

Exchange Rates

The following table shows, for the years and dates indicated, certain information concerning the rate of exchange of US dollar per Swiss franc based on exchange rate information found on Reuters/Bloomberg Market System. The exchange rate in effect on January 17, 2013, as found on Reuters Market System, was CHF 1.00 = \$1.07.

Year ended December 31, (\$ per CHF)	Period End	Average ⁽¹⁾	Low	High
2008	0.94	0.93	0.82	1.02
2009	0.97	0.92	0.84	1.00
2010	1.06	0.96	0.86	1.07
2011	1.06	1.13	1.06	1.25
2012	1.09	1.07	1.02	1.12
Month				
August 2012			1.02	1.05
September 2012			1.04	1.08
October 2012			1.06	1.08
November 2012			1.05	1.08
December 2012			1.07	1.10
January 2013 (through January 17, 2013)			1.07	1.10

(1) Represents the average of the exchange rates on the last day of each full month during the year.

3.B Capitalization and Indebtedness

Not applicable.

3.C Reasons for the offer and use of proceeds

Not applicable.

3.D Risk Factors

Our businesses face significant risks and uncertainties. You should carefully consider all of the information set forth in this annual report on Form 20-F and in other documents we file with or furnish to the SEC, including the following risk factors, before deciding to invest in any Novartis securities. Our business as well as our financial condition or results of operations could be materially adversely affected by any of these risks, as well as other risks and uncertainties not currently known to us or not currently deemed to be material.

Risks Facing Our Business

Our patented pharmaceuticals businesses, and other key products, face, and will continue to face, important patent expirations and aggressive generic competition.

The products of our Pharmaceuticals and Alcon Divisions, as well as key products from our other divisions, are generally protected by patent rights, which are intended to provide us with exclusive rights to market the patented products. However, those patent rights are of varying strengths and durations. Loss of market exclusivity for one or more important products—including the loss of exclusivity on *Diovan*, our best-selling product, which began in the EU in 2011, and occurred in the US in 2012 and will continue in Japan in 2013—have had, and can be expected to continue to have a material adverse effect on our results of operations.

The introduction of generic competition for a patented medicine typically results in a significant and rapid reduction in net sales and net income for the patented product because generic manufacturers typically offer their unpatented versions at sharply lower prices. Such competition can result from the regular expiration of the term of the patent. Such competition can also result from the entry of generic versions of another medicine in the same therapeutic class as one of our drugs, or in another competing therapeutic class, or from the compulsory licensing of our drugs by governments, or from a general weakening of intellectual property laws in certain countries around the world. In addition, generic manufacturers frequently take an aggressive approach to challenging patents, conducting so-called "launches at risk" of products that are still under legal challenge for patent infringement, before final resolution of legal proceedings.

We also rely in all aspects of our businesses on unpatented proprietary technology, know-how, trade secrets and other confidential information, which we seek to protect through various measures including confidentiality agreements with licensees, employees, third-party collaborators, and consultants who may have access to such information. If these agreements are breached, our contractual remedies may not be adequate to cover any losses.

Some of our best-selling products have begun or are about to face significant competition due to the end of market exclusivity resulting from the expiry of 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 EU in November 2011, and generic competitors have launched there. In addition, patent protection expired in the US in September 2012, and generic versions of *Diovan HCT* have launched in the US. Generic versions of *Diovan* monotherapy have not yet launched in the US but could potentially launch at any time. In addition, patent protection for *Diovan* 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 EU and Japan due to regulatory exclusivities, there is a risk that generic manufacturers may circumvent regulatory exclusivity and gain approval of a combination valsartan-amlodipine product in Europe. In the US, 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 US 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 US 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 US, 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*.

For more information on the patent status of our Pharmaceuticals Division's products see "Item 4. Information on the Company—Item 4.B Business Overview—Pharmaceuticals—Intellectual Property" and "Item 18. Financial Statements—note 20".

In 2013, the impact of generic competition on our net sales is expected to be as much as \$3.5 billion. Because 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 US, 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 branded pharmaceutical products in such geographies.

Clearly, with respect to major products for which the patent terms are expiring, the loss of exclusivity of these products can be expected to have a material adverse effect on our business, financial condition and results of operations. In addition, should we unexpectedly lose exclusivity on additional products as a result of patent litigation or other reasons, this could also have a material adverse effect on our business, financial condition and results of operations, both due to the loss of revenue and earnings, and the difficulties in planning for such losses.

Our research and development efforts may not succeed in bringing new products to market, or to do so cost-efficiently enough, or in a manner sufficient to grow our business and replace lost revenues and income.

Our ability to continue to grow our business and to replace sales lost due to the end of market exclusivity depends in significant part upon the success of our research and development activities in identifying, and successfully and cost-effectively developing new products that address unmet medical needs, are accepted by patients and physicians, and are reimbursed by payors. To accomplish this, we commit substantial effort, funds and other resources across all our divisions to research and development, both through our own dedicated resources and through various collaborations with third parties. Developing new healthcare products and bringing them to market, however, is a highly costly, lengthy and uncertain process. In spite of our significant investments, there can be no guarantee that our research and development activities will produce commercially viable new products that will enable us to grow our business and replace lost revenues and income.

Using the products of our Pharmaceuticals Division as an example, the research and development process for a new pharmaceutical product can take up to 15 years, or even longer, from discovery to commercial product launch—and with a limited available patent life, the longer it takes to develop a product, the less time there will be for us to recoup our development costs. New products need not only undergo intensive preclinical and clinical testing, but also must be approved by means of highly complex, lengthy and expensive approval processes which can vary from country to country. During each stage, there is a substantial risk that we will encounter serious obstacles which will further delay us and add substantial expense, or that we will not achieve our goals and, accordingly, may be forced to abandon a product in which we have invested substantial amounts of time and money. Reasons for delays may include: failure of the product candidate in preclinical studies; difficulty enrolling patients in clinical trials or delays or clinical trial holds at clinical trial sites; delays in completing formulation and other testing and work necessary to support an application for regulatory approval; adverse reactions to the product candidate or indications or other safety concerns; insufficient clinical trial data to support the safety or efficacy of the product candidate; an inability to manufacture sufficient quantities of the product candidate for development or commercialization activities in a timely and cost-effective manner; and failure to obtain, or delays in obtaining, the required regulatory approvals for the product candidate or the facilities in which it is manufactured. In addition, FDA and other governmental health authorities have recently begun to intensify their scrutiny of pharmaceutical companies' clinical development activities, both with respect to compliance with regulations related to the conduct of clinical trials, and with respect to their interpretations of the clinical trial requirements necessary to support a product submission. This has added to the obstacles and costs we face in bringing new products to market.

Our other divisions face similar challenges in developing and bringing to market new products. Alcon's Ophthalmic Pharmaceuticals products, Vaccines and Diagnostics' Vaccine products, and Animal Health products all must be developed and approved in accordance with essentially the same processes as faced by our Pharmaceuticals Division. Nearly all of our other products face similarly difficult

development and approval processes. At Alcon, management has announced plans to make significant investments in research and development in the coming years to develop new eyecare products to replace sales lost to generic competition and to grow its business. Vaccines and Diagnostics has, and continues to expend considerable time and resources to fully develop and bring to market new vaccines, including two, *Menveo* and *Bexsero*, to combat different strains of meningococcal disease in patients of a wide range of age groups. Our Animal Health Division seeks to bring new products to market from time to time. If these efforts do not bear significant fruit, they could have a material adverse effect on the medium to long-term success of the divisions, and of the Group as a whole.

In addition, our Sandoz Division has made, and expects to continue to make, significant investments in the development of differentiated, "difficult-to-make" generic products, including biotechnology-based, "biologic" medicines intended for sale as bioequivalent or "biosimilar" generic versions of currently-marketed biotechnology products. While the development of such products can be significantly less costly and complex than the development of the equivalent originator medicines, it can often be significantly more costly and complex than for non-differentiated generic products. In addition, to date, many countries do not yet have an established legislative or regulatory pathway which would permit biosimilars to be brought to market or sold in a manner in which the biosimilar product would be readily substitutable for the originator product. Significant difficulties in the development of differentiated products, further delays in the development of such regulatory pathways, or any significant impediments that may ultimately be built into such pathways, could put at risk the significant investments that Sandoz has made, and will continue to make, in the development of differentiated products in general, and in its biotechnology operations in particular, and could have a material adverse effect on the long-term success of the Sandoz Division and the Group as a whole.

If we are unable to cost-effectively maintain an adequate flow of successful new products and new indications for existing products sufficient to cover our substantial research and development costs and the decline in sales of older products that either become subject to generic competition (including the significant number of important products which have begun, and will continue to face generic competition in the near future), or are displaced by competing products or therapies, this could have a material adverse effect on our business, financial condition or results of operations. For a description of the approval processes which must be followed to market our products, see the sections headed "Regulation" included in the descriptions of our four operating divisions under "Item 4. Information on the Company—Item 4.B Business Overview."

Increasing regulatory scrutiny of drug safety and efficacy has and is likely to continue to adversely affect us.

Following a series of widely publicized issues in recent years, health regulators are increasingly focusing on product safety. The Obama Administration has publicly emphasized the importance of enforcing US drug safety regulations. In addition, governmental authorities around the world have paid increased attention to the risk/benefit profile of pharmaceutical products with an increasing emphasis on product safety and on examining whether new products offer a significant benefit over older products in the same therapeutic class. These developments have led to requests for more clinical trial data, for the inclusion of a significantly higher number of patients in clinical trials, and for more detailed analyses of the trials. As a result, the already lengthy and expensive process of obtaining regulatory approvals for pharmaceutical products has become even more challenging.

In addition, for the same reason, the post-approval regulatory burden has been increasing. Approved drugs have increasingly been subject to requirements such as risk evaluation and mitigation strategies (REMS), risk management plans, comparative effectiveness studies, health technology assessments and requirements to conduct post-approval Phase IV clinical trials to gather far more detailed safety and other data on products. These requirements have the effect of making the maintenance of regulatory approvals and achieving reimbursement for our products increasingly expensive, and further heightening the risk of recalls, product withdrawals, or loss of market share.

Like our industry peers, we have been required by health authorities to conduct additional clinical trials, and to submit additional analyses of our data in order to obtain product approvals or reimbursement by government or private payors. We have had REMS and other such requirements imposed as a condition of approval of our new drugs. By increasing the costs of, and causing delays in obtaining approvals, and by creating an increased risk that products either will not be approved, or will be removed from the market after previously having been approved, these regulatory developments have had, and can be expected to continue to have, a material adverse effect on our business, financial condition and results of operations.

Our business is increasingly affected by pressures on pricing for our products.

The growth of overall healthcare costs as a percentage of gross domestic product in many countries means that governments and payors are under intense pressure to control healthcare spending even more tightly. These pressures are particularly strong given the ongoing effects of the recent global economic and financial crisis, including the continuing debt crisis in certain countries in Europe, and the risk of a similar crisis in the US. As a result, our businesses and the healthcare industry in general are operating in an ever more challenging environment with very significant pricing pressures. These ongoing pressures affect all of our businesses that rely on reimbursement—including Pharmaceuticals, Alcon, Sandoz and Vaccines and Diagnostics—and involve government-imposed industry-wide price reductions, mandatory pricing systems, reference pricing systems, payors limiting access to innovative medicines based on cost-benefit analyses, an increase in imports of drugs from lower-cost countries to higher-cost countries, shifting of the payment burden to patients through higher co-payments, limiting physicians' ability to choose among competing medicines, mandatory substitution of generic drugs for the patented equivalent, and growing pressure on physicians to reduce the prescribing of patented prescription medicines. Such initiatives include the 2010 enactment of healthcare reform in the US, its implementation, and ongoing efforts by the US Government to find additional savings from government healthcare programs.

As a result of such measures, we faced downward pricing pressures on our patented and generic drugs in many countries in 2012. For example, in November 2012, the UK's National Institute for Health and Clinical Excellence (NICE) recommended that the UK National Health Service cease funding the use of our product *Xolair* to treat asthma, on cost-effectiveness grounds, despite a prior 2007 finding by NICE that use of *Xolair* was cost-effective. Similarly, in November 2011, NICE declined on cost-effectiveness grounds to recommend National Health Service funding of the use of our product *Lucentis* to treat diabetic macular edema, despite the product's having been approved by the relevant health authorities for the indication. Subsequently, in October 2012, NICE reversed its decision, recommending that *Lucentis* be reimbursed for a limited subset of patients with this condition, but only after we offered NICE a significant discount on pricing. Similarly, depending on the outcome of recently initiated preliminary court proceedings, a German government agency, the *Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen* (IQWiG), may shortly begin a Health Technology Assessment of our products *Galvus* and *Eucreas* for Type 2 Diabetes, which can be a step towards a request that we significantly reduce the prices at which we sell the products. In China, the National Development and Reform Commission imposed a price cut on our Oncology product *Femara*. In the US, under the Affordable Care Act, there is a newly created entity, the Independent Payment Advisory Board, which has been granted unprecedented authority to implement broad actions to reduce future costs of the Medicare program. This could include required prescription drug discounts or rebates.

We expect these efforts to control costs to continue in 2013 as healthcare payors around the globe, including government-controlled health authorities, insurance companies and managed care organizations, step up initiatives to reduce the overall cost of healthcare, restrict access to higher-priced new medicines, increase the use of generics and impose overall price cuts. For more information on price controls and on our challenging business environment see "Item 4. Information on the Company—Item 4.B Business Overview—Pharmaceuticals—Price Controls."

Failure to comply with law, and resulting legal proceedings may have a significant negative effect on our results of operations.

We are obligated to comply with the laws of the approximately 140 countries in which we sell products, 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 law could lead to substantial liabilities that may not be covered by insurance, and could affect our business and reputation.

In particular, 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 US and in an increasing number of countries around the world. A number of our 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. 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 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 US and other countries, and may lead to litigation. These factors have contributed to recent decisions by us and other companies in our 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. These 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.

Our businesses are currently subject to a number of these governmental investigations and information requests by regulatory authorities. See "Item 18. Financial Statements—note 20."

In addition, our Sandoz Division may, from time to time, seek approval to market a generic version of a product before the expiration of patents claimed by the marketer of the patented product. We do this in cases where we believe that the relevant patents are invalid, unenforceable, or would not be infringed by our generic product. As a result, affiliates of our Sandoz Division frequently face patent litigation, and in certain circumstances, we may elect to market a generic product even though patent infringement actions are still pending. Should we elect to proceed in this manner and conduct a "launch at risk," we could face substantial damages if the final court decision is adverse to us.

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.

For more detail regarding specific legal matters currently pending against us and provisions for such matters, see "Item 18. Financial Statements—note 20." See also "—Our reliance on third parties for the performance of key business functions heightens the risks faced by our businesses" below.

The manufacture of our products is highly regulated and complex, and may result in a variety of issues that could lead to extended supply disruptions and significant liability.

The products we market and sell are either manufactured at our own dedicated manufacturing facilities or by third parties. In either case, we must ensure that all manufacturing processes comply with current Good Manufacturing Practices (cGMP) and other applicable regulations, as well as with our own high quality standards. The manufacture of our products is heavily regulated by governmental health authorities around the world, including the FDA, and such health authorities continue to intensify their scrutiny of manufacturers' compliance with such 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. This could lead to product shortages, or to our being entirely unable to supply products to patients for an extended period of time. And such shortages or shut downs have led to and could continue to lead to significant losses of sales revenue and to potential third-party litigation. In addition, health authorities have in some cases imposed significant penalties for such failures to comply with cGMP. A failure to comply fully with cGMP could also lead to a delay in the approval of new products to be manufactured at the impacted site.

Like our competitors, we have faced, and continue to face, significant manufacturing issues. For example, in November 2011, we received a Warning Letter from the FDA with respect to three of our Sandoz Division's facilities—in Broomfield, Colorado, Wilson, North Carolina, and Boucherville, Canada. The Warning Letter raised concerns regarding these facilities' compliance with FDA cGMP regulations. It stated that until the FDA confirms that the deficiencies have been corrected, the FDA can recommend disapproval of any pending applications or supplements listing Novartis affiliates as a drug manufacturer. In addition, FDA may refuse requests to issue export certificates to our Sandoz US affiliate, or import certificates to our Sandoz Canada affiliates. The letter further states that other federal agencies may take the Warning Letter into account when considering the award of contracts. In the fourth quarter of 2012, Sandoz announced that the FDA upgraded the compliance status of its Broomfield, Colorado site. The division is on track to meet its remediation commitments for the other two sites as well.

In addition, in December 2011, we suspended operations and shipments from the OTC Division facility located at Lincoln, Nebraska, which also produces certain products for our Animal Health Division. This action was taken to accelerate maintenance and other improvement activities at the site. Subsequently, in January 2012, we recalled certain OTC Division products that were produced at the Lincoln facility. We made progress in 2012 in the remediation of quality issues at Lincoln, and have outsourced the production of certain Lincoln products. However, as of the date of this Form 20-F, it is not possible to determine when the plant will resume significant operations.

In December 2012, our Alcon Division received an FDA Warning Letter following an inspection at the *LenSx* laser manufacturing site in Aliso Viejo, California. Alcon has responded in writing to the FDA and is committed to addressing these observations and collaborating with the Agency to ensure that they are fully resolved. The items noted in the Warning Letter do not affect the safety or effectiveness of the *LenSx* laser, or impact our ability to sell the product.

As a result of such 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 the issues at these sites. Should we fail to complete the planned improvements at the sites in agreement with the FDA in a timely manner, then we may suffer significant additional losses in sales and drainage of resources, and we could be subject to legal action without further notice including, without limitation, seizure and injunction.

In addition, we currently have several other manufacturing sites which are being upgraded to address advances in technology, improve quality, and assure consistency of product supply, either at our own initiative, or in accordance with commitments to FDA and other health authorities around the world. Such efforts have required us to make significant investments in our production facilities. Ultimately, there can

be no guarantee of the outcome of any of these matters. Nor can there be any guarantee that we will not face similar such issues in the future, or that we will successfully manage such issues when they arise.

In addition to regulatory requirements, many of our products involve technically complex manufacturing processes or require a supply of highly specialized raw materials. For some products and raw materials, we may also rely on a single source of supply. In particular, a significant portion of our portfolio, including products from our Pharmaceuticals, Vaccines and Diagnostics, and Sandoz Divisions, are "biologic" products. Unlike traditional "small-molecule" drugs, biologic drugs or other biologic-based products cannot be manufactured synthetically, but typically must be produced from living plant or animal micro-organisms. As a result, the production of biologic-based products which meet all regulatory requirements is especially complex. Even slight deviations at any point in the production process may lead to batch failures or recalls. In addition, because the production process is based on living plant or animal micro-organisms, the process could be affected by contaminants which could impact those micro-organisms. As a result, the inherent fragility of certain of our raw material supplies and production processes may cause the production of one or more of our products to be disrupted, potentially for extended periods of time.

Also as part of the Group's portfolio of products, we have a number of sterile products, including oncology products, which are considered to be technically complex to manufacture, and require strict environmental controls. Because the production process for such products is so complex and sensitive, the chance of production failures and lengthy supply interruptions is increased.

Finally, in addition to potential liability for government penalties, because our products are intended to promote the health of patients, for some of our products, any supply disruption or other production issue could subject us to lawsuits or to allegations that the public health, or the health of individuals, has been endangered.

In sum, a disruption in the supply of certain key products—whether as a result of a failure to comply with applicable regulations, the fragility of the production process, or our failure to accurately predict demand—could have a material adverse effect on our business, financial condition or results of operations.

The continuing global economic and financial crisis may have a material adverse effect on our results.

Many of the world's largest economies and financial institutions continue to be impacted by the ongoing global economic and financial crisis, with some continuing to face financial difficulty, a decline in asset prices, liquidity problems and limited availability of credit. It is uncertain how long these effects will last, or whether economic and financial trends will worsen or improve. Such uncertain economic times may have a material adverse effect on our revenues, results of operations, financial condition and, if circumstances worsen, our ability to raise capital at reasonable rates. For example, the ongoing debt crisis in certain countries in Europe has increased pressures on those countries, and on payors in those countries to force healthcare companies to decrease the prices at which we may sell them our products. See also "Item 4. Information on the Company—Item 4.B Business Overview—Pharmaceuticals—Price Controls." The debt crisis has also given rise to concerns that some countries may not be able to pay us for our products at all. This situation could further deteriorate as a result of potential developments in countries of key concern such as Greece, Italy, Portugal and Spain, each of which continues to face significant concerns regarding its ability to repay its sovereign debt obligations.

Current economic conditions may adversely affect the ability of our distributors, customers, suppliers and service providers to obtain the liquidity required to pay for our products, or otherwise to buy necessary inventory or raw materials, and to perform their obligations under agreements with us, which could disrupt our operations, and could negatively impact our business and cash flow. Although we make efforts to monitor these third parties' financial condition and their liquidity, our ability to do so is limited, and some of them may become unable to pay their bills in a timely manner, or may even become insolvent,

which could negatively impact our business and results of operations. These risks may be elevated with respect to our interactions with third parties with substantial operations in countries where current economic conditions are the most severe, particularly where such third parties are themselves exposed to sovereign risk from business interactions directly with fiscally-challenged government payers. See also "—Our reliance on third parties for the performance of key business functions heightens the risks faced by our businesses" below.

In addition, the varying effects of difficult economic times on the economies, currencies and financial markets of different countries has impacted, and may continue to unpredictably impact, the conversion of our operating results into our reporting currency, the US dollar, as well as the value of our investments in our pension plans. See "—Foreign exchange fluctuations may adversely affect our earnings and the value of some of our assets," below, and "—If any of numerous key assumptions and estimates in calculating our pension plan obligations turn out to be different from our actual experience, we may be required to increase substantially our contributions to pension plans as well as our pension-related costs in the future," below. In addition, the financial crisis may also result in a lower return on our financial investments, and a lower value on some of our assets. Alternately, the financial crisis may lead to inflation, which could lead to higher interest rates, which would increase our costs of raising capital.

To the extent that the economic and financial crisis is directly affecting consumers, some of our businesses, including the elective surgical business of our Alcon Division and our OTC and Animal Health Divisions, may be particularly sensitive to declines in consumer spending. In addition, our Pharmaceuticals, Vaccines and Diagnostics, and Sandoz Divisions, and the remaining businesses of our Alcon Division, may not be immune to consumer cutbacks, particularly given the increasing requirements in certain countries that patients pay a larger contribution toward their own healthcare costs. As a result, there is a risk that consumers may cut back on prescription drugs and vaccines, as well as consumer health products, to help cope with rising costs and difficult economic times.

At the same time, significant changes and volatility in the financial markets, in the consumer and business environment, in the competitive landscape and in the global political and security landscape make it increasingly difficult for us to predict our revenues and earnings into the future. As a result, any revenue or earnings guidance or outlook which we have given or might give may be overtaken by events, or may otherwise turn out to be inaccurate. Though we endeavor to give reasonable estimates of future revenues and earnings at the time we give such guidance, based on then-current conditions, there is a significant risk that such guidance or outlook will turn out to be, or to have been, incorrect.

Foreign exchange fluctuations may adversely affect our earnings and the value of some of our assets.

In the past year, the US dollar, our reporting currency, has significantly increased in value against other world currencies. However, in the prior year, the US dollar suffered significant decreases in value. In addition, in recent years, unresolved fiscal issues in the US and in many European economies, and investor concerns about the future of the Euro, have led to the flight of investor capital to the perceived safety of the Swiss franc, causing the Swiss franc to rise significantly in value. Because a significant portion of our earnings and expenditures are in currencies other than the US dollar, including expenditures in Swiss francs which are significantly higher than our revenues in Swiss francs, this volatility can have a significant and often unpredictable impact on our reported net sales and earnings. In 2012, 36% of our net sales were made in US dollars, 25% in euros, 9% in Japanese yen, 2% in Swiss francs and 28% in other currencies. During the same period, 39% of our expenses arose in US dollars, 25% in euros, 13% in Swiss francs, 5% in Japanese yen and 18% in other currencies. As has happened in the recent past, changes in exchange rates between the US dollar and other currencies can result in increases or decreases in our sales, costs and earnings as expressed in US dollars. Fluctuations in exchange rates between the US dollar and other currencies may also affect the reported value of our assets measured in US dollars and the components of shareholders' equity. In addition, there is 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. For more information on the effects of currency fluctuations on our consolidated financial statements and on how we manage currency risk, see "Item 5.A Operating Results—Effects of Currency Fluctuations" and "Item 18. Financial Statements—note 16."

We may not successfully complete and integrate strategic acquisitions to expand or complement our business.

As part of our growth strategy, we evaluate and pursue strategic business acquisitions to expand or complement our business. Such ventures may bring new products or services, increased market share or new customers to our prominent position in the healthcare industry. We cannot ensure that suitable acquisition candidates will be identified. Acquisition activities can be thwarted by overtures from competitors for the targeted candidates, governmental regulation (including market concentration limitations) and replacement product developments in our industry. Further, after an acquisition, successful integration of the venture can be complicated by corporate cultural differences, difficulties in retention of key personnel, customers and suppliers, and coordination with other products and processes. Also, acquisitions could divert management's attention from our existing business, and could result in liabilities being incurred that were not known at the time of acquisition or the creation of tax or accounting issues. If we fail to timely recognize or address these matters or to devote adequate resources to them, we may fail to achieve our growth strategy or otherwise not realize the intended benefits of any acquisition.

An increasing amount of intangible assets and goodwill on our books may lead to significant impairment charges in the future.

The amount of goodwill and other intangible assets on our consolidated balance sheet has increased significantly in recent years, primarily due to acquisitions. As a result, impairment testing could lead to material impairment charges in the future.

We regularly review our long-lived intangible and tangible assets, including identifiable intangible assets, investments in associated companies and goodwill, for impairment. Goodwill, acquired research and development, and acquired development projects not yet ready for use are subject to impairment review at least annually. Other long-lived assets are reviewed for impairment when there is an indication that an impairment may have occurred. Impairment testing under IFRS may lead to impairment charges in the future. Any significant impairment charges could have a material adverse effect on our results of operations and financial condition. In 2012, for example, we recorded intangible asset impairment charges of \$286 million. These relate to impairment charges of \$211 million for various impairment charges in the Pharmaceuticals Division and \$75 million in all other divisions. For a detailed discussion of how we determine whether an impairment has occurred, what factors could result in an impairment and the increasing impact of impairment charges on our results of operations, see "Item 5. Operating and Financial Review and Prospects—Item 5.A Operating Results—Critical Accounting Policies and Estimates—Impairment of Long-Lived Intangible and Tangible Assets" and "Item 18. Financial Statements—note 11."

Our indebtedness could adversely affect our operations.

As of December 31, 2012 we had \$13.8 billion of non-current financial debt and \$5.9 billion of current financial debt. Our current and future debt requires us to dedicate a portion of our cash flow to service interest and principal payments and may limit our ability to engage in other transactions and otherwise may place us at a competitive disadvantage to our competitors that have less debt. We may have difficulty refinancing our existing debt or incurring new debt on terms that we would consider to be commercially reasonable, if at all.

Our reliance on outsourcing and third parties for the performance of key business functions heightens the risks faced by our businesses.

We invest a significant amount of effort and resources into outsourcing and offshoring certain key business functions with third parties, including research and development collaborations, manufacturing operations, warehousing, distribution activities, certain finance functions, marketing activities, data management and others. Despite contractual relationships with the third parties to whom we outsource these functions, we cannot ultimately control how they perform their contracts. Nonetheless, we depend on these third parties to achieve results which may be significant to us. If the third parties fail to meet their obligations or to comply with the law, we may lose our investment in the collaborations and fail to receive the expected benefits. In addition, should any of these third parties fail to comply with the law in the course of their performance of services for us, there is a risk that we could be held responsible for such violations of law, as well. Any such failures by third parties could have a material adverse effect on our business, financial condition or results of operations.

In particular, in many countries, including many less-developed markets, we rely heavily on third party distributors and other agents for the marketing and distribution of our products. Many of these third parties do not have internal compliance resources comparable to those within our organization. Some of these countries are plagued by corruption. If our efforts to screen our third party agents and detect cases of potential misconduct fail, we could be held responsible for the noncompliance of these third parties with applicable laws and regulations, which may have a material adverse effect on our reputation and on our business, financial condition or results of operations.

We may not be able to realize the expected benefits of our significant investments in Emerging Growth Markets.

At a time of slowing growth in sales of healthcare products in industrialized countries, many emerging markets have experienced comparatively strong economies, leading to proportionately higher growth and an increasing contribution to the industry's global performance. In 2012, we generated \$13.8 billion, or approximately 24% (2011: 24%) of net sales from Emerging Growth Markets—which include all markets except the Established Markets of the US, Canada, Western Europe, Australia, New Zealand and Japan—as compared with \$42.8 billion, or approximately 76% (2011: 76%) of our net sales, in the Established Markets. However, combined net sales in the Emerging Growth Markets grew 5.9% in constant currency in 2012, compared to -1.7% sales growth in constant currency in the Established Markets during the same period. As a result of this trend, we have been taking steps to increase our presence in the Emerging Growth Markets. For example, in order to bolster our ability to recruit and train commercial associates in China, we have created the Novartis China University to systematically train all Novartis commercial associates in the science of the Novartis medicines for which they are responsible. In Russia, we are working with the Yaroslavl region northeast of Moscow, and have established a new Regional Hypertension Center and a public education campaign. Three pilot sites now offer hypertension intervention tools. In addition, we are also focusing our efforts on Africa, where we expect rising demand for healthcare.

There is no guarantee that our efforts to expand our sales in these countries will succeed, or that these countries will continue to experience growth rates in excess of the world's largest markets. Some Emerging Growth Market countries may be especially vulnerable to the effects of the ongoing global financial crisis, or may have very limited resources to spend on healthcare. See "—The continuing economic and financial crisis may have a material adverse effect on our results" above. Many of these countries have a relatively limited number of persons with the skills and training suitable for employment at an enterprise such as ours. See "—An inability to attract and retain qualified personnel could adversely affect our business" below. In some Emerging Growth Market countries, a culture of compliance with law may not be as fully developed as in the Established Markets, or we may be required to rely on third-party agents, in either case putting us at risk of liability. See "—Legal proceedings may have a significant

negative effect on our results of operations," and "Our reliance on outsourcing and third parties for the performance of key business functions heightens the risks faced by our businesses," above.

In addition, many of these countries have currencies that may fluctuate substantially. If these currencies devalue significantly against the US dollar, and we cannot offset the devaluations with price increases, then our products may become less profitable.

For all these reasons, our sales to Emerging Growth Markets carry significant risks. A failure to continue to expand our business in Emerging Growth Markets could have a material adverse effect on our business, financial condition or results of operations.

Failure to obtain marketing exclusivity periods for new generic products, or to develop differentiated products, as well as intense competition from patented and generic pharmaceuticals companies, may have an adverse effect on the success of our Sandoz Division.

Our Sandoz Division achieves significant revenue opportunities when it secures and maintains exclusivity periods granted for generic products in certain markets—particularly the 180-day exclusivity period granted in the US by the Hatch-Waxman Act—and when it is able to develop differentiated products with few, if any, generic competitors. Failure to obtain and maintain these market opportunities could have an adverse effect on the success of Sandoz. In addition, the division faces intense competition from patented pharmaceuticals companies, which commonly take aggressive steps to limit the availability of exclusivity periods or to reduce their value, and from other generic pharmaceuticals companies, which aggressively compete for exclusivity periods and for market share of generic products which may be identical to certain of our generic products. These activities may increase the costs and risks associated with our efforts to introduce generic products and may delay or entirely prevent their introduction. See also "Our research and development efforts may not succeed in bringing new products to market, or to do so cost-efficiently enough, or in a manner sufficient to grow our business and replaced lost revenues and income" above, with regard to the risks involved in our efforts to develop differentiated generic products.

If any of numerous key assumptions and estimates in calculating our pension plan obligations turn out to be different from our actual experience, we may be required to increase substantially our contributions to pension plans as well as the amount we pay toward pension-related expenses in the future.

We sponsor pension and other post-employment benefit plans in various forms. These plans cover a significant portion of our current and former associates. We are required to make significant assumptions and estimates about future events in calculating the present value of expected future expense and liability related to these plans. These include assumptions about discount rates we apply to estimated future liabilities and rates of future compensation 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 Novartis may differ materially from the actual results we experience due to changing market and economic conditions (including the effects of the ongoing global economic and debt crisis, which, to date, have resulted in extremely low interest rates), higher or lower withdrawal rates, or longer or shorter life spans of participants, among other variables. For example, a decrease in the discount rate we apply in determining the present value of expected future obligations of one-quarter of one percent would have increased our year-end defined benefit obligation by \$838 million. Any differences between our assumptions and estimates and our actual experience could have a material effect on our results of operations and financial condition. Further, additional employer contributions might be required if the funding level determined based on local rules falls below a pre-determined level. For more information on obligations under retirement and other post-employment benefit plans and underlying actuarial assumptions, see "Item 5. Operating and Financial Review and Prospects—Item 5.A Operating Results—Critical Accounting Policies and Estimates—Retirement and

other post-employment plans" and "Item 18. Financial Statements—note 25". See also "—The continuing economic and financial crisis may have a material adverse effect on our results" above.

Changes in tax laws or their application could adversely affect our results of operations.

The integrated nature of our worldwide operations enables us to achieve an attractive effective tax rate on our earnings because a portion of our earnings are earned in jurisdictions which tax profits at more favorable rates. Changes in tax laws or in the laws' application, including with respect to tax base or rate, transfer pricing, intercompany dividends and cross-border transactions, controlled corporations, and limitations on tax relief allowed on the interest on intercompany debt, could increase our effective tax rate and adversely affect our financial results.

Our OTC Division faces adverse impacts from increased competition, as well as potential questions of safety and efficacy.

Our OTC Division sells over-the-counter medicines, many of which contain ingredients also sold by competitors in the OTC industry. Particularly in the US, our branded OTC products compete against "store brand" products that are made with the same active ingredients as ours. These products do not carry our trusted brand names, but they also do not carry the burden of the expensive advertising and marketing that helped to establish demand for the product. As a result, the store brand products may be sold at lower prices. In recent years, consumers have increasingly begun to purchase store brand OTC products instead of branded products. In addition, in recent years, significant questions have arisen regarding the safety, efficacy and potential for misuse of certain products sold by our OTC Division and its competitors. As a result, health authorities around the world have begun to re-evaluate some important over-the-counter products, leading to restrictions on the sale of some of them and even the banning of certain products. For example, in 2010, the FDA undertook a review of one cough medicine ingredient to consider whether over-the-counter sales of the ingredient remained appropriate. While FDA has not, to date, changed the ingredient's status, further regulatory or legislative action may follow, and litigation has often followed actions such as these, particularly in the US. Additional actions and litigation regarding OTC products are possible in the future. These trends have had, and may continue to have, a significant adverse effect on the success of our OTC Division. See also "—The continuing economic and financial crisis may have a material adverse effect on our results" above.

Counterfeit versions of our products could harm our patients and reputation.

Our industry has been increasingly challenged by the vulnerability of distribution channels to illegal counterfeiting and the presence of counterfeit products in a growing number of markets and over the Internet. Counterfeit products are frequently unsafe or ineffective, and can be potentially life-threatening. To distributors and patients, counterfeit products may be visually indistinguishable from the authentic version. Reports of adverse reactions to counterfeit drugs or increased levels of counterfeiting could materially affect patient confidence in the authentic product, and harm the business of companies such as ours. Additionally, it is possible that adverse events caused by unsafe counterfeit products would mistakenly be attributed to the authentic product. If a product of ours was the subject of counterfeits, we could incur substantial reputational and financial harm in the longer term.

Ongoing consolidation among our distributors may increase both the purchasing leverage of key customers and the concentration of credit risk.

Increasingly, a significant portion of our global sales are made to a relatively small number of US drug wholesalers, retail chains and other purchasing organizations. For example, our three most important customers globally are all in the US, and accounted for approximately 10%, 9% and 8%, respectively, of Group net sales in 2012. The largest trade receivables outstanding were for these three customers, amounting to 8%, 7% and 6%, respectively, of the Group's trade receivables at December 31, 2012. The

trend has been toward further consolidation among our distributors, especially in the US. As a result, our distributors are gaining additional purchasing leverage, which increases the pricing pressures facing our businesses. Moreover, we are exposed to a concentration of credit risk as a result of this concentration among our customers. If one or more of our major customers experienced financial difficulties, the effect on us would be substantially greater than in the past. This could have a material adverse effect on our business, financial condition and results of operations.

An inability to attract and retain qualified personnel could adversely affect our business.

We highly depend upon skilled personnel in key parts of our organization, and we invest heavily in recruiting and training qualified individuals. The loss of the service of key members of our organization—particularly senior members of our scientific and management teams—could delay or prevent the achievement of major business objectives. In addition, the success of our research and development activities is particularly dependent on our ability to attract and retain sufficient numbers of high-quality researchers and development specialists.

Future economic growth will demand more talented associates and leaders, yet the market for talent will become increasingly competitive. Shifting demographic trends will result in fewer students, fewer graduates and fewer people entering the workforce in the Western world in the next 10 years. The supply of talent for key functional and leadership positions is decreasing, and a talent gap is clearly visible for some professions and geographies—engineers in Germany, for example. Recruitment is increasingly regional or global in specialized fields such as clinical development, biosciences, chemistry and information technology.

Emerging markets are expected to be a driving force in global growth, but in countries like Russia and China there is a limited pool of executives with the training and international experience needed to work successfully in a global organization like Novartis. Moreover, younger generations around the world have changing expectations toward careers, engagement and the integration of work in their overall lifestyles. Geographic mobility is expected to decrease, and talent in emerging countries anticipate ample career opportunities closer to home than in the past.

In addition, our ability to hire qualified personnel also depends on the flexibility to reward superior performance and to pay competitive compensation. Laws and regulations on executive compensation, including legislative proposals in our home country, Switzerland, may restrict our ability to attract, motivate and retain the required level of qualified personnel.

We face intense competition for an increasingly limited pool of qualified individuals from numerous pharmaceutical and biotechnology companies, universities, governmental entities and other research institutions. As a result, we may be unable to attract and retain qualified individuals in sufficient numbers, which would have an adverse effect on our business, financial condition and results of operations.

Environmental liabilities may adversely impact our results of operations.

The environmental laws of various jurisdictions impose actual and potential obligations on us to remediate contaminated sites. While we have set aside substantial provisions for worldwide environmental liabilities, there is no guarantee that additional costs will not be incurred beyond the amounts for which we have provided in the Group consolidated financial statements. If we are required to further increase our provisions for environmental liabilities in the future, or if we fail to properly manage environmental risks, this could have a material adverse effect on our business, financial condition and results of operations. For more detail regarding environmental matters, see "Item 4.D Property, Plants and Equipment—Environmental Matters" and "Item 18. Financial Statements—note 20."

Significant disruptions of information technology systems or breaches of data security could adversely affect our business.

Our business is increasingly dependent on critical, complex and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. The size and complexity of our computer systems make them potentially vulnerable to breakdown, malicious intrusion and computer viruses, which may result in the impairment of production and key business processes.

In addition, our systems are potentially vulnerable to data security breaches—whether by employees or others—which may expose sensitive data to unauthorized persons. Such data security breaches could lead to the loss of trade secrets or other intellectual property, or could lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients, customers and others.

Such disruptions and breaches of security could have a material adverse effect on our business, financial condition and results of operations.

Increasing use of social media and mobile technologies could give rise to liability or breaches of data security.

Novartis and our associates are increasingly relying on social media tools and mobile technologies as a means of communications. To the extent that we seek as a company to use these tools as a means to communicate about our products or about the diseases our products are intended to treat, there are significant uncertainties as to the rules that apply to such communications, and as to the interpretations that health authorities will apply to the rules that exist. As a result, despite our efforts to comply with applicable rules, there is a significant risk that our use of social media and mobile technologies for such purposes may cause us to nonetheless be found in violation of them. In addition, because of the universal availability of social media tools and mobile technologies, our associates may use them in ways that may not be sanctioned by the company, and which may give rise to liability, or which could lead to the loss of trade secrets or other intellectual property, or could lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients, customers and others. Such uses of social media and mobile technologies could have a material adverse effect on our business, reputation, financial condition and results of operations.

Climate change and earthquakes could adversely affect our business.

In recent years, extreme weather events and changing weather patterns such as storms, flooding, drought, and temperature changes, appear to have become more common. We operate in countries around the world. As a result, we are potentially exposed to varying risks as a result of these weather patterns. These risks include: (i) a potential reduction in ice and snow cover, potentially leading to a reduced availability of cooling water for our facilities in Europe; (ii) potential changes in precipitation extremes and droughts, potentially leading to flooding, which may affect sites in Europe, China and India, while drought may affect sites in the UK, India and Australia; (iii) potentially rising sea levels, which could affect sites in Singapore, Shanghai and Bangladesh; (iv) potential tropical cyclones, which could affect operations in the US and Asia; (v) potential changes in the availability of natural resources, which could affect, among other things, the availability of biological ingredients for our products, and the generation of electricity in countries heavily dependent upon hydro-electricity. As a result of these and other potential impacts of climate change on the environment, our business, financial condition and results of operations could be put at risk.

Our corporate headquarters, the headquarters of our Pharmaceuticals and Animal Health Divisions, and certain of our major Pharmaceuticals Division production and research facilities are located near earthquake fault lines in Basel, Switzerland. In addition, other major facilities of our Pharmaceuticals, Alcon, and Vaccines and Diagnostics Divisions are located near major earthquake fault lines in various