

## 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 Market System. The exchange rate in effect on January 21, 2009, as found on Reuters Market System, was CHF 1.00 = \$0.87.

Year ended December 31, (\$ per CHF)	Period End	Average <sup>(1)</sup>	Low	High
2004		0.88	0.81	0.76
2005		0.76	0.80	0.75
2006		0.82	0.80	0.76
2007		0.88	0.83	0.80
2008		0.94	0.93	0.82
Month end,				
August 2008			0.90	0.95
September 2008			0.88	0.92
October 2008			0.86	0.89
November 2008			0.82	0.87
December 2008			0.82	0.96
January 2009 <sup>(2)</sup>			0.87	0.94

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

<sup>(2)</sup> Through January 21, 2009.

## 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 Pharmaceuticals Division faces and will continue to face important patent expirations and aggressive generic competition.*

Our Pharmaceuticals Division's products 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—whether due to patent expiration, generic challenges or other reasons—could have a material adverse effect on our

results of operations. The introduction of a generic version of a branded medicine typically results in a significant and rapid reduction in net sales for the branded product because generic manufacturers typically offer their unbranded versions at sharply lower prices. The pharmaceuticals industry is confronted by a continuing high level of patent expirations, with products representing approximately \$24 billion in combined annual sales facing patent expiry in 2009, similar to levels seen in 2007 and 2008, according to IMS Health. In addition, generic manufacturers are increasingly conducting so-called "launches at risk" of products that are still under legal challenge for patent infringement, before final resolution of legal proceedings.

In 2008, sales of four Novartis Pharmaceuticals Division products—*Lotrel* (high blood pressure), *Lamisil* (fungal infections), *Trileptal* (epilepsy) and *Famvir* (viral infections)—continued to lose sales following the start of generic competition in the US in 2007. As a result of generic competition, combined net sales for these products declined from \$2.6 billion in 2006 to \$1.6 billion in 2007 and \$536 million in 2008. The sharp reduction in net sales of these products had an adverse effect on the results of operations of our Pharmaceuticals Division in 2007 and 2008.

Four of our five best-selling products, *Diovan* (high blood pressure), *Zometa*, *Femara* (both for cancers), and *Sandostatin* (acromegaly) potentially could face generic competition in the near future in various markets, either in the US or Europe, or both, whether due to patent challenges or the scheduled expiration of patents. In particular, the patent on our top-selling drug, *Diovan*, expires in the major countries of the EU in 2011 and in the US in 2012. In addition, sales of Diovan may begin to erode in 2009 in certain countries in the EU and in 2010 in the US when a competitor product, Cozaar®, goes off-patent. Similarly, zoledronic acid, the active ingredient in *Zometa*, as well as in *Reclast/Aclasta* (osteoporosis), is currently the subject of US patent litigation, with the possibility of an "at risk launch" by one or more generic competitors as early as the end of 2010. *Femara's* patent will expire in 2011 in the US and in major European markets. Patent litigation against a generic manufacturer who challenged the *Femara* patent has been settled. Finally, patents protecting the *Sandostatin* LAR formulation, the long-acting version of *Sandostatin* which represents a majority of our sales, expires in 2010 in major markets outside the US (and in 2014 and beyond in the US). Clearly, the loss of exclusivity of any one of these four products could have a material adverse effect on our business, financial condition and results of operations.

In addition to *Zometa* and *Reclast/Aclasta*, key products of our Pharmaceuticals Division that are the subject of ongoing US patent litigation include *Lescol* (high cholesterol), *Focalin/Ritalin LA* (ADHD) and *Comtan/Stalevo* (Parkinson's disease). The loss of exclusivity of some of these products could have a significant adverse effect on the results of operations of our Pharmaceuticals Division. In addition, *Neoral* (transplantation) and *Voltaren* (pain), which are still among our top ten-selling products with combined net sales of \$1.8 billion in 2008, have already encountered generic competition in many markets. As a result, sales from these products may decline significantly in the future, which could have a material adverse effect on our business, financial condition and results of operations.

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."

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, or consultants who may have access to such information. If these agreements are breached, our contractual remedies may inadequately cover any losses.

***Our business is increasingly affected by pressures on drug pricing.***

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 spending even more tightly. 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 include government-imposed industry-wide price reductions, mandatory pricing systems, 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 and growing pressure on physicians to reduce the prescribing of patented prescription medicines. We expect these efforts to continue as healthcare payors around the globe—in particular 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.

These initiatives not only affect the results of our Pharmaceuticals Division, but also have an increasing impact on the prices we can charge for the generic drugs marketed by our Sandoz Division. This is particularly true in Europe and especially Germany, our second-largest market for generic products, where various measures have been introduced to require generic manufacturers to lower their prices. In addition, in the US, a combination of aggressive efforts by distributors to increase their profit margins on generic products that are considered commodities, intense and increasing competition between generic pharmaceutical manufacturers, and changes to government regulations, including state and federal regulations and regulations impacting Medicare and Medicaid, are increasing the downward pressure on our prices there. We expect these and other challenges to continue to put pressure on our revenues, and therefore they could have a material adverse effect on our business, financial condition and results of operations.

For more information on pricing controls and on our challenging business environment see "Item 4. Information on the Company—Item 4.B Business Overview—Pharmaceuticals—Price Controls" and "Item 5. Operating and Financial Review and Prospects—Item 5.A Operating Results—Factors affecting results of operations—Pressure to reduce drug prices and increase access to medicines."

***Increasing regulatory scrutiny of drug safety and efficacy may adversely affect us.***

We must comply with a broad range of regulatory requirements for the development and marketing of our products. These requirements not only affect our development costs, but also the time required to reach the market and the likelihood of successfully doing so. Stricter regulatory requirements also heighten the risk of withdrawal of existing products by regulators on the basis of post-approval concerns over product safety, which would reduce revenues and could result in product recalls and product liability lawsuits. Even in the absence of regulatory action, concerns about efficacy or safety, whether or not scientifically justified, may cause us to voluntarily cease marketing a product or face declining sales. The development of the post-approval adverse event profile for a product or product class also may have a material adverse effect on the marketing and sale of that product. For more detail on the governmental regulations that affect our business, 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."

Following widely publicized product recalls such as the Merck & Co., Inc. recall of its pain medicine Vioxx® in 2004, health regulators are increasingly focusing on product safety and efficacy as well as on the risk/benefit profile of developmental drugs. This has 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 analysis of the trials. As a result, obtaining regulatory approvals has become more challenging for pharmaceutical companies. In addition, maintaining regulatory approvals has become increasingly expensive since companies are being required to gather far more detailed safety and other clinical data on products after approval.

We have suffered setbacks in gaining regulatory approvals for new products, as well as being able to keep products on the market, primarily in the Pharmaceuticals Division. For example, in March 2007, we received a so-called "approvable" letter from the FDA regarding Galvus (diabetes), which required us to conduct major additional clinical trials in order to obtain US regulatory approval for the drug. Although

*Galvus* was subsequently approved in the EU, a resubmission for US approval is not planned. Separately, in the second half of 2007, *Prexige* (osteoarthritic pain) was withdrawn from the market in Australia and some countries of the EU based on post-marketing reports of serious liver side-effects, including two deaths in Australia, allegedly associated with long-term uses of higher doses of the drug. This product was subsequently withdrawn from remaining markets during 2008.

Any additional adverse regulatory developments in the approval process for new products or in the continued marketing of significant existing products, or any increases in regulation or major changes in the healthcare landscape under the new US administration, could have a material adverse effect on our business, financial condition and results of operations.

***Our research and development efforts may not succeed in bringing high-potential products to market.***

Our ability to continue to grow our business and to replace any sales lost due to the end of exclusivity for our products—whether through patent expiration, generic challenges, competition from new branded products or changes in regulatory status—depends upon the success of our research and development activities in identifying and developing high-potential breakthrough products that address unmet needs, are accepted by patients and physicians, and are reimbursed by payors. To accomplish this, we commit substantial effort, funds and other resources to research and development, both through our own dedicated resources and through various collaborations with third parties. Developing new pharmaceutical products and bringing them to market, however, is a costly, lengthy and uncertain process. In spite of our significant investments, there can be no guarantee that our research and development activities will produce a sufficient number of commercially viable new products.

The pharmaceuticals industry has seen a dearth of regulatory approvals for new drugs in recent years. For example, the FDA approved only 18 entirely new drugs (new molecular entities) in 2007, one of the lowest single-year totals since 1983, when there were 14 new approvals. New product approvals for the industry are expected to remain low in the future following FDA approvals for 24 brand new medicines in 2008, according to IMS Health. These approval levels compare with the average annual approval rate of more than 30 new medicines per year in the period from 1996 to 2004, the year that Vioxx was withdrawn from the market. In addition, many of the new drugs approved in recent years have not been as financially successful as those approved in prior years. This relatively low level in research productivity comes at a time when the worldwide pharmaceuticals industry is estimated to be spending more than \$40 billion each year on research and development activities.

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 to pass a highly complex, lengthy and expensive approval process. During each stage, there is a substantial risk that we will encounter serious obstacles which will further delay us, or that we will not achieve our goals and, accordingly, may abandon a product in which we have invested substantial amounts of time and money. Similar efforts are required to develop new products in our other divisions, as well, and the same risks apply.

If we are unable to maintain a continuous flow of successful new products and new indications or brand extensions for existing products sufficient to cover our substantial research and development costs and to replace sales lost as older products are displaced by competing products or therapies, this could have a material adverse effect on our business, financial condition or results of operations.

In addition, we invest a significant amount of effort and financial resources into research and development collaborations with third parties, organizations that we do not control. Many of these may be small companies that do not have the same resources and development expertise as Novartis. If these third parties fail to meet our expectations, we may lose our investment in the collaborations or fail to

receive the expected benefits, which could have a material adverse effect on our business, financial condition or results of operations.

***The current economic and financial crisis may have a material adverse effect on our results.***

Many of the world's largest economies and financial institutions currently face extreme financial difficulty, including a decline in asset prices, liquidity problems and limited availability of credit. It is uncertain how long this crisis will last, but many countries are concerned that their economies may enter a deep and prolonged recession. Such difficult economic times may have a material adverse effect on our revenues, results of operations, financial condition and ability to raise capital. Some of our businesses, including the business units of our Consumer Health Division, may be particularly sensitive to declines in consumer spending. In addition, our Pharmaceuticals, Vaccines and Diagnostics and Sandoz Divisions may not be immune to consumer cutbacks. As reported by IMS Health, after ten years of growth, in the first eight months of 2008 the total number of prescriptions dispensed in the US declined, as compared with the same period in 2007. The current economic and financial crisis appears to be affecting all of the major markets in which we operate. 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 hard economic times.

In addition, the financial crisis may cause the value of our investments in our pension plans to decrease, requiring us to increase our funding of those pension plans. The financial crisis may also result in a lower return on our financial investments, and a lower value on some of our assets. For example, our investment in Alcon, Inc. has declined significantly in market value since we acquired it in July 2008. The financial crisis could also negatively impact the cost of financing or our ability to finance the second step of the Alcon acquisition on favorable terms. The impact of the current financial crisis on our future access to various kinds of capital, and the cost of that capital, is not currently predictable.

At the same time, significant changes and volatility in the consumer environment, the equity, credit and foreign exchange markets, and in the competitive 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, under current market conditions there is a significant risk that such guidance or outlook will turn out to be, or to have been, incorrect.

***Legal proceedings may have a significant negative effect on our results of operations.***

In recent years, the industries of which we are a part have become important targets of litigation around the world, especially in the US. A number of our subsidiaries are, and will likely continue to be, subject to various legal proceedings that arise from time to time, including product liability, commercial, employment and wrongful discharge, antitrust, securities, sales and marketing practices, health and safety, environmental and tax litigation claims, government investigations and intellectual property disputes. As a result, we may become subject to substantial liabilities that may not be covered by insurance. Litigation is inherently unpredictable, and large verdicts 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, our Pharmaceuticals Division frequently defends its patents against challenges by our competitors. Should we fail to successfully defend our patents, we will be faced with generic competition for the relevant products, and a resulting loss of revenue.

At the same time, 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 one of our competitors for the branded 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, we 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.

The CIBA Vision Business Unit of our Consumer Health Division also has been required to defend its patents against frequent challenges by competitors.

Separately, the US affiliates of our Pharmaceuticals and Sandoz Divisions are the subjects of lawsuits brought by private plaintiffs and state and local government entities alleging that they have fraudulently overstated the Average Wholesale Price and "best price," which are, or have been, used by the US federal and state governments in the calculation of, respectively, US Medicare reimbursements and Medicaid rebates. A limited number of similar actions have been brought to trial to date against various pharmaceutical companies, including one against our affiliate in the Pharmaceuticals Division, and in certain instances, substantial damages have been awarded. Recent damage awards are on appeal. Should we fail to successfully defend the cases against us, we could face substantial damages if the final court decision is adverse to us.

Adverse judgments or settlements in any of these cases could have a material adverse effect on our business, financial condition and results of operations.

Governments and regulatory authorities have been stepping up their compliance and law enforcement activities in recent years in key areas, including corruption, marketing practices, antitrust and trade restrictions. Our businesses have been subject, from time to time, to such governmental investigations and information requests by regulatory authorities. For example, we are cooperating with civil and criminal investigations currently being undertaken by the US Attorney's Office into allegations of potential off-label promotion of our epilepsy drug, *Trileptal*. While the outcomes of government and regulatory investigations are unpredictable, they are costly, divert management from our business and may affect our reputation. In some instances, the inherent uncertainty of litigation, the resources required to defend against governmental actions and the risk to reputation as well as of potential exclusion from US federal government reimbursement programs have contributed to decisions by companies in our industry to enter into settlement agreements with governmental, and particularly federal, authorities. Those settlements have involved and may continue to involve large cash payments, including the potential repayment of amounts allegedly obtained improperly and penalties up to treble damages. In addition, settlements of healthcare fraud cases typically involve 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.

For more detail regarding specific legal matters currently pending against us, see "Item 18. Financial Statements—note 19" and "Item 4. Information on the Company—4.B Business Overview—Pharmaceuticals—Intellectual Property."

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

We regularly review our investments in associated companies for impairment. They are reviewed for impairment whenever there is an indication that an impairment may have occurred. The amount of investments in associated companies on our consolidated balance sheet has increased significantly in recent years, primarily as a result of the recent Alcon acquisition. 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. For a detailed discussion of how we determine whether an impairment has occurred, what factors could result in an impairment and a detailed analysis of the status of our Alcon investment see "Item 5.A Operating Results—Critical Accounting Policies and Estimates—

Investments in Associated Companies and—Assessment of Alcon Investment" and "Item 18. Financial Statements—note 10".

Similarly, we regularly review our long-lived intangible and tangible assets, including identifiable intangible assets 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. The amount of goodwill and other intangible assets on our consolidated balance sheet have increased significantly in recent years, primarily as a result of recent acquisitions. In 2008, for example, we recorded an intangible asset impairment charge of \$223 million after we decided not to pursue further development of Pharmaceuticals Division pipeline product *Aurograb*. 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.A Operating Results—Critical Accounting Policies and Estimates—Impairment of Long-Lived Intangible and Tangible Assets" and "Item 18. Financial Statements—note 9".

***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 pharmaceuticals in industrialized countries, many emerging markets have experienced comparatively strong economies, leading to higher proportional growth and an increasing contribution to the industry's global performance. In 2008, Novartis generated approximately 64% (2007: 66%) of our net sales from continuing operations in the world's seven largest developed markets, while the seven leading emerging markets—Brazil, China, India, Mexico, Russia, South Korea and Turkey—contributed 10% (2007: 9%) of net sales. However, combined net sales in these seven priority emerging markets grew 18% in local currency in 2008, compared to 1% sales growth in local currency in the seven largest developed markets during the same period. As a result of this trend, we have been taking steps to increase our presence in these priority emerging markets and in other emerging markets. For example, in 2007 Novartis announced the creation of a new cross-divisional operation to accelerate growth in small emerging markets, expanding the presence of all of our products in regions that include Northern and Sub-Saharan Africa, Central Asia and parts of Southeast Asia.

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 in excess of the world's largest markets. Some emerging countries may be especially vulnerable to the current global financial crisis, or may have very limited resources to spend on healthcare. See "—The current economic and financial crisis may have a material adverse effect on our results" above. Many of these countries have relatively few persons with the skills and training suitable for employment at an enterprise such as ours. See also "—An inability to attract and retain qualified personnel could adversely affect our business" below. In other emerging countries, we may be required to rely on third-party agents, which may put us at risk of liability. See also "—We may be held responsible for the potential misconduct by our third-party agents, particularly in developing countries" below. 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.

***We may not be able to realize the expected benefits from our anticipated acquisition of a majority interest in Alcon.***

In April 2008, we announced an agreement with Nestlé S.A. to acquire a 25% stake in Alcon Inc., a world leader in eye care, including pharmaceutical, surgical and consumer products, with the option of acquiring an additional 52% stake in the company. Under that agreement, we purchased the 25% stake from Nestlé in July 2008 for \$10.4 billion. In the optional second step, we have the right to acquire Nestlé's remaining 52% majority stake in Alcon between January 1, 2010, and July 31, 2011, for a fixed price of \$181.00 per share, or approximately \$28 billion. During this period, Nestlé has the right to require Novartis to buy its remaining stake at a 20.5% premium to Alcon's share price at the time of exercise, but

not exceeding \$181.00 per share. Novartis has no obligation to purchase the remaining 23% of shares held by Alcon minority shareholders.

The Alcon acquisition is intended to enhance the diversification of our product portfolio and to give us access to a high-growth area of the healthcare market. However, there can be no guarantee that the second step of the transaction will be completed or that we will, in fact, achieve majority ownership of Alcon. In addition, even if we do obtain majority ownership of Alcon, there can be no guarantee that the acquisition will be successful, or will result in the expected strategic benefits and synergies with our own eye-related businesses. A failure to complete the acquisition of a majority interest in Alcon, or to realize the expected potential strategic benefits and synergies if it is completed, may have a long-term material adverse effect on our business, financial condition or results of operations.

***Our indebtedness could adversely affect our operations.***

As of December 31, 2008 we had \$2.2 billion of non-current financial debt and \$5.2 billion of current financial debt. We may in the future incur additional debt for a variety of reasons including our agreement with Nestlé relating to Alcon, Inc. 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 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.

***We may not be able to realize the expected benefits from our significant investments in biologics.***

We believe that recent advances in technologies, particularly new approaches in the analysis of human genome data, could have a fundamental effect on product development and, in turn, on our future results of operations. We are, therefore, making major investments in these technologies and devoting significant resources to building our position in biologic therapies, which now represent approximately 25% of our preclinical research portfolio. For our efforts in this area to be successful, we need to ensure a speedy expansion of our capabilities, expertise and skills in the development, manufacturing and marketing of biological therapies. This, however, poses a number of significant challenges, including intense competition for qualified individuals. See also "An inability to attract and retain qualified personnel could adversely affect our business" below.

In 2007, we formed our Novartis Biologics Unit. To complement internal research and development activities, we also have made significant investments in licensing agreements with specialized biotechnology companies. At the same time, our Sandoz Division is taking steps to expand its expertise in biosimilars (generic versions of biological therapies) and is actively working with regulators to establish appropriate rules for the approval of these types of generic products.

There can be no guarantee that our efforts in the biologics area will be successful or that we will be able to realize the expected benefits from our significant investment in this area. A failure to build and expand our position in biologics or to achieve the expected benefits from our investments in this area could have a material adverse effect on our business, financial condition and results of operations.

***Failure to obtain marketing exclusivity periods for new generic products, and intense competition from branded pharmaceuticals companies, may have an adverse effect on the success of our Sandoz Division.***

Our Sandoz Division achieves significant revenue opportunities when it secures exclusivity periods granted for generic products in certain markets—particularly the 180-day exclusivity period granted in the US by the Hatch-Waxman Act. Failure to obtain these market exclusivities could have an adverse effect on the success of Sandoz. In addition, the division faces intense competition from branded pharmaceuticals companies, which commonly take aggressive steps to limit the availability of exclusivity periods or to



reduce their value. These activities may increase the costs and risks associated with our efforts to introduce generic products and may delay or entirely prevent their introduction.

***We may not be able to realize the expected benefits from our ongoing productivity initiatives.***

In December 2007, we launched a new strategic initiative called "Forward" to enhance productivity by simplifying organizational structures throughout the Group, accelerating and decentralizing decision-making and redesigning the way we operate. Through this initiative, we aim to reduce our cost-base by approximately \$1.6 billion by 2010 compared to 2007 levels. Our ability to achieve the expected cost savings, however, depends on a number of factors beyond our control. If we are unable to successfully complete "Forward" and other ongoing productivity initiatives, that could have a material adverse effect on our business, financial condition and results of operations.

***We may not be able to realize the expected benefits of our significant marketing efforts for our products.***

The time between the launch of innovative "first-in-class" treatments and "me-too" or generic pharmaceuticals has shortened significantly in recent years. This trend is putting increasing pressure on our Pharmaceuticals Division to maximize revenue from each new product quickly following its launch, in order to recover the significant research and development costs and earn a return on that investment. A strong marketing message and rapid penetration of different geographic markets are vital for a product to attain peak sales as quickly as possible before the loss of patent protection or the entry of significant competitor products. As a consequence, we are required to invest significant resources in marketing and sales efforts. We continually evaluate the appropriateness of our marketing models, explore more efficient ways to support new product launches and adjust the composition of our sales force in response to changes in our product portfolio. For example, we announced a new commercial model for our US General Medicines business in 2008, aimed at driving sales growth while deploying resources more efficiently. If these or other efforts prove unsuccessful, this could have a material adverse effect on our business, financial condition and results of operations.

***A failure to develop differentiated vaccines or to bring key products to market in time for the relevant disease seasons could have an adverse effect on the success of our Vaccines and Diagnostics Division.***

The demand for some products marketed by our Vaccines and Diagnostics Division, such as influenza vaccines, is seasonal, while the demand for other vaccines, such as pediatric combination vaccines, depends on changes in birth rates in developed countries. Some vaccines that make an important contribution to the division's net sales and profits, particularly the key seasonal influenza vaccine products, are considered commodities, meaning that there are few therapeutic differences among vaccines offered by competitors. In addition, the seasonal influenza vaccine products have suffered from price erosion due to growth in product supply across the industry. The ability to develop differentiated, effective and safe vaccines, to gain approval for inclusion in national immunization recommendation lists, and to consistently produce and deliver high-quality vaccines in time for the relevant disease seasons are critical to the success of our Vaccines and Diagnostics Division.

***Our OTC Business Unit faces adverse impacts from questions of safety and efficacy, as well as more intense competition.***

The OTC Business Unit of our Consumer Health Division sells over-the-counter medicines, many of which contain ingredients also sold by competitors in the OTC industry. In recent years, significant questions have arisen regarding the safety, efficacy and potential for misuse of certain products sold by our OTC Business Unit 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 October 2008, acting in consultation with the FDA, we voluntarily re-labeled our US cough and cold medicines to indicate that these products

should not be used in children under four years of age. Litigation has often followed actions such as these, particularly in the US. Additional actions and litigation regarding OTC products are possible in the future. In addition, particularly in the US, our branded OTC products compete against "store brand" products that are made with the same active ingredients but do not carry our trusted brand names, or the burden of expensive advertising. As a result, the store brands may be sold at lower prices. In recent years, consumers have increasingly begun to purchase store brand OTC products instead of branded products. These trends have had, and may continue to have, a significant adverse effect on the success of our OTC Business Unit. See also "The current economic and financial crisis may have a material adverse effect on our results" above.

***The manufacture of our products is highly regulated and complex, and may encounter a variety of issues that lead to supply disruptions.***

The products we market, distribute and sell are either manufactured at our own dedicated manufacturing facilities or by third parties. In either case, we need to ensure that manufacturing processes comply with applicable regulations and manufacturing practices, as well as our own high quality standards. In particular, the manufacture of our products is heavily regulated by governmental authorities around the world, including the FDA. If we or our third party suppliers fail to comply fully with such regulations then there could be a government-enforced shutdown of production facilities or production lines, which in turn could lead to product shortages. A failure to comply fully with such regulations could also lead to a delay in the approval of new products. For example, in August 2008, our Sandoz Division's Wilson, North Carolina facility received a Warning Letter from the FDA which remains unresolved. The Warning Letter raises concerns regarding the Wilson facility's compliance with FDA Good Manufacturing Practice regulations, and states that until the FDA confirms that the deficiencies have been corrected, the FDA can recommend disapproval of any pending NDAs, abbreviated NDAs or export certificate requests submitted by our Sandoz US affiliate. Sandoz is collaborating with the FDA to promptly correct all concerns raised in the Warning Letter, and to ensure that our products are safe and effective and meet highest quality standards. Voluntary recalls were made in September and in the fourth quarter of 2008 as part of the FDA review of the facility.

In addition, 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. As a result of these factors, the production of one or more of our products may be disrupted from time to time.

A disruption in the supply of certain key products, or our failure to accurately predict demand, could have a material adverse effect on our business, financial condition or results of operations. And because our products are intended to promote the health of patients, for some of our products, a supply disruption could subject us to lawsuits or to allegations that the public health, or the health of individuals, has been endangered.

***If any of numerous key assumptions and estimates in calculating our pension plan obligations turn out to be different than 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.***

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, expected returns on plan assets 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 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 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-half of one percent would have increased our year-end defined benefit obligation by \$1.2 billion. Any differences between our assumptions and estimates and our actual experience could have a material effect on our results of operations and financial condition. 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 26". See also "—The current economic and financial crisis may have a material adverse effect on our results" above.

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

Increasingly, significant portions of our sales, particularly in the US, 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, all of which are from the US, accounted for approximately 8%, 7% and 6%, respectively, of Group net sales from continuing operations in 2008. The highest amounts of trade receivables outstanding were for these three customers, and they amounted to 9%, 5% and 6%, respectively, of the Group's trade receivables at December 31, 2008. 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. The increased purchasing power of these customers also increases the risk that we may not be able to effectively enforce the high standards that we expect of our distributors and customers. Each of these factors 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—may 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 future 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 international experience—and the language and other skills—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.

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 19."

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

A significant portion of our earnings and expenditures are in currencies other than US dollars, our reporting currency. In 2008, 34% of our net sales from continuing operations were made in US dollars, 32% in euros, 7% in Japanese yen, 2% in Swiss francs and 25% in other currencies. During the same period, 31% of our expenses from continuing operations arose in US dollars, 28% in euros, 16% in Swiss francs, 5% in Japanese yen and 20% in other currencies. Changes in exchange rates between the US dollar and other currencies can result in increases or decreases in our sales, costs and earnings. 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. 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 11. Quantitative and Qualitative Disclosures about Non-Product-Related Market Risk."

***We may be held responsible for potential misconduct of third-party agents, particularly in developing countries.***

We have operations in approximately 140 countries around the world and are significantly expanding our activities in emerging growth markets. In many countries, particularly in 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 are small and 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 negative effect on our reputation and our business.

***Significant disruptions of information technology systems could adversely affect our business.***

Our business is increasingly dependent on increasingly complex and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. Any significant breakdown or interruption of these systems, whether due to computer viruses or other causes, may result in the loss of key information and/or impairment of production and business processes, which could materially and adversely affect our business.

***Earthquakes could adversely affect our business.***

Our corporate headquarters, the headquarters of our Pharmaceuticals and Consumer Health Divisions, and certain of our major Pharmaceuticals Division production facilities are located near