underlying the data in the tables.

ALIGNMENT OF REPORTING AND PERFORMANCE

The compensation tables synchronize the reporting of annual compensation with the performance in the given year, i.e., all amounts awarded for performance in 2012 and 2011, including the future LSSP/ESOP match, are disclosed in full in the tables of 2012 and 2011.

DISCLOSURE STRUCTURE

The compensation table shows the compensation granted to the CEO and each member of the Executive Committee for performance in 2012 for all compensation elements.

The column "Future LSSP/ESOP match" reflects shares to be awarded in the future if the member of the Executive Committee remains with Novartis for at least three or five years, respectively.

The members of the Executive Committee were invited to invest their annual incentive awards for 2012 and 2011 either in the five-year Leveraged Share Savings Plan (LSSP) or in the three-year Swiss Employee Share Ownership Plan (ESOP) to further align their interests with those of our shareholders. Under the plan rules, participants will receive additional shares ("matching shares") after the expiration of either the three- or five-year vesting period. Under the three-year ESOP, for every two shares invested, the participant receives one matching share. Under the five-year LSSP, each share invested entitles the participant to receive one matching share. If a participant leaves Novartis prior to the expiration of the vesting period, in general, no matching shares are awarded.

VALUATION PRINCIPLES

In order to allow a comparison with other companies, the Compensation Committee decided to disclose shares, restricted shares, RSUs and ADS at their market value on the date of grant. Market value is the current quoted share price at which a director or an associate is granted a share, a restricted share or a restricted stock unit at grant date. The market value of share options is calculated by using an option pricing valuation model as per grant date.

The total expense for the year for the compensation awarded to the members of the Board of Directors and the members of the Executive Committee using IFRS measurement rules is presented in our Financial Report in note 27 to the Group's audited consolidated financial statements.

EXECUTIVE COMMITTEE MEMBER MARKET VALUE COMPENSATION FOR PERFORMANCE YEAR 2012 [1]

		Base compensation	Variable compensation					Benefits		Total		Total compensation
			Short-term incentive plans		Long-term incentive plans							
					Equity Plan "Select"		Long-Term Performance Plan	Pension benefits	Other benefits		Future LSSP/ESOP match [9]	Including future LSSP/ESOP match [10,11]
	Currency	Cash (Amount)	Cash (Amount)	Shares (Market value) [2]	Shares (Market value) [3]	Options (Market value) [4]	Shares (Market value) [5]	(Amount) [6]	(Amount) [7]	(Amount) [8]	Shares (Market value)	(Amount)
Joseph Jimenez (Chief Executive Officer)	CHF	2 025 000	1 370 300	0	4 795 941	0	4 747 013	161 200	128 734	13 228 188	0	13 228 188
Juergen Brokatzky-Geiger	CHF	708 750	0	625 330	1 250 536	0	731 145	148 594	10 084	3 474 439	625 330	4 099 769
Kevin Buehler [12]	USD	1 118 333	202 897	504 048	2 827 532	0	1 753 300	413 056	62 930	6 882 096	504 048	7 386 144
Felix R. Ehrat	CHF	743 333	0	750 149	1 500 112	0	432 702	158 498	0	3 584 794	750 149	4 334 943
David Epstein	USD	1 158 332	525 953	727 166	3 132 643	0	1 666 814	325 563	26 191	7 562 662	727 166	8 289 828
Mark C. Fishman	USD	990 000	23 265	966 736	3 960 038	0	1 547 029	242 832	118 319	7 848 219	966 736	8 814 955
Jeff George	CHF	791 667	220 000	220 022	880 027	0	636 250	111 932	55 412	2 915 310	110 011	3 025 321
George Gunn	CHF	862 500	716 300	0	1 193 710	0	1 213 762	108 382	0	4 094 654	0	4 094 654
Naomi Kelman (until February 29, 2012) [13]	USD	102 782	51 667	0	0	0	0	3 196	904 469	1 062 114	0	1 062 114
Andrin Oswald	CHF	791 667	0	304 058	608 054	0	636 250	118 132	38 520	2 496 681	304 058	2 800 739
Jonathan Symonds	CHF	916 667	0	621 011	1 552 557	0	1 377 021	161 817	17 135	4 646 208	621 011	5 267 219
Brian Mc Namara (as from March 1, 2012) [14]	USD	500 000	94 169	140 002	464 869	0	260 580	45 053	19 710	1 524 383	140 002	1 664 385
Total [15]	**CHF**	**10 466 057**	**3 148 166**	**4 711 715**	**21 513 910**	**0**	**14 673 602**	**1 933 597**	**1 310 446**	**57 757 493**	**4 601 704**	**62 359 197**

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not considered compensation.

[2] Participants elected to invest some or all of the value of their annual incentive in the Leveraged Share Savings Plan (LSSP) with a five-year vesting period or the Swiss Employee Share Ownership Plan (ESOP) with a three-year vesting period rather than to receive cash.

[3] Novartis shares granted under the Novartis Equity Plan "Select" have a three-year vesting period.

[4] Novartis share options granted under the Novartis Equity Plan "Select" are tradable. Share options granted outside North America will expire on January 17, 2023, have a three-year vesting period and have an exercise price of CHF 61.70 per share (the closing price of Novartis shares on the grant date of January 17, 2013). Based on the option pricing valuation model as per grant date, the value of the share options granted outside North America used in this table was CHF 4.28. Share options on ADSs granted to participants in North America will expire on January 17, 2023, have a three-year vesting period and an exercise price of USD 66.07 per ADS (the closing price of Novartis ADSs on the grant date of January 17, 2013). Based on the option pricing valuation model as per grant date, the value of the share options on ADSs granted to participants in North America used in this table was USD 4.37.

[5] Awarded based on the achievement of Novartis Economic Value Added (NVA) objectives over the performance period ended December 31, 2012.

[6] Service costs of pension and post-retirement healthcare benefits accumulated in 2012.

[7] Includes perquisites and other compensation valued at market price. Does not include cost allowances and tax-equalization payments regarding the international assignment of David Epstein, Jeff George and Andrin Oswald. Does not include an annual pension in payment for Kevin Buehler as a result of a change of control clause (USD 491 174). Does not include dividend equivalents paid in 2012 to Kevin Buehler (USD 529 387) for pre Alcon merger RSUs grants, to David Epstein (USD 138 011), Mark C. Fishman (USD 189 845) and Brian Mc Namara (USD 17 122) for RSUs grants made in or prior to 2010.

[8] The value of all equity grants included in this table has been calculated based on market value.

[9] Reflects shares to be awarded in the future under the share saving plans, either the five-year Leveraged Share Savings Plan (LSSP) or the three-year Swiss Employee Share Ownership Plan (ESOP). Participants will receive additional shares ("matching shares") after the expiration of either the five- or three-year vesting period.

[10] The values of the shares, RSUs and share options reflected in this table have been calculated based on market value. The closing share price on the grant date January 17, 2013 was CHF 61.70 per Novartis share and USD 66.07 per ADS.

[11] All amounts are gross amounts (i.e., before deduction of social security and income tax due by the executives). The employer social security contribution is not included.

[12] Excludes 35 153 performance shares awarded to Kevin Buehler, against the share price of USD 54.51 for performance prior to the Alcon merger.

[13] Naomi Kelman stepped down from the Executive Committee as per February 29, 2012. The base compensation and benefits information in the table reflects her pro rata compensation over the period from January 1, 2012 to February 29, 2012 (i.e. the period during which she was member of the Executive Committee). The other compensation ("Other benefits") includes the contractual compensation and benefits from March 1, 2012 to December 31, 2012 due in compensation for the twelve-month notice set forth in her employment contract. The other compensation ("Other benefits") does not include the fair market compensation (USD 1 263 223 related to the period between March 1, 2012 and December 31, 2012) for refraining to compete with any business of Novartis for twelve months following her departure. Ms. Kelman will receive this payment in 2013 partly in cash and partly in shares subject to her continued compliance with the non-compete terms. Of the 88 000 shares reported in the Annual Report 2011 as a Special Share Award, 70 500 shares have forfeited, while 17 500 shares contractually vested in 2012.

[14] The table reflects the compensation as Permanent Attendee to the Executive Committee from March 1, 2012 until December 31, 2012.

[15] Amounts in USD for Kevin Buehler, David Epstein, Mark C. Fishman, Naomi Kelman and Brian Mc Namara were converted at a rate of CHF 1.00 = USD 1.067, which is the same average exchange rate used in the Group's consolidated financial statements.

EXECUTIVE COMMITTEE MEMBER COMPENSATION FOR PERFORMANCE YEAR 2011 (MARKET VALUE)[1]

		Base compensation	Variable compensation						Benefits		Total		Total compensation
			Short-term incentive plans		Long-term incentive plans								
					Equity Plan "Select"		Long-Term Performance Plan	Special share awards	Pension benefits	Other benefits		Future LSSP/ESOP match[10]	Including future LSSP/ESOP match[11,12]
	Currency	Cash (Amount)	Cash (Amount)	Shares (Market value)[2]	Shares (Market value)[3]	Options (Market value)[4]	Shares (Market value)[5]	Shares (Market value)[6]	(Amount)[7]	(Amount)[8]	(Amount)[9]	Shares (Market value)	(Amount)
Joseph Jimenez (Chief Executive Officer)	CHF	1 916 667	704 000	1 056 033	6 160 047	0	4 550 524	0	172 193	106 889	14 666 353	1 056 033	15 722 386
Juergen Brokatzky-Geiger	CHF	696 670	0	616 037	1 232 020	0	582 379	0	150 268	26 117	3 303 491	616 037	3 919 528
Kevin Buehler (since April 8, 2011)[13]	USD	803 611	618 799	1 078 872	2 716 195	0	1 312 775	0	229 624	45 974	6 805 850	1 078 872	7 884 722
David Epstein	USD	933 333	402 630	583 475	2 794 007	0	1 293 468	0	279 409	115 086	6 401 408	583 475	6 984 883
Mark C. Fishman	USD	986 333	13 997	951 304	3 861 038	0	1 347 831	0	252 712	122 315	7 535 530	951 304	8 486 834
Jeff George	CHF	733 334	365 650	365 687	1 462 533	0	443 410	940 000	105 934	48 053	4 464 601	182 871	4 647 472
George Gunn	CHF	845 836	663 000	0	1 105 030	0	930 397	0	98 584	9 992	3 652 839	0	3 652 839
Andrin Oswald	CHF	733 334	682 500	0	1 365 027	0	443 410	940 000	118 403	57 507	4 340 181	0	4 340 181
Jonathan Symonds	CHF	890 000	0	792 025	1 980 034	0	766 171	0	196 350	0	4 624 580	792 025	5 416 605
Thomas Werlen (until September 30, 2011)[14]	CHF	560 001	0	412 516	0	0	0	0	99 836	1 598 454	2 670 807	0	2 670 807
Naomi Kelman (as from March 2, 2011)[15]	USD	497 826	262 500	0	525 028	0	81 720	4 773 120	18 466	638 443	6 797 103	0	6 797 103
Felix R. Ehrat (as from October 1, 2011)[16]	CHF	175 000	0	130 405	260 810	0	76 639	0	36 296	4 352	683 502	130 405	813 907
Total[17]	**CHF**	**9 401 376**	**3 563 757**	**5 685 668**	**22 323 260**	**0**	**11 364 429**	**6 104 000**	**1 668 316**	**2 667 132**	**62 777 939**	**5 090 336**	**67 868 275**

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not considered compensation.

[2] Participants elected to invest some or all of the value of their annual incentive in the five-year Leveraged Share Savings Plan (LSSP) or the three-year Swiss Employee Share Ownership Plan (ESOP) rather than to receive cash.

[3] Novartis shares granted under the Novartis Equity Plan "Select" have a three-year vesting period.

[4] Novartis share options granted under the Novartis Equity Plan "Select" are tradable. Share options granted outside North America will expire on January 19, 2022, have a three-year vesting period and have an exercise price of CHF 54.20 per share (the closing price of Novartis shares on the grant date of January 19, 2012). Based on the option pricing valuation model as per grant date, the value of the share options granted outside North America used in this table was CHF 4.30. Share options on ADSs granted to participants in North America will expire on January 19, 2022, have a three-year vesting period and an exercise price of USD 58.33 per ADS (the closing price of Novartis ADSs on the grant date of January 19, 2012). Based on the option pricing valuation model as per grant date, the value of the share options on ADSs granted to participants in North America used in this table was USD 4.14.

[5] Awarded based on the achievement of Novartis Economic Value Added (NVA) objectives over the performance period ended December 31, 2011.

[6] The special share awards consist of RSUs to Jeff George and to Andrin Oswald awarded on September 1, 2011, against the closing share price of that day (CHF 47.00). These RSUs have a five year vesting period. The special share awards also consist of a special award of 88 000 shares granted to Naomi Kelman to compensate her loss of equity from her former employer. This grant was awarded on April 1, 2011 at the price of USD 54.24 with staggered vesting over seven years.

[7] Service costs of pension and post-retirement healthcare benefits accumulated in 2011.

[8] Includes perquisites and other compensation paid during 2011. Does not include cost allowances and tax-equalization payments regarding the international assignment of David Epstein, Jeff George and Andrin Oswald. Does not include an annual pension in payment for Kevin Buehler as a result of a change of control clause (USD 346 362 being the time pro-rated amount for the period from April 8, 2011 to December 31, 2011).

[9] The value of all equity grants included in this table has been calculated based on market value.

[10] Reflects shares to be awarded in the future under the share saving plans, either the five-year Leveraged Share Savings Plan (LSSP) or the three-year Swiss Employee Share Ownership Plan (ESOP). Participants will receive additional shares ("matching shares") after the expiration of either the three- or five-year vesting period.

[11] The values of the shares, RSUs and share options reflected in this table have been calculated based on market value. The closing share price on the grant date January 19, 2012 was CHF 54.20 per Novartis share and USD 58.33 per ADS.

[12] All amounts are gross amounts (i.e., before deduction of social security and income tax due by the executives). The employer social security contribution is not included.

[13] Excludes the annual incentive and an equity grant that were awarded to K. Buehler prior to April 8, 2011 and which relate to past performance.

[14] Thomas Werlen stepped down from the Executive Committee as per September 30, 2011 and decided to leave Novartis on January 31, 2012. The base compensation and benefits information in the table reflects his pro rata compensation over the period from January 1, 2011 to September 30, 2011 (i.e. the period during which he was member of the Executive Committee). The other compensation ("Other benefits") includes the contractual salary payments from October 1, 2011 to January 31, 2012 and the pension benefits costs over this period. The other compensation ("Other benefits") does not include, however, the fair market compensation for refraining to compete with any business of Novartis over an agreed period after leaving the Company. Mr. Werlen will receive fair market compensation in return for complying with the restriction not to compete.

[15] The table reflects the compensation as Permanent Attendee to the Executive Committee from date of hiring (March 2, 2011) until December 31, 2011.

[16] The table reflects the compensation as Permanent Attendee to the Executive Committee from hire date (October 1, 2011) until December 31, 2011.

[17] Amounts in USD for Kevin Buehler, David Epstein, Mark C. Fishman and Naomi Kelman were converted at a rate of CHF 1.00 = USD 1.130, which is the same average exchange rate used in the Group's consolidated financial statements.

EXECUTIVE COMMITTEE MEMBER – EQUITY AWARDS FOR PERFORMANCE YEAR 2012 (NUMBER OF EQUITY INSTRUMENTS)

	Variable compensation				
	Short-term incentive plans	Long-term incentive plans			
		Equity Plan "Select"		Long-Term Performance Plan	Future LSSP/ESOP match
	Shares (Number)[2]	Shares (Number)[3]	Options (Number)[3]	Shares (Number)	Shares (Number)
Joseph Jimenez (Chief Executive Officer)	0	77 730	0	76 937	0
Juergen Brokatzky-Geiger	10 135	20 268	0	11 850	10 135
Kevin Buehler	7 629	42 796	0	26 537	7 629
Felix R. Ehrat	12 158	24 313	0	7 013	12 158
David Epstein	11 006	47 414	0	25 228	11 006
Mark C. Fishman	14 632	59 937	0	23 415	14 632
Jeff George	3 566	14 263	0	10 312	1 783
George Gunn	0	19 347	0	19 672	0
Naomi Kelman (until February 29, 2012)	0	0	0	0	0
Andrin Oswald	4 928	9 855	0	10 312	4 928
Jonathan Symonds	10 065	25 163	0	22 318	10 065
Brian Mc Namara (as from March 1, 2012)[1]	2 119	7 036	0	3 944	2 119
Total	**76 238**	**348 122**	**0**	**237 538**	**74 455**

[1] The table reflects the compensation as Permanent Attendee to the Executive Committee from March 1, 2012 until December 31, 2012.
[2] These shares have a five-year vesting period under LSSP and a three-year vesting period under ESOP.
[3] These shares and the options awarded under the Equity Plan "Select" have a three-year vesting period.

EXECUTIVE COMMITTEE MEMBER – EQUITY AWARDS FOR PERFORMANCE YEAR 2011 (NUMBER OF EQUITY INSTRUMENTS)

	Variable compensation					
	Short-term incentive plans	Long-term incentive plans				
		Equity Plan "Select"		Long-Term Performance Plan	Special share awards	Future LSSP/ESOP match
	Shares (Number)[2]	Shares (Number)[3]	Options (Number)[3]	Shares (Number)	Shares (Number)	Shares (Number)
Joseph Jimenez (Chief Executive Officer)	19 484	113 654	0	83 958	0	19 484
Juergen Brokatzky-Geiger	11 366	22 731	0	10 745	0	11 366
Kevin Buehler (since April 8, 2011)	18 496	46 566	0	22 506	0	18 496
David Epstein	10 003	47 900	0	22 175	0	10 003
Mark C. Fishman	16 309	66 193	0	23 107	0	16 309
Jeff George	6 747	26 984	0	8 181	20 000	3 374
George Gunn	0	20 388	0	17 166	0	0
Andrin Oswald	0	25 185	0	8 181	20 000	0
Jonathan Symonds	14 613	36 532	0	14 136	0	14 613
Thomas Werlen (until September 30, 2011)	7 611	0	0	0	0	0
Naomi Kelman (as from March 2, 2011)[1]	0	9 001	0	1 401	88 000	0
Felix R. Ehrat (as from October 1, 2011)[1]	2 406	4 812	0	1 414	0	2 406
Total	**107 035**	**419 946**	**0**	**212 970**	**128 000**	**96 051**

[1] The table reflects the compensation as Permanent Attendee to the Executive Committee from date of hiring until December 31, 2011.
[2] These shares have a five-year vesting period under LSSP and a three-year vesting period under ESOP.
[3] These shares and the options awarded under the Equity Plan "Select" have a three-year vesting period.

The aggregate amount of compensation of all members of the Executive Committee in 2012 is CHF 62 359 198 (compared to CHF 67 868 275 in 2011). The factors which may influence in one way or another the difference of the aggregate amount of compensation of all members of the Executive Committee between 2012 and 2011 include, among others, the different composition of the Executive Committee (incl. the inclusion of Permanent Attendees to the Executive Committee), the variations in average compensation mix and individual objective attainment.

12.2) COMPENSATION OF BOARD MEMBERS

GENERAL PRINCIPLES

The Board of Directors determines the compensation of its members, other than the Chairman, each year, based on a proposal by the Compensation Committee and advice from its independent advisors.

The compensation of the Chairman is based on a contract, which provides Dr. Daniel Vasella with a fixed remuneration of CHF 12.4 million, indexed to the average compensation increase for associates based in Switzerland. The Board acknowledges that the compensation of the Chairman reflects his exceptional experience and significant on-going contribution to building the Group, representing our interests in the global business community and delivering sustainable value for our shareholders. One third of his total compensation is paid out in monthly cash installments; the remaining two-thirds are in the form of unrestricted Novartis shares that are granted to him each year at the closing market price of the underlying share at the end of the day at grant date, in 2012 on January 19, 2012.

Following his tenure as Chairman, Dr. Vasella agreed to continue to make available his know-how to Novartis and to refrain from activities that compete with any business of Novartis for a multi-year period. Dr. Vasella will receive fair market compensation in return for his services and for complying with the restriction not to compete. Dr. Vasella carries forward tradable options, shares and benefits (including pension) as a result of his 14-year tenure as our CEO. In his current capacity he receives no variable compensation, tradable options or equity other than the shares that are part of his remuneration as Chairman.

The other members of the Board of Directors receive an annual fixed Board membership fee and additional fees for committee chairmanships, committee memberships, and other functions to compensate for their increased responsibilities and engagements. They do not receive additional fees for attending meetings. The members of the Board of Directors are paid in unrestricted shares for at least 50% of their fees. With the exception of the Chairman, they do not have pension benefits. Members of the Board of Directors do not receive share options.

The fee rates for Board membership and functional roles of other members of the Board of Directors are as follows:

BOARD MEMBER ANNUAL FEE RATES (EXCL. CHAIRMAN)

	Annual fee (CHF)
Board membership	350 000
Chairman's Committee membership	150 000
Audit and Compliance Committee membership	100 000
Other Board Committee membership	50 000
Vice chairmanship of the Board of Directors	50 000
Board Committee chairmanship (except for ACC)	10 000
Audit and Compliance Committee chairmanship	20 000
Delegated board membership[1]	125 000

[1] The Board of Directors has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD). The Board of Directors has delegated both Rolf M. Zinkernagel and William Brody to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

COMPENSATION IN 2012 AND 2011

The following compensation tables disclose the compensation granted to Board members in 2012 with comparatives to 2011.

BOARD MEMBER COMPENSATION IN 2012[1]

	Board membership	Vice Chairman	Chairman's Committee	Audit and Compliance Committee	Risk Committee	Compensation Committee	Corporate Governance and Nomination Committee	Delegated board membership	Annual cash compensation (CHF) (A)	Shares (Market value) (CHF) (B)[2]	Shares (Number)	Other (CHF) (C)	Total (CHF) (A)+(B)+(C)
Daniel Vasella	**Chair**		**Chair**	•[3]	•[3]	•[3]	•[3]		4 110 750	8 241 815	152 063	715 027[4]	13 067 592
Ulrich Lehner	•	•	•	•	•	•	Chair		405 000	405 037	7 473	43 070[5]	853 107
Dimitri Azar	•								140 000	210 025	3 875	–	350 025
William Brody[6]	•					•		•	262 500	262 545	4 844	–	525 045
Srikant Datar	•		•	Chair	•	•			360 000	360 051	6 643	–	720 051
Ann Fudge	•				•		•		225 000	225 038	4 152	–	450 038
Pierre Landolt[7]	•						•		–	400 050	7 381	23 977[5]	424 027
Enrico Vanni	•			•		Chair			255 000	255 011	4 705	30 150[5]	540 161
Andreas von Planta	•			•	Chair		•		280 000	280 051	5 167	29 023[5]	589 074
Wendelin Wiedeking	•			•	•				–	500 049	9 226	29 607[5]	529 656
Marjorie M.T. Yang	•					•			200 000	200 052	3 691	24 177[5]	424 229
Rolf M. Zinkernagel[8]	•						•	•	325 000	325 037	5 997	34 383[5]	684 420
Total									**6 563 250**	**11 664 761**	**215 217**	**929 414**	**19 157 425**

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not compensation.
[2] The value of the shares reflected in this column has been calculated based on market value of the shares at grant date. All shares were granted as per January 19, 2012 against the prevailing share price of CHF 54.20.
[3] Daniel Vasella attended the meetings of these Committees as a guest without voting rights.
[4] Includes inter alia social security costs due by the individual and paid by the company, pension and life insurance.
[5] Includes social security costs due by the individual and paid by the company.
[6] The Board of Directors has delegated William Brody to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).
[7] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of the compensation.
[8] The Board of Directors has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

BOARD MEMBER COMPENSATION IN 2011 (MARKET VALUE)[1]

	Board membership	Vice Chairman	Chairman's Committee	Audit and Compliance Committee	Risk Committee	Compensation Committee	Corporate Governance and Nomination Committee	Delegated board membership	Annual cash compensation (CHF) (A)	Shares (Market value) (CHF) (B)[2]	Shares (Number)	Other (CHF) (C)	Total (CHF) (A)+(B)+(C)
Daniel Vasella	Chair		Chair	•[3]	•[3]	•[3]	•[3]		4 060 004	8 786 735[4]	160 635[4]	654 207[5]	13 500 946[7]
Ulrich Lehner	•	•	•	•	•	•	Chair		1 110 000	–	–	62 650[6]	1 172 650
William Brody[8]	•					•		•	229 688	295 325	5 399	–	525 013
Srikant Datar	•		•	Chair	•	•			550 250	159 779	2 921	–	710 029
Ann Fudge	•				•		•		450 000	–	–	–	450 000
Pierre Landolt[9]	•						•		106 000	294 013	5 375	24 177[6]	424 190
Enrico Vanni	•			•		•			425 000	75 048	1 372	29 404[6]	529 452[7]
Andreas von Planta	•			•	Chair		•		448 000	112 026	2 048	32 685[6]	592 711
Wendelin Wiedeking	•			•	•				132 500	367 529	6 719	30 965[6]	530 994
Marjorie M.T. Yang	•					Chair			410 000	–	–	24 719[6]	434 719
Rolf M. Zinkernagel[10]	•						•	•	–	650 000	11 883	34 381[6]	684 381
Total[11]									**7 921 442**	**10 740 454**	**196 352**	**893 188**	**19 555 084**

[1] Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not compensation.

[2] The value of the shares reflected in this column has been calculated based on market value of the shares at grant date. All shares were granted as per January 19, 2011 against the prevailing share price of CHF 54.70.

[3] Daniel Vasella attended the meetings of these Committees as a guest without voting rights.

[4] Includes 12 188 shares paid in 2011 related to the grant of 2010.

[5] Includes social security costs due by the individual and paid by the company, pension and life insurance.

[6] Includes social security costs due by the individual and paid by the company.

[7] Does not include Board member compensation granted by Alcon, Inc. until April 8, 2011.

[8] The Board of Directors has delegated William Brody to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

[9] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of the compensation.

[10] The Board of Directors has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

[11] Alexandre F. Jetzer-Chung and Hans-Jörg Rudloff were members of the Board of Directors until February 22, 2011. Their compensation was reported in the 2010 Annual Report.

12.3) SHARES AND SHARE OPTIONS OWNED BY EXECUTIVE COMMITTEE MEMBERS

SHARES AND SHARE OPTIONS OWNED

The following tables show the total number of vested and unvested Novartis shares (including share units but excluding unvested matching share units from leveraged share savings plans and unvested target units from the Long-Term Performance Plan) and the total number of share options owned by the members of the Executive Committee as of January 17, 2013, and January 19, 2012.

As of January 17, 2013, and January 19, 2012, no member of the Executive Committee together with "persons closely linked"[1] to them owned 1% or more of the outstanding shares of Novartis, either directly or through share options.

[1] "Persons closely linked" are (i) their spouse, (ii) their children below age 18, (iii) any legal entities that they own or otherwise control, and (iv) any legal or natural person who is acting as their fiduciary.

SHARES OWNED BY EXECUTIVE COMMITTEE MEMBERS

	Number of shares[1]	
	As of January 17, 2013	As of January 19, 2012
Joseph Jimenez	565 007	461 487
Juergen Brokatzky-Geiger	268 498	232 858
Kevin Buehler	502 859	445 287
Felix R. Ehrat	52 616	9 132
David Epstein	319 532	279 395
Mark C. Fishman	439 946	435 071
Jeff George	137 666	109 525
George Gunn	267 468	251 459
Naomi Kelman	NA[2]	97 906
Andrin Oswald	150 810	135 713
Jonathan Symonds	202 375	144 829
Brian Mc Namara (as from March 1, 2012)[3]	41 160	NA
Total	**2 947 937**	**2 602 662**

NA – Not applicable.
[1] Includes holdings of "persons closely linked" to Executive Committee members (see definition under 12.3).
[2] Naomi Kelman, who stepped down from the Executive Committee as per February 29, 2012, owned 97 906 shares at this date.
[3] Permanent attendee to the Executive Committee.

SHARE OPTIONS OWNED BY EXECUTIVE COMMITTEE MEMBERS

	Number of share options[1]							
	2013	2012	2011	2010	2009	Other	As of January 17, 2013	As of January 19, 2012
Joseph Jimenez					552 076	157 266	709 342	709 342
Juergen Brokatzky-Geiger					75 705	255 452	331 157	331 157
Kevin Buehler						605 877[2]	605 877	782 485
Felix R. Ehrat								
David Epstein								267 777
Mark C. Fishman						604 129	604 129	772 019
Jeff George			141 396	97 827	15 359	1 793	256 375	256 375
George Gunn						94 371	94 371	94 371
Naomi Kelman[3]	NA							
Andrin Oswald						5 633	5 633	5 633
Jonathan Symonds				54 348			54 348	54 348
Brian Mc Namara (as from March 1, 2012)[4]						88 005	88 005	NA
Total	**0**	**0**	**141 396**	**152 175**	**643 140**	**1 812 526**	**2 749 237**	**3 273 507**

NA – Not applicable.
[1] Share options disclosed for a specific year were granted in that year under the Novartis Equity Plan "Select." The column "Other" refers to share options granted in 2008 or earlier, to share options granted to these executives while they were not Executive Committee members (nor Permanent Attendees), and to share options bought on the market by the Executive Committee members or "persons closely linked" to them (see definition under – Share and Share Options Owned by Members of the Board of Directors).
[2] Consists of share settled appreciation rights resulting from conversion of Alcon equity into Novartis equity.
[3] Naomi Kelman stepped down from the Executive Committee as per February 29, 2012.
[4] Permanent Attendee to the Executive Committee.

12.4) SHARES AND SHARE OPTIONS OWNED BY BOARD MEMBERS

The total number of vested and unvested Novartis shares and share options owned by Board members and "persons closely linked" (see definition under 12.3) to them as of the end of the day of January 17, 2013, and the end of the day of January 19, 2012, is shown in the following tables.

As of the end of the day of January 17, 2013, and the end of the day of January 19, 2012, none of the Board members together with "persons closely linked" (see definition under 12.3) to them owned 1% or more of the outstanding shares of Novartis, either directly or through share options.

SHARES OWNED BY BOARD MEMBERS

	Number of shares [1,2]	
	As of January 17, 2013	As of January 19, 2012
Daniel Vasella	3 170 729	3 306 730
Ulrich Lehner	34 363	22 193
Dimitri Azar	5 743	NA
William Brody	18 420	10 532
Srikant Datar	31 080	20 263
Ann Fudge	13 769	7 008
Pierre Landolt [3]	52 356	40 442
Enrico Vanni	12 501	4 839
Andreas von Planta	121 334	111 628
Wendelin Wiedeking	260 286	40 901
Marjorie M.T. Yang	18 000	18 000
Rolf M. Zinkernagel	45 948	34 683
Total	**3 784 529**	**3 617 219**

NA – Not applicable.
[1] Includes holdings of "persons closely linked" to Board members (see definition under 12.3).
[2] Each share provides entitlement to one vote.
[3] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of all shares.

SHARE OPTIONS OWNED BY BOARD MEMBERS

	Number of share options [1,2]	
	As of January 17, 2013	As of January 19, 2012
Daniel Vasella [3]	1 633 290	2 433 290
Ulrich Lehner	0	0
Dimitri Azar	0	NA
William Brody	0	0
Srikant Datar	0	0
Ann Fudge	0	0
Pierre Landolt [4]	0	0
Enrico Vanni	0	0
Andreas von Planta	0	0
Wendelin Wiedeking	0	0
Marjorie M.T. Yang	0	0
Rolf M. Zinkernagel	0	0
Total	**1 633 290**	**2 433 290**

NA – Not applicable.
[1] 2002 was the last year during which Novartis granted share options to non-executive Board members.
[2] Includes holdings of "persons closely linked" to Board members (see definition under 12.3).
[3] Includes options awarded during Daniel Vasella's tenure as Chairman and CEO.
[4] According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of all share options.

TERMS OF SHARE OPTIONS GRANTED

The share options granted to the members of the Executive Committee under the variable compensation plans are exercisable for one share each (1:1). The terms of the share options granted since 2009 are shown in the table below.

TERMS OF SHARE OPTIONS

Grant year	Exercise price (CHF/USD)	Vesting (years) (CH/other countries)	Term (years)
2013	61.70/66.07	3/3	10
2012	54.20/58.33	3/3	10
2011	54.70/57.07	2/3	10
2010	55.85/53.70	2/3	10
2009	53.65/46.42	2/3	10

12.5) LOANS AND OTHER PAYMENTS

LOANS TO BOARD MEMBERS OR MEMBERS OF THE EXECUTIVE COMMITTEE

No loans were granted to current or former Board members or members of the Executive Committee during 2012 and 2011. No such loans were outstanding as of December 31, 2012 and December 31, 2011.

OTHER PAYMENTS TO BOARD MEMBERS OR MEMBERS OF THE EXECUTIVE COMMITTEE

During 2012 and 2011, no payments (or waivers of claims) other than those set out in the Board Member Compensation tables and the Executive Committee Member Compensation tables (including their footnotes) were made to current Board members or members of the Executive Committee or to "persons closely linked" to them (see definition under 12.3).

PAYMENTS TO FORMER BOARD MEMBERS OR MEMBERS OF THE EXECUTIVE COMMITTEE

During 2012 and 2011, no payments (or waivers of claims) were made to former Board members or members of the Executive Committee or to "persons closely linked" to them (see definition under 12.4), except for an amount of CHF 62 346 which was paid to the Honorary Chairman in 2012 (and an amount of CHF 62 346 which was paid to the Honorary Chairman in 2011), an amount of CHF 1 129 for social security arrears which was paid in 2011 in favor of a former member of the Board of Directors, an amount of CHF 1 156 414, (which includes an amount of CHF 1 125 000 paid in 2012 to a former member of the Executive Committee, in relation to his obligation to refrain from activities that compete with any business of Novartis and an amount of CHF 31 414 as other benefits related to his ECN tenure) and an amount of CHF 25 596 which was paid in 2011 to a former member of the Executive Committee as deferred compensation.

13. RISK ASSESSMENT DISCLOSURES

Novartis AG, as the ultimate parent company of the Novartis Group, is fully integrated into the Group-wide internal risk assessment process and is fully integrated into the process described in note 32 to the Group's consolidated financial statements.

APPROPRIATION OF AVAILABLE EARNINGS OF NOVARTIS AG AND DECLARATION OF DIVIDEND

The Board of Directors proposes to use the available earnings of Novartis AG of 2012 for the purpose of distributing a gross dividend of CHF 2.30 per share as follows. This will result in a payout ratio of 65% of the Group's consolidated net income expressed in USD. The payout ratio is calculated by converting into USD the proposed total gross dividend amount in CHF at the CHF-USD exchange rate of December 31, 2012 based on an estimated number of shares outstanding on dividend payment date and dividing it by the USD consolidated net income attributable to shareholders of Novartis AG based on the 2012 Novartis Group consolidated financial statements.

	2012 CHF	2011 CHF
Available unappropriated earnings		
Balance brought forward	–	–
Net income of the year	5 141 036 034	5 370 749 043
Partial use of free reserves	853 530 441	477 787 917
Total available earnings at the disposal of the Annual General Meeting	**5 994 566 475**	**5 848 536 960**
Appropriation		
Payment of a gross dividend of CHF 2.30 (2011: CHF 2.25) on 2 606 333 250 (2011: 2 599 349 760) dividend bearing shares [1] with a nominal value of CHF 0.50 each	– 5 994 566 475	– 5 848 536 960
Balance to be carried forward	**–**	**–**

[1] No dividend will be declared on treasury shares held by Novartis AG, and certain other treasury shares held by other Group companies.

Assuming that this proposal by the Board of Directors is approved, payment of the dividend will be made as from March 1, 2013 to those shareholders holding Novartis shares on February 25, 2013. As from February 26, 2013 the shares will be traded ex-dividend.

REPORT OF THE STATUTORY AUDITOR ON THE FINANCIAL STATEMENTS OF NOVARTIS AG

TO THE GENERAL MEETING OF NOVARTIS AG, BASEL

REPORT OF THE STATUTORY AUDITOR ON THE FINANCIAL STATEMENTS OF NOVARTIS AG

As statutory auditor, we have audited the financial statements of Novartis AG, which comprise the income statement, balance sheet and notes (pages 258 to 275), for the year ended December 31, 2012.

Board of Directors' Responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the Company's articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended December 31, 2012 comply with Swiss law and the Company's articles of incorporation.

REPORT ON OTHER LEGAL REQUIREMENTS

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the Company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers AG

pwc

Peter M. Kartscher
Audit expert
Auditor in charge

Gerd Tritschler
Audit expert

Basel, January 22, 2013

ANNUAL REPORT PHOTOGRAPHY AND FILMS

FRONT COVER
Children's Hospital Los Angeles; California, USA

INSIDE FRONT
Novartis Institutes for BioMedical Research; Cambridge, Massachusetts, USA

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Children's Hospital Los Angeles; California, USA

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Children's Hospital Los Angeles; California, USA

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Panapakkam; Tamil Nadu, India

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Amrita Institute of Medical Sciences; Kochi, India

19
Guizhou Provincial People's Hospital; Guiyang, Guizhou, China

20
Amrita Institute of Medical Sciences; Kochi, India

22
Guizhou Provincial People's Hospital; Guiyang, Guizhou, China

32
Camp Reykjadalur; Reykjavík, Iceland

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A village outside Kisumu, Kenya

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Kiev, Ukraine

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The Filatov Institute; Odessa, Ukraine

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The Filatov Institute; Odessa, Ukraine

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Children's Hospital Los Angeles; California, USA

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Amrita Institute of Medical Sciences; Kochi, India

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Novartis Institutes for BioMedical Research; Cambridge, Massachusetts, USA

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Guiyang Ai Xin Autistic Children's Home; Guiyang, Guizhou, China

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Teojomulco, Oaxaca, Mexico

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Camp Reykjadalur; Reykjavík, Iceland

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Oaxaca de Juárez, Oaxaca, Mexico

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Michelle Obama Children's Hospital; Kisumu, Kenya

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Pochutla, Oaxaca, Mexico

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Soundar Clinic; Valarpuram, Tamil Nadu, India

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Michelle Obama Children's Hospital; Kisumu, Kenya

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Guiyang Ai Xin Autistic Children's Home; Guiyang, Guizhou, China

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Amrita Institute of Medical Sciences; Kochi, India

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Amrita Institute of Medical Sciences; Kochi, India

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Guizhou Provincial People's Hospital; Guiyang, Guizhou, China

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Oaxaca de Juárez, Oaxaca, Mexico

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The Filatov Institute; Odessa, Ukraine

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Abasolo, Oaxaca, Mexico

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Novartis Institutes for BioMedical Research; Cambridge, Massachusetts, USA

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Oaxaca de Juárez, Oaxaca, Mexico

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Camp Reykjadalur; Reykjavík, Iceland

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Michelle Obama Children's Hospital; Kisumu, Kenya

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Guiyang Ai Xin Autistic Children's Home; Guiyang, Guizhou, China

INSIDE BACK
Michelle Obama Children's Hospital; Kisumu, Kenya

BACK COVER
Lewa, Kenya

Each year Novartis commissions a photographer to portray a unique, personal and artistic perspective of healthcare around the world. By capturing the diverse experiences of children in various settings, these photographs demonstrate the complex realities of global healthcare. We are grateful to Mary Ellen Mark, and to those who shared their experiences for Annual Report 2012 photography.

This year, Novartis also commissioned documentary filmmaker Martin Bell to produce a series of short films to accompany the photography. The films can be watched online at www.novartis.com/annualreport2012.

MARY ELLEN MARK

Among the world's most respected and influential photographers, Mary Ellen Mark has achieved international recognition through her numerous books, exhibitions and editorial magazine work. She has spent more than four decades traveling extensively to make pictures that reflect a high degree of humanism, and her photo essays and portraits have appeared in various publications including The New Yorker, LIFE, The New York Times Magazine, Rolling Stone and Vanity Fair.

Ms. Mark's images of diverse cultures, in particular, have become landmarks in the field of documentary photography. Her portrayals of Mother Teresa, Indian circuses and brothels in Bombay were the product of many years of work in India. Furthermore, her photo essay on runaway children in Seattle became the basis of the Academy Award-nominated film "Streetwise," directed and photographed by her husband, Martin Bell. Since then, they have collaborated on several projects.

Additionally, Ms. Mark has published 17 books and her photographs have been exhibited worldwide. The retrospective book "Exposure" features 134 of her best images – many of which previously were unpublished. And for her most recent book, "Prom," Ms. Mark spent more than four years photographing high school dances across the United States with a 20×24 Polaroid camera. For her book and exhibition project on AMERICA, Ms. Mark received a John Simon Guggenheim Fellowship, an Erna & Victor Hasselblad Foundation grant, and a Walter Annenberg grant. She also has received numerous awards including the Cornell Capa Award, the Infinity Award for journalism, the Matrix Award for outstanding woman in the field of film/photography, the George Polk Award for photojournalism, the Dr. Erich Salomon Award for outstanding merits in the field of journalistic photography, the World Press Award for outstanding body of work throughout the years, the Photographer of the Year Award from The Friends of Photography, the Victor Hasselblad Cover Award, the Creative Arts Award Citation for Photography at Brandeis University, and two Robert F. Kennedy awards.

Ms. Mark has honorary degrees from her alma mater, the University of Pennsylvania, as well as the University of the Arts, the Center for Creative Studies, Columbia College and Kenyon College.

KEY DATES FOR 2013

Anticipated key reporting dates

Annual General Meeting	February 22, 2013
First Quarter 2013 Results	April 24, 2013
Second Quarter and First Half 2013 Results	July 17, 2013
Third Quarter and First Nine Months 2013 Results	October 22, 2013
Full Year 2013	January 2014

ACKNOWLEDGEMENTS

We would like to thank all contributors to this Novartis Annual Report for sharing their knowledge and personal experiences.

People in the photographs and stories have no actual or implied connection with Novartis or with the Group's products, except for those specifically identified as associated with Novartis.

The business policy of Novartis takes into account the OECD's Guidelines for Multinational Enterprises, with their recommendations on the disclosure of information.

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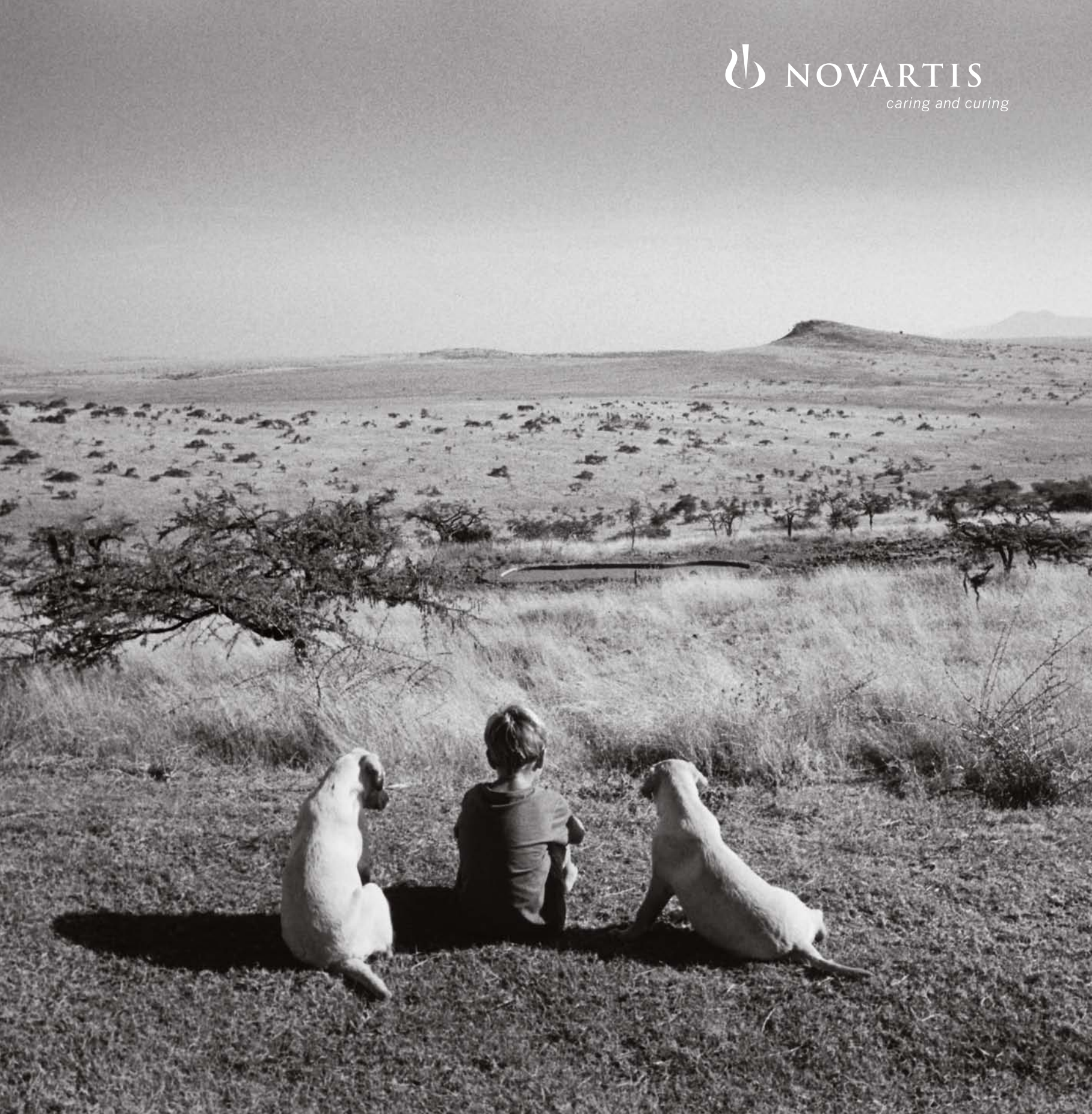
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