As filed with the Securities and Exchange Commission on March 18, 2002

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington D.C. 20549

FORM 20-F

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended December 31, 2001

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-15024

NOVARTIS AG

(Exact name of Registrant as specified in its charter)

NOVARTIS Inc.

(Translation of Registrant's name into English)

Switzerland

(Jurisdiction of incorporation or organization)

Lichtstrasse 35
4056 Basel, Switzerland

(Address of principal executive offices)

Securities registered pursuant to Section 12(b) of the Act:

Title of class	Name of each exchange on which registered
American Depositary Shares each representing 1 ordinary share, nominal value CHF 0.50 per ordinary share, and ordinary shares	**New York Stock Exchange, Inc.**

Securities registered pursuant to Section 12(g) of the Act:

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:

2,885,204,680 ordinary shares

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days:

Yes ☒ No ☐ Not Applicable

Indicate by check mark which financial statement item the Registrant has elected to follow:

Item 17 ☐ Item 18 ☒

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INTRODUCTION AND USE OF CERTAIN TERMS

Novartis AG and our consolidated subsidiaries ("Novartis" or the "Group") publish consolidated financial statements expressed in Swiss francs ("CHF"). Our consolidated financial statements found in Item 18 of this annual report on Form 20-F ("Form 20-F") include those for the year ended December 31, 2001. In this Form 20-F, references to "CHF" are to Swiss francs; references to "US dollars", "US$" or "$" are to the lawful currency of the United States of America; and references to "m" are to million. Solely for the convenience of the reader, this Form 20-F contains translations of certain Swiss franc amounts into US dollar amounts at specified rates. These translations should not be construed as representations that the Swiss franc amounts actually represent such US dollar amounts or could be converted into US dollars at the rate indicated or at any other rate. Unless otherwise indicated, the translations from Swiss francs into US dollars have been made at the market rate as quoted by the Reuters Market System in effect on December 31, 2001, which was $1.00 = CHF 1.68.

In this Form 20-F, references to the "United States" or to "US" are to the United States of America, references to "Europe" are to all European countries (including Turkey, Russia and the Ukraine), whereas references to the European Union ("EU") are to each of the 15 member-states of the EU and references to "Americas" are to North, Central (including the Caribbean) and South America, unless the context otherwise requires; references to "Novartis" or the "Group" are to Novartis AG and its consolidated subsidiaries. You will find the words "we," "our," "us" and similar words or phrases in this Form 20-F. We use those words to comply with the requirement of the United States Securities and Exchange Commission to use "plain English" in public documents like this annual report. For the sake of clarification, each operating company in the Group is legally separate from all other companies in the Group and manages its business independently through its respective board of directors or other top local management body. No Group company operates the business of another Group company nor is any Group company the agent of any other Group company.

We furnish to holders of our ordinary shares ("shares") annual reports that include a description of operations and annual audited consolidated financial statements prepared in accordance with International Accounting Standards ("IAS"), which differs in certain significant respects from Generally Accepted Accounting Principles in the United States ("US GAAP"). See "Item 18. Financial Statements—note 33" for a description of the significant differences between IAS and US GAAP. The financial statements included in the annual reports are examined and reported upon by our independent accountants. We also furnish holders of our shares with half-year interim reports that include unaudited interim consolidated financial information prepared in conformity with IAS with a reconciliation to US GAAP. In 2002, we will also make available to our shareholders, on our web page, quarterly interim press releases that include unaudited interim consolidated financial information prepared in conformity with IAS with a reconciliation to US GAAP.

FORWARD-LOOKING STATEMENTS

This Form 20-F contains certain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, relating to our business and the sectors in which we and our subsidiaries and interests operate. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believe," "expect," "may," "are expected to," "will," "will continue," "should," "would be," "seek" or "anticipate" or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions. Such statements include descriptions of our investment and research and development programs and anticipated expenditures in connection therewith, descriptions of new products we expect to introduce and anticipated customer demand for such products. Such statements reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performances or achievements that may be expressed or implied by such forward-looking statements. Some of these factors are discussed in more detail herein, including under "Item 3. Key Information—3.D. Risk factors," "Item 4. Information on the Company," and "Item 5. Operating and Financial Review and Prospects." Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this Form 20-F as anticipated, believed, estimated or expected. We do not intend, and do not assume any obligation, to update any industry information or forward-looking statements set out in this Form 20-F.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

3.A Selected Financial Data

The financial data at December 31, 2001, 2000, 1999, 1998 and 1997 shown in the chart below are taken from audited financial statements. Our consolidated financial statements ("consolidated financial statements") for the years ended December 31, 2001, 2000 and 1999 are included elsewhere in this Form 20-F. All financial data should be read in conjunction with "Item 5. Operating and Financial Review and Prospects" and our consolidated financial statements and accompanying notes which are included elsewhere in this Form 20-F. All financial data presented in this Form 20-F are qualified in their entirety by reference to the consolidated financial statements and such notes.

The audited financial statements used to create the selected consolidated financial data set forth below were prepared in accordance with IAS. IAS differs in certain respects from US GAAP. For a discussion of the significant differences between IAS and US GAAP, see "Item 18. Financial Statements—note 33."

For further information regarding continuing and discontinued activities (the Agribusiness sector), see "Item 4. Information on the Company—4.A. History and Development of Novartis" and "Item 5. Operating and Financial Review and Prospects—5.A. Operating Results."

	Year Ended December 31,							
	2001[1]	2001	2000	2000[2]	1999	1999[2]	1998	1997
	($)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)
	(in millions except per share data)							
INCOME STATEMENT DATA								
Amounts in accordance with IAS:								
Net sales	**19,070**	**32,038**	**35,805**	**29,112**	**32,465**	**25,409**	**31,702**	**31,180**
Operating income	4,331	7,277	7,883	6,727	7,343	6,696	6,920	6,688
Income from associated companies	83	139	98	97	383	376	239	45
Net financial income/expenses	635	1,067	1,091	1,216	793	990	759	167
Income before taxes and minority interests	**5,049**	**8,483**	**9,072**	**8,040**	**8,519**	**8,062**	**7,918**	**6,900**
Taxes	(857)	(1,440)	(1,820)	(1,504)	(1,833)	(1,683)	(1,882)	(1,674)
Minority interests	(11)	(19)	(42)	(25)	(27)	(20)	(26)	(18)
Net income	**4,181**	**7,024**	**7,210**	**6,511**	**6,659**	**6,359**	**6,010**	**5,208**
Basic earnings per share[3]	1.63	2.73	2.75	2.50	2.50	2.40	2.28	1.98
Diluted earnings per share[4]	1.62	2.72	2.75	2.50	2.50	2.40	2.28	1.98
Cash dividends[4]	1,306	2,194	2,064		1,935		1,663	1,320
Cash dividends per share[4]	0.54	0.90	0.85		0.80		0.73	0.62
Operating income from continuing operations per share:								
basic earnings per share	1.68	2.83	2.58	2.58	2.53	2.53	2.20	
diluted earnings per share	1.68	2.82	2.58	2.58	2.53	2.53	2.20	

(1) The Swiss franc amounts have been translated into US dollars at the rate of CHF 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, US dollars at that or any other rate.

(2) Financial data is presented on a continuing basis and gives effect to the Agribusiness spin-off (see "Item 4. Information on the Group—4.A. History and Development of the Group").

(3) Basic earnings per share has been adjusted to reflect a forty-for-one share split effective May 7, 2001. All years presented have been adjusted to provide a consistent earnings per share representation.

(4) Cash dividends represent cash payments in the applicable year that generally relate to earnings of the previous year. Dividends in prior years have been adjusted to reflect the share split in 2001.

	Year Ended December 31,					
	2001[1]	2001	2000	1999	1998	1997
	($)	(CHF)	(CHF)	(CHF)	(CHF)	(CHF)
	(in millions except per share data)					
BALANCE SHEET DATA						
Amounts in accordance with IAS:						
Cash, cash equivalents and current marketable securities	13,002	21,844	20,523	16,328	14,170	13,722
Inventories	2,448	4,112	4,122	6,887	6,695	6,545
Other current assets	4,907	8,244	8,294	11,464	9,088	9,139
Long-term assets	19,396	32,585	25,257	30,848	26,272	24,244
Total assets	**39,753**	**66,785**	**58,196**	**65,527**	**56,225**	**53,650**
Trade accounts payable	1,077	1,809	1,591	1,971	1,537	1,757
Other current liabilities	7,393	12,420	10,049	15,442	13,453	15,889
Long-term liabilities and minority interests	6,137	10,311	9,694	10,898	9,839	9,533
Total equity	25,146	42,245	36,862	37,126	31,396	26,471
Total liabilities and equity	**39,753**	**66,785**	**58,196**	**65,437**	**56,225**	**53,650**
Net assets	25,208	42,349	36,940	37,437	31,590	26,699
Outstanding share capital	758	1,274	1,304	1,313	1,328	1,370
Amounts in accordance with US GAAP:						
Income statement data						
Net income	2,799	4,703	6,913	5,419	4,955	
Basic and diluted earnings per share[2]	1.13	1.90	2.74	2.10	1.92	
Balance sheet data						
Total equity	30,207	50,747	48,802	50,575	47,823	
Total assets	45,093	75,756	72,077	79,756	73,014	

(1) The Swiss franc amounts have been translated into US dollars at the rate of CHF 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, US dollars at that or any other rate.

(2) Earnings per share has been adjusted to reflect a forty-for-one share split effective May 7, 2001. All years presented have been adjusted to provide a consistent earnings per share representation.

Cash Dividends per Share

Cash dividends are translated into US dollars at the Reuters Market System Rate on the payment date. Because we pay dividends in Swiss francs, exchange rate fluctuations will affect the US dollar amounts received by holders of ADSs.

Year Earned	Month and Year Paid	Total Dividend per share	Total Dividend[1][2] per share	Total Dividend[3] per ADS
		(CHF)	($)	($)
1997	April 1998	0.62	0.42	0.36
1998	April 1999	0.73	0.48	0.40
1999	April 2000	0.80	0.49	0.41
2000	April 2001	0.85	0.52	0.43
2001[4]	March 2002	0.90	0.54	0.54

(1) The Swiss franc amounts have been translated into US dollars at the rate of CHF 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, US dollars at that or any other rate.

(2) Adjusted for a forty-for-one share split and share-to-ADS ratio change on May 7, 2001.

(3) Adjusted for a two-for-one split for the ADSs on May 11, 2000.

(4) Dividend to be proposed at Annual General Meeting on March 21, 2002.

Exchange Rates

The following table shows, for the years and dates indicated, certain information concerning the rate of exchange of Swiss francs per US dollar based on exchange rate information found on Reuters Market System. The exchange rate in effect on March 11, 2002, as found on Reuters Market System, was CHF 1.68 = $1.00.

	Year ended December 31,			
	Period End	Average[1]	High	Low
1997	1.46	1.45	1.54	1.34
1998	1.37	1.45	1.54	1.29
1999	1.59	1.51	1.60	1.36
2000	1.64	1.69	1.83	1.55
2001	1.68	1.69	1.82	1.58
November 2001			1.67	1.63
December 2001			1.68	1.63
January 2002			1.71	1.64
February 2002			1.72	1.68
March 2002[2]			1.71	1.67

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

(2) The high and low US dollar/Swiss Franc exchange rate is current as of March 11, 2002.

3.B Capitalization and Indebtedness

Not applicable.

3.C Reasons for the offer and use of proceeds

Not applicable.

3.D Risk factors

You should carefully consider all of the information set forth in this annual report and the following risk factors. The risks below are not the only ones we face. Additional risks not currently known to us or that we presently deem immaterial may also impair our business operations. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. This annual report also contains forward-looking statements that involve risks and uncertainties. Our results could materially differ from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere. See "Forward-Looking Statements."

Risks Related to our Business

We face intense competition from new products and from lower-cost generic products

Our products that are under patent protection face intense competition from competitors' proprietary products. This competition may increase as new products enter the market. We also face increasing competition from lower-cost generic products after patents on our products expire. Loss of patent protection typically leads to a rapid loss of sales for that product and could affect future results. Patent protection is no longer available in major markets for the active ingredients used in a number of Novartis Pharmaceuticals' leading products. Patent protection exists for the micro-emulsion formulation and other cyclosporin formulations through 2009 in major markets. Despite that protection, generic products competing with Neoral® entered the transplantation market segment in the United States, Germany and elsewhere. Our patent protection for Aredia® is limited. A generic version of Aredia® was launched in the United States in 2001. Others have been tentatively approved by the FDA and are expected to be launched in May of 2002. Generic products in competition with Aredia® are on sale in Canada and elsewhere. Patent protection or regulatory exclusivity will expire in the next few years in major markets for the key product Sandostatin®. The basic octreotide substance patents expire in late 2002 in the United States and Japan, and from 2003 to 2009 in major EU countries. Voltaren® is off-patent and revenue declines year-over-year may be significant over the next few years.

As new products enter the market, our products may become obsolete or our competitors' products may be more effective or more effectively marketed and sold than our products. If we fail to maintain our competitive position, this could have a material adverse effect on our business and results of operations.

Product regulation may adversely affect our ability to bring new products to market

We and our competitors are subject to strict government controls on the development, manufacture, labeling, distribution and marketing of products. We must obtain and maintain regulatory approval for our pharmaceutical and other products from regulatory agencies before products may be sold in a particular jurisdiction. The submission of an application to a regulatory authority does not guarantee that a license to market the product will be granted. Each authority may impose its own requirements and delay or refuse to grant approval, even though a product has been approved in another country. In our principal markets, the approval process for a new product is complex, lengthy and expensive. The time taken to obtain approval varies by country but generally takes from six months to several years from the date of application. There have been recent press articles indicating a possible general slowing of review and approval of new pharmaceutical products by regulatory authorities, the US FDA in particular. While it is not possible for us to say that there is in fact a conscious policy to slow down the approval and registration process, the implementation of such a policy is possible and is a risk that must be considered real in our industry.

In addition to regulatory delays, other risks associated with product regulation include the inability to successfully complete clinical trials, claims and concerns about safety and efficacy, new discoveries, patents and products of competitors and related patent disputes and claims about adverse side effects. These risks are only a few of the factors that could delay or even prevent registration of a product. The registration process increases the cost to us of developing new products and increases the risk that we will not succeed in selling them successfully.

Changes in intellectual property protections and remedies, trade regulations and procedures and actions affecting approval, production, pricing, reimbursement and marketing of products, as well as unstable governments and legal systems, intergovernmental disputes and possible nationalization could also materially adversely affect our business or results of operations.

Risks Affecting our Industry

Our research and development efforts may not succeed or our competitors may develop more effective or successful products

In order to remain competitive, we must continue to launch new and better products each year. To accomplish this, we commit substantial resources to research and development through our dedicated resources. In addition, we spend considerable effort and funds on various collaborations with third parties. Our ongoing investments in new product launches and research and development for future products could produce higher costs without a proportional increase in revenues.

In the pharmaceutical business, the research and development process can take from 10 to 12 years from discovery to commercial product launch. This process is conducted in various stages, and during each stage there is a substantial risk that we will not achieve our goals and accordingly we may abandon a product in which we have invested substantial amounts. If we fail to continue developing commercially successful products, or if competitors develop more effective products or a greater number of successful new products, this could have a material adverse effect on our business and results of operations.

Price controls can limit our revenues and adversely affect our business and results of operations

In addition to normal price competition in the marketplace, the prices of our pharmaceutical products are restricted by price controls imposed by governments and health care providers in most countries. Price controls operate differently in different countries and can cause wide variations in prices between markets. Currency fluctuations can aggravate these differences. The existence of price controls can limit the revenues we earn from our products and may have an adverse effect on our business and results of operations.

In the United States, the current national debate over Medicare reform could increase pricing pressures. If Medicare reform results in the provision of outpatient pharmaceutical coverage for beneficiaries, the United States government could use its enormous purchasing power to demand discounts from pharmaceutical companies thereby creating de facto price controls on prescription drugs. In Europe, our operations are also subject to price and market regulations. Many governments are introducing healthcare reforms in an attempt to curb increasing healthcare costs. In Japan, where we also operate, governmental price cut rounds generally are introduced biannually. In response to rising healthcare costs, many governments and private medical care providers, such as HMOs, have instituted reimbursement schemes that favor the substitution of generic pharmaceuticals for more expensive brand-name pharmaceuticals. In the United States, generic substitution statutes have been enacted by virtually all states and permit or require the dispensing pharmacist to substitute a less expensive generic drug instead of an original ethical drug. As a result, we expect that pressures on pricing and operating results will continue and may increase.

We operate in highly competitive and rapidly consolidating industries

We operate in highly competitive and rapidly consolidating industries. Our principal competitors are major international corporations with substantial resources for research and development, production and marketing. Our competitors are consolidating, and the strength of combined companies could affect our competitive position in all of our business sectors.

Product liability claims could adversely affect our business and results of operations

Potentially, product liability is a significant commercial risk for us. Substantial damage awards have been made in some jurisdictions against pharmaceutical companies based upon claims for injuries allegedly caused by the use of their products. We are involved in a number of product liability cases claiming damages as a result of the use of our products. While we hold insurance for product liability in reasonable and prudent amounts, it is possible that not all risks may be covered by such insurance. We believe, but do not know with certainty, that any reasonably foreseeable unaccrued costs and liabilities associated with the risks of product liability claims will not have a material adverse effect on our consolidated financial position, results of operations or liquidity.

Our business will continue to expose us to risks of environmental liabilities

We use hazardous materials, chemicals, viruses and toxic compounds in our product development programs and manufacturing processes which have exposed us and in the future could expose us to risks of accidental contamination and events of noncompliance with environmental laws and regulatory enforcement, personal injury, property damage and claims resulting therefrom. If an accident occurred or if we were to discover contamination caused by prior operations, we could be liable for cleanup obligations, damages or fines, which could have an adverse effect on our business and results of operations.

The environmental laws of many jurisdictions impose actual and potential obligations on us to remediate contaminated sites. These obligations may relate to sites:

- that we currently own or operate;
- that we formerly owned or operated; or
- where waste from our operations was disposed.

These environmental remediation obligations could significantly reduce our operating results. In particular, our accruals for these obligations may be insufficient if the assumptions underlying the accruals prove incorrect or if we are held responsible for additional contamination.

Stricter environmental, safety and health laws and enforcement policies could result in substantial costs and liabilities to us, and could subject our handling, manufacture, use, reuse or disposal of substances or pollutants to more rigorous scrutiny than is currently the case. Consequently, compliance with these laws could result in significant capital expenditures as well as other costs and liabilities, thereby harming our business and operating results.

We depend on third party suppliers for manufacture of certain of our products, and a supply interruption could adversely affect our business and results of operation

The products we market, distribute and sell are either manufactured at our dedicated manufacturing facilities, through toll manufacturing arrangements or through supply agreements with third parties. Inasmuch as many of our products are chemically based and are the result of technically complex manufacturing processes, we can provide no assurances that supply sources will not be interrupted from time to time. We also operate in a dynamic regulatory environment, making supply never an absolute certainty.

Foreign exchange fluctuations may adversely affect our earnings and the value of our non-Swiss assets

We record our transactions and prepare our financial statements in Swiss francs, but a significant portion of our earnings and expenditures are in other currencies. In 2001, 45% of our sales were made in US dollars, 23% in Euro, 8% in Japanese yen, 5% in Swiss francs and 19% in other currencies. 31% of our costs were generated in US dollars, 26% in Swiss francs, 22% in Euro, 5% in Japanese yen and 16% in other currencies. Changes in exchange rates between the Swiss franc and these other currencies can result in increases or decreases in our costs and earnings. Fluctuations in exchange rates between the Swiss franc and other currencies may also affect the book value of our assets outside Switzerland and the amount of shareholders' equity. We seek to minimize our currency exposure by engaging in hedging transactions, where we deem it appropriate. To mitigate some of these risks, we have hedged certain US dollar and Japanese yen positions for 2002. We cannot predict, however, all changes in currency and interest rates, inflation or other factors, which could affect our international businesses.

Item 4. Information on the Company

4.A History and Development of Novartis

Novartis AG, headquartered in Basel, Switzerland, is a public company incorporated under the laws of Switzerland with an indefinite duration. We were created as a result of the merger of Sandoz AG and CIBA-Geigy AG (the "Merger") in December 1996. Prior to the Merger, Sandoz AG and CIBA-Geigy AG were each global participants in the pharmaceutical and agrochemical industries. We are domiciled in and are governed by the laws of Switzerland.

Our Group companies employ approximately 71,000 people worldwide and operate in over 140 countries. Our registered shares are listed in Switzerland on the SWX Swiss Exchange ("SWX") and traded on the European trading platform virt-x, and our American Depositary Shares are listed on the New York Stock Exchange ("NYSE"). Our registered office is located at Lichtstrasse 35, 4056 Basel and our telephone number is 011-41-61-324-1111. We maintain an Internet website at http://www.novartis.com.

Major transactions in 2001, 2000 and 1999

On May 5, 2001 we announced the acquisition of 32 million bearer shares of Roche Holdings Ltd, representing 20% of the voting shares of that company for approximately CHF 4.8 billion (approximately US$2.8 billion). These shares were purchased as a package from BZ Gruppe Holding and are intended as a financial investment of a potentially strategic nature. At December 31, 2001 we held 21.3% of the voting shares of Roche Holding Ltd, which represents an approximate 4% interest in the total Roche equity.

On December 21, 2000, Novartis Pharmaceuticals completed the acquisition of the antiviral products Famvir® (famciclovir) and Vectavir®/Denavir® (penciclovir) from SmithKline Beecham, for a total price of CHF 2.7 billion approximately (US $1.6 billion). We expect the acquisition of these products to expand our franchise in the primary care market.

In November 2000, we spun-off and merged our Crop Protection and Seeds businesses with AstraZeneca's Zeneca Agrochemicals to create Syngenta AG ("Syngenta"), which is headquartered in Basel, Switzerland, and is listed on the Swiss, London, New York and Stockholm stock exchanges.

On October 2, 2000, CIBA Vision acquired the stock of Wesley Jessen VisionCare Inc., a US corporation for CHF 1.3 billion (approximately $800 million) in cash.

For a description of our principal capital expenditures and divestitures, see "Item 5. Operating and Financial Review and Prospects—5.B. Liquidity and Capital Resources."

General Corporate Initiatives

We have undertaken a number of initiatives designed to make our management of the Group more transparent to investors and advance our corporate citizenship ideals.

In 2002:

- In the United States, we instituted the Novartis *CareCard*[sm] program to assist low income elderly to obtain the Novartis medications they need at significant discounts.

In 2001:

- A Board-level committee was created to develop and implement sound corporate governance principles;
- The Board's Audit Committee was given additional responsibility to monitor our compliance with law and policy;
- A new Policy of Corporate Citizenship was instituted which sets the framework for our commitment to making corporate citizenship an integral aspect of our business;
- A patient assistance program was created to help persons with limited financial means to afford Glivec®/Gleevec™, our innovative medication for chronic myeloid leukemia;
- In collaboration with the World Health Organization ("WHO"), we announced a plan to stem the spread of malaria in Africa and other endemic regions in the developing world. As part of a world-wide initiative entitled "Roll Back Malaria," we will provide specially designed packs of Coartem®, our novel malaria treatment, for distribution through WHO at cost;
- We established the Novartis Institute for Tropical Diseases in Singapore to target tropical diseases, including Dengue fever, and infections like tuberculosis;
- Our shares were split 40 for 1 so that there is now a 1:1 share-to-ADS ratio.

In 2000:

- The Novartis Code of Conduct was rolled out to our employees throughout the world;
- We were among the first companies to join the Global Compact, a multilateral initiative of United Nations Secretary General Kofi Annan that is consistent with our own approach to business ethics. The Global Compact formulates nine principles in the areas of environmental protection, respect for the workforce, and human rights.

In 1999:

- The Novartis Code of Conduct was approved;
- We pledged to donate approximately US$30 million in medication to cure all the leprosy patients in the world detected through 2005. This is our key contribution to the Global Alliance, associated with the WHO, that aims to eliminate leprosy as a public health problem from every country by the year 2005;

As part of our commitment to focus not just on our business, but on the business of being a responsible member of the global community, we implemented initiatives like the Novartis Community Partnership Day where all our employees are encouraged, for one day each year, to give time back to the communities in which we operate.

4.B Business Overview

General

We are a world leader both in sales and in innovation in our continuing core business: pharmaceuticals, generics, consumer health, eyecare products, and animal health. We aim to hold a leadership position in all of these businesses. We are committed to improving health and well-being through innovative products and services. The name "Novartis" is derived from the Latin *novae artes*, meaning "new skills," which reflects our focus on research and development.

Product Sectors and Geographic Markets

We currently operate in five principle industry sectors: Pharmaceuticals, Generics, Consumer Health, CIBA Vision, and Animal Health. All references to Group figures, unless otherwise indicated, including employees and sales, include the Agribusiness sector, up until the November 6, 2000 spin-off. The following tables set forth the Group's sales and operating income by business sector for the financial years ended December 31, 2001, 2000 and 1999.

	Year ended December 31,			
	2001	**2000[1]**	**2000**	**1999**
		(in CHF millions)		
Sales to third parties				
Pharmaceuticals	20,181	18,150	17,611	15,275
Generics	2,433	1,973	1,938	1,823
Consumer Health — ongoing	6,675	6,514	6,395	5,570
Divested Consumer Health activities				182
CIBA Vision	1,787	1,392	2,085	1,632
Animal Health	962	1,083	1,083	927
Sales of continuing activities	**32,038**	**29,112**	**29,112**	**25,409**
Sales from discontinued Agribusiness activities[2]		6,693	6,693	7,056
Group sales	**32,038**	**35,805**	**35,805**	**32,465**
Operating income				
Pharmaceuticals	5,677	5,401	5,403	4,676
Generics	281	242	227	347
Consumer Health — ongoing	920	869	824	807
Divested Consumer Health activities				375
CIBA Vision	174	100	158	250
Animal Health	138	179	179	216
Corporate and Other	87	(64)	(64)	25
Operating income from continuing activities	**7,277**	**6,727**	**6,727**	**6,696**
Operating income from discontinued Agribusiness activities[2]		1,156	1,156	647
Group operating income	**7,277**	**7,883**	**7,883**	**7,343**

(1) 2000 sector reporting has been restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors.

(2) Agribusiness: Crop Protection and Seeds businesses through November 6, 2000, the date of spin-off.

The table below sets forth a regional breakdown of certain data for the years ended December 31, 2001, 2000 and 1999.

	Americas			Europe			Rest of the World		
	2001	**2000**	**1999**	**2001**	**2000**	**1999**	**2001**	**2000**	**1999**
Sales (CHF m)	16,640	17,761	15,328	10,158	11,729	11,620	5,240	6,315	5,517
Operating income (CHF m)	2,158	2,474	2,170	4,555	4,469	4,549	564	940	624
Number of employees (at December 31)	27,303	27,063	29,077	31,386	28,815	38,125	12,427	11,775	14,652
Investment in tangible fixed assets (CHF m)	723	475	510	560	790	754	68	88	107
Depreciation of tangible fixed assets (CHF m)	(311)	(388)	(351)	(561)	(715)	(790)	(67)	(86)	(120)
Net operating assets (CHF m)	10,590	9,774	7,780	15,759	11,176	14,936	1,722	1,529	2,043

PHARMACEUTICALS

The business of our Pharmaceuticals sector is conducted by a number of affiliated companies throughout the world. We are a world leader in the discovery, development, manufacture and marketing of prescription medicines. Our goal is to provide a broad portfolio of effective and safe products and services to patients through healthcare professionals around the world. This goal is supported by approximately 80 affiliates operating in more than 140 countries. In 2001, the affiliated companies of our Pharmaceuticals sector employed 41,256 people and had CHF 20,181 million in sales, which represented 63% of the Group's sales.

Our product portfolio includes a wide range of products in eight major disease areas: (i) cardiovascular/metabolism/endocrinology; (ii) oncology/hematology; (iii) central nervous system; (iv) transplantation/immunology; (v) dermatology; (vi) respiratory; (vii) rheumatology/bone/hormone replacement therapy ("HRT") and (viii) ophthalmics. Effective January 1, 2001, Novartis Pharmaceuticals took over responsibility for operating the ophthalmic pharmaceutical business previously managed by CIBA Vision. Our Pharmaceuticals sector is organized into five Business Units: Primary Care, Oncology, Transplantation, Ophthalmics and Mature Products. The Business Units coordinate the worldwide research, distribution, marketing and sales of the products assigned to each.

The current product portfolio includes 30 key marketed products, of which 4 were launched in 2001. In addition, the portfolio includes a further 66 projects in development. See "—Research and Development."

Key Marketed Products

The following table describes the key marketed products of our Pharmaceuticals sector.

Therapeutic area	Project/ Compound	Generic name	Indication	Formulation
Cardiovascular, metabolism and endocrinology	Diovan®	valsartan	Hypertension	Capsule
	Co-Diovan®	valsartan + HCTZ	Hypertension	Film-coated tablet
	Lescol®	fluvastatin	Cholesterol-lowering agent	Capsule
	Lotrel®	benazepril & amlodipine	Hypertension	Capsule
	Cibacen®/ Lotensin®	benazepril	Hypertension	Coated tablet
	Cibadrex®/ Lotensin HCT®	benazepril + HCTZ	Hypertension	Coated tablet
	Starlix®	nateglinide	Type-2 diabetes	Tablet
	Zelmac®/ Zelnorm®	tegaserod/tegaserod maleate	Symptomatic treatment of Irritable Bowel Syndrome	Tablet
Oncology and hematology	Aredia®	pamidronate	Conditions associated with cancer	Intravenous infusion
	Femara®	letrozole	Advanced breast cancer	Coated tablet
	Glivec®/ Gleevec™	imatinib	Chronic Myeloid Leukemia	Capsule
			Gastrointestinal Stromal Tumors	Capsule
	Sandostatin® LAR	octreotide	Acromegaly, cancer	Intramuscular injection
	Zometa®	zoledronic acid	Hypercalcaemia of malignancy	Infusion
			Bone metastases treatment	Infusion
Central nervous system	Exelon®	rivastigmine	Alzheimer's disease	Capsule
	Leponex®/ Clorazil®	clozapine	Antipsychotic agent for treatment-resistant schizophrenia	Tablet, ampoule
	Tegretol®	carbamazepine	Epilepsy, acute and bipolar affective disorders	Tablet, chewable tablet, syrup, suppository
	Trileptal®	oxcarbazepine	Epilepsy	Tablet, oral suspension
	Comtan®	entacapone	Parkinson's disease	Film-coated tablet
Transplantation	Neoral®/ Sandimmun®	cyclosporine	Prevention of graft rejection following organ and bone marrow transplantation	Soft gelatin capsule, oral solution, intravenous infusion
	Simulect®	basiliximab	Acute organ rejection in de novo renal transplantation	Intravenous infusion or injection
Dermatology	Elidel®	pimecrolimus cream	Eczema	Cream
	Famvir®	famciclovir	Acute herpes zoster	Tablet
	Lamisil®	terbinafine	Fungal infections of the skin and nails	Tablet, cream, *DermGel*, solution, spray

Therapeutic area	Project/ Compound	Generic name	Indication	Formulation
Respiratory	Foradil®	formoterol	Asthma, chronic obstructive pulmonary disease	Inhalation capsule (aerosol)
Rheuma, bone and hormone replacement therapy	Estalis®	estradiol norethisterone acetate	Postmenopausal symptoms and osteoporosis	Patch
	Estraderm® TTS/MX	estradiol	Estrogen deficiency following menopause	Patch
	Miacalcic®	salmon calcitonin	Osteoporosis, regulator of mineral homeostasis and skeletal metabolism	Nasal spray
	Voltaren®	diclofenac	Inflammatory forms of rheumatism, pain management	Enteric coated tablet, drop, ampoule
Ophthalmics	Visudyne®	verteporfin	Wet form of age-related macular degeneration	Intravenous infusion, activated by laser light
	Zaditen®	ketotifen	Ocular allergy	Drop

Not all products are registered in all markets for the treatment areas described above.

Compounds in Development

The following table describes our most important compounds presently under development. "Filed" means either filed with the Food and Drug Administration of the United States ("FDA"), in the European Union (by either centralized or mutual recognition procedure), and/or with national health authorities, but not necessarily in all jurisdictions.

Therapeutic area	Project/ Compound	Generic name	Indication	Estimated Filing Date/Phase[1]
Cardiovascular, metabolism and endocrinology	SPP100[2]	—	Hypertension	2004/II
	LAF237	—	Type-II diabetes	2004/II
	Zelmac®/ Zelnorm®	tegaserod	Functional dyspepsia	2003/II
			Gastroesophagal reflux disease	2005/II
			Chronic constipation	2003/III
			Irritable bowel syndrome	2003/III
	Diovan®	valsartan	Congestive heart failure	Filed
			Post-and pre-myocardial infarction	2004/III
	Sandostatin® LAR	octreotide acetate	Diabetic retinopathy, other indications	2004/III
	Lotrel® 10-20	amlodipine+ benazepril	Hypertension	Filed (United States)
	Lotrel® 10-40	amlodipine+ benazepril	Hypertension	2002 (United States)/III
	NKS104	pitavastatin	Dyslipidemia	2005 (EU)/II
	Starlix®/ metformin	—	Type-II diabetes	2004 II
	Starlix®/ Diovan®	(Navigator Trial)	Prevention of onset of Type II diabetes	>2005 III

(1) Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

(2) This compound was out-licensed to Speedel with a callback option.

Therapeutic area	Project/ Compound	Generic name	Indication	Estimated Filing Date/Phase[1]
Oncology and hematology	Glivec®/ Gleevec™	imatinib mesylate	GIST (gastrointestinal stromal tumors)	US approved/EU Filed
		—	Solid tumors	Filing date to be determined/II
	Femara®	letrozole	Breast cancer (adjuvant therapy)	2005/III
	Zometa®	zoledronate	Treatment of bone metastases	US approved/EU Filed
			Bone metastases prevention	2005/III
	OctreoTher™	—	Somatostatin receptor positive tumors	2004/II
	EPO906	—	Solid tumors	2004/II
	ICL670	—	Chronic iron overload	2004/II
	PKI166	—	Solid tumors	2004/II
	PTK787	—	Solid tumors	2004/II
Central nervous system	Ritalin® LA	methylphenidate	Attention deficit disorders	Filed
	Clozaril® (InterSePT)	clozapine	Suicide prevention	2002/III
	Iloperidone	iloperidone	Schizophrenia	2003/III
	Exelon®	rivestigmine	Non-Alzheimer's dementia	2005/III
	Exelon® TDS	rivestigmine	Alzheimer's disease	2004/II
	Trileptal® NP	oxcarbazepine	Neuropathic pain	2004/II
	AMP397	—	Epilepsy	>2005/II
	TCH346	—	Parkinson's disease, amyotrophic lateral sclerosis	>2005/II
Transplantation, immunology	Certican®	everolimus	Transplantation	2002/III
	Myfortic™ (ERL080)	mycophenolate soldium	Transplantation	2002 (United States III)/EU Filed
	FTY720	—	Transplantation	2005/II
Dermatology	Elidel® oral	pimecrolimus	Inflammatory skin diseases	2005/II
	Elidel® Cream	pimecrolimus	Inflammatory skin diseases	US approved/EU Filed
	Lamisil®	terbinafine	Tinea capitis	2004/III
Respiratory	DNK333	—	Rhinitis, asthma, chronic obstructive pulmonary disease	>2005/II
	Foradil®	formoterol	Multi dose dry powder inhaler in asthma	2003/III
			"On demand" use (prn)	>2005/III
	Xolair®	omalizumab	Asthma/prevention of seasonal allergic rhinitis	Filed

(1) Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

Therapeutic area	Project/ Compound	Generic name	Indication	Estimated Filing Date/Phase[1]
Rheuma, bone and hormone replacement therapy	COX189	—	Rheumatoid arthritis, osteoarthritis, pain	2002/III
	Zoledronic acid	zoledronate	Post-menopausal osteoporosis	>2005/III
			Paget's disease	2005/III
Ophthalmics	Visudyne™	verteporfin	Age-related macular degeneration (occult)	2004/III
			Age-related macular degeneration (classic)	2002/III Japan
			Age-related macular degeneration (minimally classic)	>2005/II
	Rescula™	unoprostone isopropyl	Glaucoma	EU Filed
	PKC412	—	Diabetic macular edema	>2005/II

(1) Phase II: Clinical trials in patients to determine dose ranging, safety and efficacy. Phase III: Large clinical trials to determine definitive safety and efficacy in patients.

The tables shown above and the summary that follows describe each of our Pharmaceuticals sector's eight key therapeutic areas. Unless otherwise indicated, and subject to required regulatory approvals and, in certain instances, contractual limitations, the intention is to sell the key marketed products throughout the world. These same compounds are in various stages of development throughout the world. For some compounds, the development process is ahead in the United States, whereas for other compounds, development is behind in the United States. Due to regulatory restrictions in some countries, including the United States, it may not be possible to obtain registration of compounds in development for all indications referred to in this annual report.

Cardiovascular/Metabolism/Endocrinology

Our Pharmaceuticals sector markets a wide range of products for the treatment of cardiovascular disease, including products for the treatment of hypertension, hyperlipidemia, angina pectoris, heart failure and Type-II diabetes. Ongoing research is focused on the development of innovative new agents to treat metabolic disorders, such as Type-II diabetes, which are associated with serious cardiovascular sequelae including peripheral vascular disease, diabetic retinopathy, nephropathy, stroke and myocardial infarction.

Recently launched products

- Starlix® (nateglinide) is a member of a new class of drugs for the treatment of patients with Type-II diabetes, also known as adult-onset diabetes, which affects approximately 6% of the developed world's population, many of whom are presently undiagnosed. We licensed the compound from Ajinomoto Co., Ltd. and own marketing rights for the drug worldwide, except for Japan and several other Asian markets. Starlix® is derived from an amino acid, the basic building block of proteins, and is chemically and pharmacologically distinct from other oral hypoglycemic agents, such as glitazones. The drug aims to restore the early phase of insulin release which helps control blood glucose levels at mealtime. Starlix® is currently being sold in the United States, the EU and other countries.
- Zelmac®/Zelnorm™ (tegaserod/tegaserod maleate) is a 5-HT_4 partial agonist developed to address the need for a well-tolerated and effective treatment of irritable bowel syndrome, relieving such symptoms as abdominal pain, constipation and bloating. Switzerland's Swissmedic regulatory

authority has approved Zelmac®, as have the authorities in Mexico, Australia, Venezuela, Argentina, Colombia, the Czech Republic and approximately 19 other nations. The compound is currently in the registration phase in the United States where its name has been changed to Zelnorm™ due to FDA nomenclature confusion concerns.

Key marketed products

- Diovan® (valsartan) and Co-Diovan® (valsartan+HCTZ) are early entrants in a new class of antihypertensive agents, the angiotensin II receptor blockers (ARBs). The ARBs are forecast to be a key growth class of drugs within the antihypertensive market. The fixed combination product, Co-Diovan®, provides additional antihypertensive efficacy for patients who require a greater reduction in blood pressure than can be achieved with monotherapy.
- Lescol® (fluvastatin) is a lipid-lowering drug (statin) indicated for the treatment of hyperlipidemia. In addition, Lescol® has been approved in the United States to be marketed for slowing the progression of coronary atherosclerosis in patients with primary hyperlipidemia (including mild forms) and congestive heart failure. Hyperlipidemia is forecast to continue to be a major growth segment in the cardiovascular market.
- Lotrel® (benazepril-amlodipine) is a fixed combination of the ACE-inhibitor benazepril and a leading calcium antagonist (amlodipine). It is marketed only in the United States.
- Cibacen®/Lotensin® (benazepril) and Cibadrex®/Lotensin HCT® (benazepril+HCTZ) are ACE-inhibitors indicated for the first-line treatment of hypertension and as adjunct therapy in heart failure.

Compounds in development

- SPP100 is a renin inhibitor being developed for the treatment of hypertension and other cardiovascular indications. Blood pressure lowering effects have been demonstrated in phase II trials, with no significant adverse events observed. The compound is out-licensed to Speedel with a call-back option for us.
- LAF237 is a DPP-IV inhibitor in phase II development for the treatment of type II diabetes. Blocking the action of the enzyme DPP-IV has been shown to improve glycemic control by increasing GLP-1 levels (a peptide that augments glucose-induced insulin secretion and also affects other aspects of glycemic control). Phase I studies have shown that once-a-day dosing maintains DPP-IV activity below the levels believed to be needed to increase GLP-1 activity sufficiently for a therapeutic effect.
- Zelmac®/Zelnorm™ (tegaserod) is in development for irritable bowel syndrome (phase III), chronic constipation (phase III), functional dyspepsia (phase II) and gastroesophagal reflux disease (phase II). In July 2001, the US FDA issued a non-approvable letter, despite giving earlier indications that the drug was approvable. Novartis Pharmaceuticals has filed an appeal with the FDA. In Europe, the file was withdrawn and discussions are ongoing with European Medical Evaluations Agency (“EMEA”). A strategic alliance with Bristol-Myers Squibb Company for the co-development and co-promotion of tegaserod was terminated during 2001.
- Diovan® (valsartan) is in development for congestive heart failure (filed) and post and pre-myocardial infarction (phase III). Diovan® is the only angiotensin II receptor blocker (ARB) with clinical benefits in heart failure to be demonstrated in a large scale trial.
- Sandostatin® LAR (octreotide acetate) is in development for diabetic retinopathy (phase III). This condition affects approximately 15% of patients with diabetes and is one of the leading causes of blindness in people of working age. Currently there are no effective drugs available to treat diabetic retinopathy.
- Lotrel® (benazepril & amlodipine) has two new dosages under development for hypertension (Lotrel® 10-20 and Lotrel®10-40).

- NKS104 (pitavastatin) is a lipid-lowering agent, in development for the treatment of dyslipidemia. We acquired the European marketing rights to pitavastatin in 2001. Clinical trials to date have shown that NKS104 lowers LDL cholesterol and triglycerides while increasing HDL cholesterol levels. The compound is in phase II.
- Starlix® (nateglinide) is currently under development in combination with metformin for Type-II diabetes (phase II).
- Starlix®/Diovan® Navigator (Nateglinide and Valsartan in Impaired Glucose Tolerance and Outcomes Research) trial was initiated in November 2001. 7,500 patients aged 50 years or older will be treated with Diovan® and/or Starlix® to examine the effect on progression from Impaired Glucose Tolerance to type II diabetes after 3 years. Initial results are expected to be available by June 2006.

Oncology and Hematology

The Oncology and Hematology disease area is a rapidly growing and increasingly important specialty segment. We market products for the treatment of a number of different cancers and for metastatic bone disease. Research and development in this disease area is aimed at the discovery and development of innovative approaches to the treatment of cancer, focusing in particular on the major forms of solid tumors (lung, breast, prostate and colorectal cancer), which account for approximately 50% of all deaths from cancer. In addition, compounds are being developed for the treatment of other forms of cancer including glioblastoma, melanoma, ovarian cancer, leukemia, lymphoma and sarcoma.

Recently launched products

- Glivec®/Gleevec™ (imatinib mesylate) is a signal transduction inhibitor being developed to treat several forms and phases of chronic myeloid leukemia (CML). It has achieved an unprecedented level of efficacy in both the chronic and the advanced phases of CML, and was approved in record time by the FDA for Interferon-intolerant and resistant patients. It gained approval in all key markets during 2001 (United States, EU, Japan). The compound is widely seen as a new model for rational drug development, leading to high efficacy and relatively low toxicity, as it specifically targets the genetic cause of the disease. Glivec®/Gleevec™ was approved in February 2002 in the United States for the treatment of inoperable gastrointestinal stromal tumors (GIST) and has been filed in Europe for the same indication. In addition, the potential of Glivec®/Gleevec™ is being studied in solid tumors as a basis for widening the range of indications to include other types of cancer.
- Zometa® (zoledronate) is a more potent bisphosphonate than Aredia®, and is being developed to offer patients a more advanced alternative treatment. It has recently been launched in key markets in its first indication "hypercalcemia of malignancy." In February 2002, Zometa® received approval from the FDA for the treatment of multiple myeloma and bone metastases from a broad range of tumors including prostate cancer, a tumor type in which other bisphosphonates could not demonstrate clear efficacy to date.

Key Marketed Products

- Aredia® (pamidronate) is a therapy for tumor-induced hypercalcemia, osteolysis from multiple myeloma and bone metastases from breast cancer. Our patent protection for Aredia® is limited. A generic version of Aredia® was launched in the United States in 2001. Others have been tentatively approved by the FDA and are expected to be launched in May of 2002. Generic products in competition with Aredia® are on sale in Canada and elsewhere.
- Femara® (letrozole) is an oral aromatase inhibitor for the treatment of advanced breast cancer in women with natural or artificially induced post-menopausal status. It recently received approval for

first-line therapy globally, based upon superior efficacy over the most widely used previous standard therapy, tamoxifen. It also is being developed for adjuvant therapy of breast cancer.

- Sandostatin® (octreotide) is a synthetic octapeptide derivative of the hormone somatostatin indicated for the treatment of pancreatic and gastrointestinal endocrine tumors, acromegaly, and acute variceal bleeding. Patent protection or regulatory exclusivity will expire in the next five years in major markets for this product. The basic octreotide substance patents expire in 2002 in the United States and Japan, and from 2003 and 2009 in major EU countries. However, protection extending to 2010 (and 2013 and beyond in the United States) continues in major markets for Sandostatin® LAR, which represents a significant and growing proportion of our Pharmaceuticals sector's octreotide sales.
- Sandostatin® LAR (octreotide) is a depot injection used for the treatment of acromegaly. In addition, this long-acting release formulation is approved for the control of symptoms such as the severe diarrhea and flushing associated with metastatic carcinoid tumors, and the severe diarrhea associated with vasoactive intestinal polypeptide secreting tumors.

Compounds in Development

- Glivec®/Gleevec™ (imatinib mesylate) is being studied in several solid tumors as a basis for widening the range of indications to include other types of cancers. Phase II trials are in progress.
- Femara® (letrozole) is in phase III development for adjuvant therapy in the treatment of breast cancer.
- Zometa® (zoledronate) is also in phase III development for the prevention of bone metastases.
- OctreoTher™ is in phase II trials for the treatment of somatostatin receptor positive tumors.
- EPO906 (epothilone B), a novel tubulin polymerizing compound, is a cytotoxic with a similar mechanism of action as Taxol® (paclitaxel). The taxane segment is the largest cytotoxic market segment in oncology. Preclinically, Epothilone B has shown more potency than paclitaxel and more activity in paclitaxel resistant tumors. Responses have been observed in phase I in several solid tumors and it is now in phase II clinical development. Dose limiting toxicity is diarrhea. Significant myelosupression has not been reported to date.
- ICL670 is an iron chelator currently in phase II clinical development. It was designed to enhance patient acceptance and was selected from over 700 compounds of 6 chemical classes tested. Iron accumulation resulting from red blood cell lysis can lead to organ damage and, ultimately, death. ICL670 has been shown preclinically to efficiently induce iron excretion. Bioavailability has been demonstrated orally. Recently published clinical data (American Society of Hematology 2001) demonstrate clinical effectiveness of ICL670 in achieving negative iron balance. The goal is to make iron chelation therapy more practical for patients with chronic iron overload.
- PKI166 is a tyrosine kinase inhibitor that targets the epidermal growth factor receptor (EGF-r). Over expression of the EGF-r has been demonstrated in a number of human cancers, including breast, non-small cell lung, prostate, head and neck as well as ovarian cancers. Preclinical studies with PKI166 have shown that cellular proliferation and tumor growth can be inhibited in a wide variety of human tumor types, either used alone or in combination with other anti-cancer agents. PKI166 is a new chemical entity belonging to the pyrrolo-pyrimidine class of compounds. It is currently in phase II development.
- PTK787 is a new chemical entity with a novel mechanism of action, which inhibits tumor growth and the development of metastases through inhibition of tumor vascularization. It is expected to be biologically effective as an oral anti-angiogenic agent, in particular in combination with standard therapies against a broad range of tumor types. No significant toxicities are expected at efficacious doses that would preclude chronic administration. PTK787 is in phase I/II development, and has shown no significant toxicity to date. The compound is being developed in collaboration with Schering AG, Germany.

Central Nervous System

Novartis Pharmaceuticals markets a broad range of central nervous system products, including agents to treat patients with schizophrenia, epilepsy, Parkinson's disease, Alzheimer's disease, attention deficit hyperactivity disorder and migraine headaches. Ongoing research to extend the current product portfolio in this disease area includes projects in psychiatric disease (psychoses, depression, and anxiety), neurological disorders (epilepsy, Parkinson's disease, and Alzheimer's disease), learning disorders and chronic pain.

Key marketed products

- Exelon® (rivastigmine) is a therapy for the treatment of patients with mild to moderate Alzheimer's disease. Exelon® has been approved in all major markets, including the 15 member-states of the EU and the United States.
- Leponex®/Clozaril® (clozapine) is a neuroleptic agent used in treatment-resistant schizophrenia and is experiencing competition from generic competitors in many markets, including the United States.
- Tegretol® (carbamazepine) was launched in 1963 for the treatment of epileptic seizures and remains a mainstay in the treatment of the disorder.
- Trileptal® (oxcarbazepine) is an anti-epileptic drug for the treatment of partial seizures as adjunctive or monotherapy in adults, or as adjunctive therapy in children.
- Comtan® (entacapone) treats Parkinson's disease by enhancing the action of levodopa, the standard therapy for Parkinson's disease. The compound is licensed from Orion Pharma of Finland.

Compounds in development

- Ritalin® LA (methylphenidate) is currently in registration in the United States and the EU for the treatment of Attention Deficity Hyperactivity Disorder (ADHD).
- Clozaril® (clozapine) is currently in phase III development (InterSePT trial) for the prevention of suicide in schizophrenia.
- Iloperidone is a mixed serotonin/dopamine antagonist for the treatment of schizophrenia and other related psychotic disorders. Iloperidone is licensed from Titan Pharmaceuticals, Inc. and is currently in phase III clinical trials.
- Exelon® (rivastigmine) is also in development for additional indications and formulations. Exelon® is being investigated in phase III trials for the treatment of non-Alzheimer's dementias. A transdermal formulation, Exelon® TDS, is in phase II development for Alzheimer's disease.
- Trileptal® (oxcarbazepine) is in phase II development for the treatment of diabetic neuropathic pain.
- AMP397 is in phase II development for the treatment of epilepsy.
- TCH346 is in phase II development for the treatment of Parkinson's disease and Amyotrophic Lateral Sclerosis (ALS).

Transplantation/Immunology

We are a leader in the development of transplantation medicine, producing widely used products that help to prevent the rejection of organs following transplantation. A wide-ranging research and development program is aimed at developing new compounds and interventions in the area of chronic rejection, tolerance induction, Beta-cell inhibition, ischemia/reperfusion injury to reduce delayed graft function, inhaled therapies for lung transplantation and pancreatic islet transplantation.

Key Marketed Products

- Neoral® (cyclosporin) builds on the established clinical utility of Sandimmun® to provide improved primary immunosuppression in organ transplant patients. Neoral® is formulated as a microemulsion, thereby providing improved absorption and less variability in dosing. Despite patent protection, generic companies have launched competing products in the United States and are expected to compete vigorously. Marketing authorizations have also been granted for generic products in Europe and elsewhere. Neoral® was launched in Japan in 2000, and these sales may partially offset reduction of sales in the United States and elsewhere.
- Sandimmun® (cyclosporin) was introduced in 1982 for the prevention of organ rejection among patients with solid organ (kidney, heart, lung and liver) transplants and bone marrow transplantation.
- Simulect® (basiliximab) is a chimeric monoclonal antibody that suppresses interleukin-driven proliferation of T-cells. Simulect® is designed to complement Neoral® in preventing acute rejection episodes in organ transplantation.

Compounds in development

- Certican® (everolimus) is a new immunosuppressant being developed for transplantation. The compound currently is in phase III clinical trials and will be used in combination with Neoral® to prevent rejection episodes in patients with kidney, lung, heart and liver transplants. Certican® is being developed in a tablet formulation.
- Myfortic™ (mycophenolate sodium) is a new immunosuppressant in development for transplantation. The compound is currently at the end of phase III clinical trials (the registration dossier has already been submitted in the EU) and is intended for use in combination with Neoral® and corticosteroids to prevent rejection episodes in patients with kidney transplants. Myfortic™ is being developed as an advanced enteric coated tablet formulation of mycophenolate.
- FTY720 is a novel immunosuppressant being developed for transplantation. The compound currently is in phase II clinical trials and is planned to be used in combination with Neoral® or Certican® to prevent rejection episodes or to enhance graft survival in patients with kidney transplants. FTY720 has a new mechanism of action altering lymphocyte homing. FTY720 is being developed in capsule, oral liquid and injectable formulations. This product has been licensed from Yoshitomi Co., Ltd. of Japan.

Dermatology

Our Dermatology portfolio covers a broad range of indications, with marketed products for the treatment of fungal infections, psoriasis and wound healing. In addition, ongoing research and development is aimed at developing new compounds and extending the clinical utility of existing compounds in the areas of allergic and inflammatory skin disease, such as atopic excema and psoriasis. There is considerable demand for new treatments in these areas where current therapies are handicapped by limited efficacy or unacceptable side effects.

Key Marketed Products

- Elidel® (pimecrolimus cream) is a cytokine inhibitor used in the treatment of atopic excema. The compound is a member of a new class of agents – the ascomycin macrolactams – that appear to be suitable for both short- and long-term treatment. Elidel® is now approved in the United States.
- Famvir® (famciclovir) is used in the treatment of acute herpes zoster and genital herpes, and was acquired in 2000 from SmithKline Beecham. The acquisition included global marketing rights, production rights and all intellectual property rights.

- Lamisil® (terbinafine) is used in the treatment of fungal infections of the skin, nails and scalp. Lamisil® kills the fungus, rather than simply preventing further fungal growth. An "over-the-counter" formulation is marketed by Novartis Consumer Health in many markets, including the United States.

Compounds in development

- Elidel® (pimecrolimus cream), the cytokine inhibitor approved in the United States for the treatment of atopic excema, has been in registration with the European health authorities (EMEA) since June 2001. An oral form also is in development, currently in phase II.
- Lamisil® (terbinafine) is also in phase III development for tinea capitis.

Respiratory

We are committed to expanding our product range in this important disease area. A discovery and development program is aimed at providing improved therapeutic options in the treatment of asthma and chronic obstructive pulmonary disease ("COPD"), which includes chronic bronchitis and emphysema.

Recently launched/key marketed products

- Foradil® (formoterol) is a long-acting bronchodialator indicated for the treatment of asthma, approved and launched in the United States in 2001. The product was launched in its original form in 1994 outside the United States. The long-acting bronchodilator is a relatively new addition to the range of treatments for asthma, and is distinguished by its rapid onset of action (one to three minutes) and long-lasting effect from a single dose (12 hours). In addition, we are working to strengthen our position in this segment by extending the Foradil® line with an active development program. See "Compounds in development." Foradil® is currently marketed principally in Europe in a single-dose dry powder inhaler (Aerolizer), and in certain markets as a pressurized metered dose inhaler. Foradil® received approval from the FDA in September 2001 for the indication of COPD.

Compounds in development

- DNK333 is in phase II development for the treatment of rhinitis, asthma and COPD.
- Foradil® (formoterol) is in phase III development. Ongoing research and product development is aimed at extending the clinical utility of Foradil® by registering the product for use as asthma rescue medication ("prn"—indication) and as a multi-dose dry powder inhaler.
- Xolair® (omalizumab) is an anti-IgE monoclonal antibody developed to treat allergic disease, irrespective of allergen, by normalizing serum IgE. The drug is being developed in partnership with Genentech and Tanox for the treatment of allergic asthma and seasonal allergic rhinitis and is currently in registration with the FDA and EMEA. In July 2001, the FDA issued a Complete Response letter for Xolair®. The letter requests additional pre-clinical and clinical data analyses, as well as pharmacokinetic information. We will provide additional data and pending continuing discussions with the FDA, some additional trials on specific subgroups may be necessary. It is anticipated that the initial proposed label claim will likely be for adult allergic asthma. We are considering different scenarios with a conservative estimate being resubmissions ranging from 2002 to early 2003. The exact timing will be dependent on the scope of the discussions with the FDA. The new data will be submitted to the FDA and also to the EMEA in the EU.

Rheumatology/Bone/Hormone Replacement Therapy (HRT)

We are a leader in the rheumatology/bone/hormone replacement therapy area with products intended to treat arthritis, osteoporosis and early menopausal symptoms, such as hot flashes, and prevent the

long-term complications of these conditions, which include cardiovascular disease and osteoporosis resulting from menopausal change. The bone and rheumatology research and development pipeline includes new compounds for the treatment of rheumatoid arthritis, osteoarthritis and bone metabolism disorders, such as osteoporosis. Research and development in HRT is primarily focused on improving the delivery of therapy via transdermal patch technology.

Key Marketed Products

- Estalis® (estradiol, norethisterone acetate transdermal system) is for the treatment of menopausal symptoms and prevention of bone loss. The compound is licensed from Aventis.
- Estraderm® TTS/MX (estradiol) are treatments for estrogen deficiency and subsequent bone loss due to menopause, whether natural or surgically induced.
- Miacalcic® (salmon calcitonin) is indicated for the prevention of progressive loss of bone mass, mainly in post-menopausal women and in elderly patients, Paget's disease and hypercalcemia. Miacalcic® is available both in an injectable form and as a nasal spray.
- Voltaren® (diclofenac) is a non-steroidal anti-inflammatory drug ("NSAID") for the treatment of inflammatory and degenerative forms of rheumatism (articular and non-articular), post-operative and post-traumatic pain and acute attacks of gout and migraines. This product faces generic competition. The brand has been extended as an over-the-counter preparation, Voltaren® Emulgel, a topical form of diclofenac for inflammation of tendons, ligaments, muscles and joints, and for localized forms of soft-tissue and degenerative rheumatism.

Compounds in development

- COX189 is an NSAID that selectively inhibits the COX-2 enzyme. The compound is in phase III clinical trials. Target indications include osteoarthritis, rheumatoid arthritis and pain.
- Zoledronic acid is being developed for several benign indications including postmenopausal osteoporosis and Paget's disease. Phase II trials in osteoporosis have shown that zoledronic acid, administered as a once per year injection, causes significant increases in bone mineral density. Phase III trials in postmenopausal osteoporosis are currently in progress.

Ophthalmics

We market products for the treatment of a number of different ophthalmic diseases. Research and development in this disease area is aimed at the discovery and development of innovative approaches to the treatment of glaucoma, age-related macular degeneration, eye inflammation, ocular allergies and other diseases and disorders of the eye.

Recently launched products

- Visudyne™ (verteporfin) is a light activated drug (photosensitizer) and is used as a two-step procedure that can be performed in a doctor's office. First, the drug is injected intravenously into the patient's arm. A non-thermal laser light is then shone into the patient's eye to activate the drug. Visudyne™ therapy uses a specially designed laser that produces the low level, non-thermal 689 nm (nanometer) light required to activate the drug. Visudyne™ has recently been launched for two new indications, pathologic myopia (in the United States and Europe) and ocular histoplasmosis syndrome (in the United States).

Key Marketed Products

- Visudyne™ (verteporfin) is commercially available in 58 countries for the treatment of predominantly classic subfoveal choroidal neovascularization (CNV) caused by age-related macular

degeneration. It is also approved in over 35 countries, including EU countries, the United States and Canada, for the treatment of subfoveal CNV due to pathologic myopia (severe near-sightedness).

- Zaditen® (ketotifen) ophthalmic is a new eye drop which provides fast relief of symptoms in patients suffering from ocular allergy. Zaditen® ophthalmic works through multiple mechanism of action to provide relief within minutes and a duration of action of up to 12 hours. Zaditen® provides rapid relief and long lasting control of allergy symptoms with a twice daily dosing regimen. Zaditen® is approved in more than 30 countries, including the United States (where it is marketed as Zaditor™) and the EU.

Compounds in Development

- Visudyne™ (verteporfin) is also in development for additional indications. Phase III trials are ongoing in occult age-related macular degeneration ("AMD") and phase II trials are in progress for minimal class AMD.
- Rescula™ (unoprostone) is filed in the EU for the treatment of glaucoma.
- PKC412 is an inhibitor of Protein Kinase C, currently in development for diabetic macular edema (phase II).

Principal Markets

The world market for pharmaceuticals is concentrated in the major markets of the United States, Europe and Japan. The following table sets forth certain data relating to our principal markets.

Pharmaceuticals	**Sales 2001**	
	(CHF millions)	**(%)**
United States	8,636	43
Americas (except the United States)	1,699	8
Europe	6,122	30
Japan	2,198	11
Rest of the World	1,526	8
Total	**20,181**	**100**

Many of our products are used for chronic conditions that require patients to consume the product over long periods of time, from months to years. Accordingly, sales are not subject to material changes in seasonal demand.

Production

The key goal in our manufacturing and supply chain management program is to ensure the uninterrupted, timely and cost-effective supply of products that meet all product specifications. In order to achieve this objective, we manufacture our prescription medicines at 8 bulk chemical and 21 secondary production facilities. Major bulk chemical sites are located in Basel, Switzerland; Grimsby, United Kingdom; and Ringaskiddy, Ireland. Bulk chemical production involves the manufacture of therapeutically active compounds, mainly by chemical synthesis or by a biological process such as fermentation. Significant secondary production facilities are located in Stein, Switzerland; Suffern, New York, United States; in Sasayama, Japan and in various locations in Europe, including Italy, Spain, Germany, France, the United

Kingdom, and Turkey. Secondary production involves the manufacture of galenical forms of drug products such as tablets, capsules, liquids, ampoules, vials and creams.

During clinical trials, which can last several years, the manufacturing process is rationalized and refined. By the time clinical trials are completed and products are launched, the manufacturing processes have been extensively tested and are considered stable. However, improvements may continue throughout a product's life cycle.

Raw materials for the manufacturing process are purchased from a number of third party suppliers. Where possible, our policy is to maintain multiple supply sources so that the business is not dependent on a single or limited number of suppliers. Moreover, we monitor developments that could have an adverse effect on the supply of essential materials. While we have not experienced material supply interruptions in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances. We also operate in a dynamic regulatory environment making supply never an absolute certainty.

Overall, prices are not volatile for materially significant raw materials.

Marketing and Distribution

We have invested significant resources in our sales and marketing organizations to achieve a competitive presence in all of the main pharmaceutical markets worldwide. In particular, the affiliates of Novartis Pharmaceuticals have a strong presence in the United States and the EU.

Products are sold to wholesale and retail drug distributors, hospitals, clinics, government agencies and managed care providers. In each market to the extent permitted by law, we deploy sales representatives to market our products and supporting medical staff to provide medical information to prescribers and healthcare purchasers. At December 31, 2001 affiliates of Novartis Pharmaceuticals had approximately 5,500 medical representatives in the US field forces, (including contract field forces) and approximately 15,800 medical representatives worldwide. Our sales and marketing reach is further extended through various agreements with promotion and marketing partners, licensees, associates and distributors.

Competition

We compete in most major markets with other global pharmaceutical companies, including Abbott Laboratories, Alcon, Allergan, American Home Products, AstraZeneca, Aventis, Bausch & Lomb, Bayer, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Johnson & Johnson, Merck, Pfizer, Pharmacia, Roche, Santen and Schering-Plough. Competition within the pharmaceutical industry is intense and extends across a wide range of commercial activities, including pricing, product characteristics, customer service, sales and marketing, and research and development.

In addition to competition from ethical pharmaceutical companies, that is, companies selling patented pharmaceuticals under trademarked brand names, our pharmaceuticals business faces an increasing challenge from companies selling generic forms of Novartis products following the expiry of patent protection. In response to generic challenges that infringe upon our patents and trademarks, we vigorously defend our intellectual property rights. Where we have made meaningful improvements to existing products, we seek to extend the product range with patent-protected value-added line extensions. We focus our marketing efforts to increase brand awareness and loyalty. While competition from generic products can have a significant impact on product value, there is no guarantee that any product, even with patent protection, will remain successful if a competitor develops a new product offering significant improvements over existing therapies.

Research and Development

We are among the leaders in the pharmaceuticals industry in terms of research and development investment. In 2001, Novartis Pharmaceuticals invested approximately CHF 3.4 billion in research and

development, which represents 17% of total pharmaceuticals sales. Our Pharmaceuticals sector invested CHF 3.3 billion and CHF 2.8 billion on research and development in 2000 and 1999 respectively. There are currently 66 projects in clinical development, with 16 in Phase I and 21 in Phase II and 29 in Phase III and in registration. Products expected to be launched in 2002 from our efforts include Elidel® in Japan as well as new indications or formulations for Diovan®, Glivec®/Gleevec™, Lamisil®, Lotrel®, Ritalin® and Zometa®.

Clinical development program

Development of a new drug is a lengthy process, usually requiring 10 to 12 years from the initial research to bringing a drug to market and six to eight years from phase I clinical trials to market. Usually in phase I clinical trials, a drug is tested with about 20 to 80 normal, healthy volunteers. The tests study the drug's safety profile, including the safe dosage range. The studies also determine how a drug is absorbed, distributed, metabolized and excreted, and the duration of its action. In phase II clinical trials, the drug is tested in controlled studies of approximately 100 to 300 volunteer patients (*i.e.,* persons with the targeted disease) to assess the drug's effectiveness and safety, and to establish a proper dose. In phase III clinical trials, the drug is further tested on approximately 1,000 to 3,000 volunteer patients (in some cases up to 15,000 patients in total) in clinics and hospitals. Physicians monitor volunteer patients closely to determine efficacy and identify possible adverse reactions. The vast amount of data that must be collected and evaluated makes clinical testing the most time-consuming and expensive part of new drug development. The next stage in the drug development process is to seek registration for the new drug. See "—Regulation."

Initiatives to optimize the discovery and development process

We are working to be more efficient in selecting candidate drugs for development. For example, we are now better able to select the best compounds for development by having senior management focus on development projects at an early stage. Under another initiative, special teams work to develop late stage products more quickly. The goal is to improve the likelihood of therapeutic and commercial success, which should reduce development costs and decrease time to market. In several other initiatives we are improving electronic management of the clinical trial processes, including data capture and transfer, reviewing site management as well as electronic storage and archiving of study data and documents. Overall, these initiatives have the potential to substantially reduce the time between initial research and the introduction of the drug to market.

Alliances and acquisitions

Our Pharmaceuticals sector forms strategic alliances and alliance arrangements with other industry players or academic institutions in order to develop new products, acquire platform technologies and to access new markets. We license in products which complement our current product line and that are appropriate to our business strategy. A Disease Area Strategy is in place that focuses on alliances and acquisition activities for key disease areas/indications that are expected to be growth drivers in the future. Products and compounds we review for in-licensing are selected and evaluated using the same criteria as the ones used for our own internally discovered drugs.

We have long term research undertakings totaling CHF 1,480 million (US$ 881 million) in the aggregate as of December 31, 2001. See note 29 to the consolidated financial statements. We intend to fund these expenditures from internally generated resources.

Implementation of new technologies

The completion of the human genome sequence and advances in technologies and computing are changing the way we are discovering new drugs. Functional genomics at Novartis Pharmaceuticals aims at focusing our discovery efforts on drug targets which are disease-relevant and offer potential for new

medicines which prevent or slow the progression of a disease, rather than just treat its symptoms. Genomics research groups are located in Basel, Switzerland, and New Jersey (United States) with further support from the Genomics Institute of the Novartis Research Foundation in San Diego California (United States). In total, these activities are staffed by more than 300 scientific and technical experts. This strong in-house capability is complemented by external collaborations with numerous highly regarded biotech companies and academic groups world-wide. Advances made at Novartis Pharmaceuticals and in the alliances we have with other organizations in combinatorial chemistry, ultra high throughput screening technologies, miniaturization, computational approaches, and robotics and engineering are being incorporated into our new discovery processes in order to maximize their effectiveness.

Regulation

The international pharmaceutical industry is highly regulated. National and supranational regulatory authorities administer numerous laws and regulations regarding the testing, approval, manufacturing, importing, labeling and marketing of drugs, and also review the safety and efficacy of pharmaceutical products. Further controls exist on the non-clinical and clinical development of pharmaceutical products in particular. These regulatory requirements are a major factor in determining whether a substance can be developed into a marketable product and the amount of time and expense associated with that development.

The national and supranational regulatory authorities, especially in the United States, the EU and Japan, have high standards of technical evaluation. The introduction of new pharmaceutical products generally entails a lengthy approval process. Of particular importance is the requirement in all major countries that products be authorized or registered prior to marketing, and that such authorization or registration be subsequently maintained. The regulatory process requires increased testing and documentation for clearance of new drugs, with a corresponding increase in the expense of product introduction.

To register a pharmaceutical product, a registration dossier containing evidence establishing the quality, safety and efficacy of the product must be submitted to regulatory authorities. Generally, a therapeutic product must be registered in each country in which it will be sold. In all jurisdictions, the submission of an application to a regulatory authority does not guarantee that approval to market the product will be granted. Although the criteria for the registration of therapeutic drugs are similar in most countries, the formal structure of the necessary registration documents varies significantly from jurisdiction to jurisdiction. It is possible that a drug can be registered and marketed in one country while the registration authority in a neighboring country may, prior to registration, request additional information from the pharmaceutical company or even reject the product.

The registration process generally takes between six months and several years, depending on the jurisdiction, the quality of the data submitted, the efficiency of the registration authority's procedures and the nature of the product. Many countries provide for accelerated processing of registration applications for innovative products of particular therapeutic interest. In recent years, intensive efforts have been made among the United States, the EU and Japan to harmonize registration requirements in order to achieve shorter development and registration times for medical products. However, the requirement in many countries to negotiate selling prices or reimbursement levels with government regulators can substantially extend the time until final marketing approval is granted.

The following provides a summary of the regulatory process in the principal markets served by affiliates of Novartis Pharmaceuticals:

United States

In the United States, applications for drug registration are submitted to and reviewed by the FDA. The FDA regulates the testing, approval, manufacturing, and labeling of pharmaceutical products intended for commercialization in the United States, as well as the monitoring of all pharmaceutical products

currently on the US market. The pharmaceutical development and registration process is typically intensive, lengthy and rigorous. A new drug application ("NDA") or a Biologics License Application ("BLA") for biologic products, (hereafter referred to synonymously with NDA) is filed with the FDA if the data sufficiently demonstrate the drug's quality, safety and efficacy. The NDA must contain all the scientific information that has been gathered and typically covers all patients tested in clinical trials. A supplemental new drug application ("sNDA") must be filed for a line extension of, or new indications for, a previously registered drug.

Once the FDA approves the NDA/sNDA, the new pharmaceutical becomes available for physicians to prescribe. Thereafter, the drug owner must submit periodic reports to the FDA, including any cases of adverse reactions. For some medications, the FDA requires additional post-approval studies (phase IV) to evaluate long-term effects or to gather information on the use of the product under special conditions. The FDA also requires compliance with standards relating to laboratory, clinical and manufacturing practices.

European Union

In the EU, there are two main procedures for application for marketing authorization, namely the Centralized Procedure and the Mutual Recognition Procedure. In the Centralized Procedure, applications are made to the European Medical Evaluations Agency ("EMEA") for an authorization which is valid across all EU member-states. The Centralized Procedure is mandatory for all biotechnology products and optional for other new chemical compounds or innovative medicinal products. In the Mutual Recognition Procedure, a first authorization is granted by a single EU member-state. Subsequently, mutual recognition of this first authorization is sought from the remaining EU member-states or subset thereof. National authorizations are only possible for products intended for commercialization in a single EU member-state only, or for line extensions to existing national product licenses.

Japan

In Japan, applications for new products are made through the Pharmaceutical and Medical Devices Evaluation Center ("PMDEC"). After a data reliability survey and a Good Clinical Practice inspection are carried out by the Organization for Pharmaceutical Safety and Research ("OPSR"), a team evaluation is passed to the Central Pharmaceuticals Affairs Council ("CPAC"), whose special members, committees and executive committees provide a report back to the PMDEC. After a further team evaluation, a report is provided to the Ministry of Health, Labor and Welfare ("MHLW"), which makes a final determination for approval and refers this to the CPAC which then advises the MHLW on final approvability. Drug manufacturing or import license approval is issued by the local prefecture government.

Price Controls

In many of the markets where we operate, the prices of pharmaceutical products are subject to direct price controls (by law) and to drug reimbursement programs with varying price control mechanisms.

In the United States, debate over the reform of the healthcare system has resulted in an increased focus on pricing. Although there are currently no government price controls over private sector purchases in the United States, federal legislation requires pharmaceutical manufacturers to pay prescribed rebates on certain drugs to enable them to be eligible for reimbursement under healthcare programs. In the absence of new government regulation, managed care has become a potent force in the market place that increases downward pressure on the prices of pharmaceutical products. In addition, the current national debate over Medicare reform could increase pricing pressures. If Medicare reform results in the provision of outpatient pharmaceutical coverage for beneficiaries, the US government could use its enormous purchasing power to demand discounts from pharmaceutical companies thereby creating *de facto* price controls on prescription drugs. On the other hand, Medicare drug reimbursement legislation may increase the volume of pharmaceutical drug purchases, offsetting, at least in part, potential price discounts. As a result, we expect that pressures on pricing and operating results will continue and may increase.

In the EU, governments influence the price of pharmaceutical products through their control of national healthcare systems that fund a large part of the cost of such products to consumers. The downward pressure on healthcare costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products, as exemplified by the National Institute for Clinical Excellence in the UK, which evaluates the data supporting new medicines and passes reimbursement recommendations to the government. In addition, in some countries, cross-border imports from low-priced markets (parallel imports) exert commercial pressure on pricing within a country.

In Japan, the National Health Ministry biannually reviews the pharmaceutical prices of individual products. In the past, these reviews have resulted in price reductions. The Japanese government is planning a healthcare reform initiative to be implemented in 2002 and it is expected that the pharmaceutical pricing system will be one of the issues reviewed. The key issues are the evaluation of innovative products and the pricing of older products, including the biannual reduction of reimbursement prices adjusted for actual discounts given. The previously proposed reference price system has been abandoned by the government.

Intellectual Property

We attach great importance to patents, trademarks, and know-how in order to protect our investment in research and development, manufacturing and marketing. It is the policy of the Group to seek the broadest possible protection for significant product developments in all major markets. Patents may cover products *per se*, product formulations, processes, intermediate products and product uses.

Protection for individual products extends for varying periods depending on the date on which the patent application was granted and the legal life of patents in the various countries. The protection afforded, which may also vary from country to country, depends upon the type of patent and its scope of coverage. In most industrial countries, patent protection exists for new active substances and formulations, as well as for new indications and production processes. We monitor our competitors and vigorously challenge patent and trademark infringements of our intellectual property.

Patent protection is no longer available in several major markets for the active ingredients used in a number of our Pharmaceutical sector's leading products:

- Patent protection exists for the Neoral® microemulsion formulation and other cyclosporin formulations through 2009 and beyond in major markets. Despite this protection generic cyclosporin products competing with Neoral® have entered the transplantation market in the United States, Germany and elsewhere. Patent infringement proceedings have been filed and are pending.
- Our patent protection for Aredia® is limited. One generic version of Aredia® was launched in the United States in December 2001. Others are tentatively approved for marketing by the FDA and are expected to be launched in approximately May 2002. Generic products to Aredia® are on sale in Canada and elsewhere. We have a next generation drug, Zometa®, which was approved and launched in the United States in 2001 and is also launched in other key markets for its first indication. Patent protection will expire in major markets for the key product Sandostatin®. The basic octreotide substance patents expire in late 2002 in the United States, and Japan, and from 2003 to 2009 in major EU countries. However, protection extending to 2010 (and 2013 and beyond in the United States) continues in major markets for Sandostatin® LAR, which represents a significant and growing proportion of Novartis Pharmaceuticals octreotide sales.
- The basic benazepril substance patent for Cibacen®/Lotensin® will expire in Japan in 2002 and in the United States in 2003, but will remain in place in major markets in the EU. Lotrel®, the fast growing combination of benazepril with amlodipine, on the other hand, is patented in the United

States till 2017 and is expected to at least partially offset potential generic erosion on Cibacen®/ Lotensin® sales. Lotrel® contributes a growing proportion of Cibacen®/Lotensin® group sales.

- Voltaren® is another major Novartis product facing generic competition.

The loss of patent protection can have a significant impact on Novartis Pharmaceuticals, and we work to offset these negative effects by developing and patenting inventions that result in process and product enhancements and by positioning many of our products in specific market niches. However, there can be no assurance that this strategy will be effective in the future to extend competitive advantage, or that we will be able to avoid substantial adverse effects from future patent expirations.

GENERICS

The business of Generics is conducted by a number of affiliated companies throughout the world and provides off-patent pharmaceutical products and substances. The affiliates of Generics compete in two principal product segments: finished dosage forms ("Generic Pharmaceuticals Business") and active pharmaceutical ingredients and their intermediates ("Industrial Business"). In the Generics Pharmaceuticals Business, finished dosage forms are sold to pharmacies, hospitals and other healthcare outlets, while in the Industrial Business, active ingredients and their intermediates for pharmaceutical and biotechnological substances are sold to industrial customers.

As of December 31, 2001, the affiliates comprising Generics employed 7,230 people. Generics products are sold in over 140 countries throughout the world. In 2001, the affiliates comprising Generics had CHF 2,433 million in sales, which represented 7% of the Group's sales.

In 2001, Generics sales grew by more than 26% in local currencies. The business year was characterized by the integration of companies acquired in 2000 and 2001 and high volume growth in both the Industrial and Generic Pharmaceuticals Businesses. However, continued price pressure, especially in the Generic Pharmaceuticals Business, partially offset the very dynamic sales growth and thereby increased pressure on operating income development.

In the United States, double digit sales growth was achieved despite continued decreasing prices. Improved performance is attributable to significant improvements at Geneva Pharmaceuticals, Inc., the integration of Apothecon's former unbranded generics business (acquired in 2000), strong volume growth and successful launches of important finished dosage form pharmaceuticals, i.e. fluoxetine, the generic form of the blockbuster anti-depressant Prozac®, for which Geneva held a 6-months-exclusivity in the United States for the ten milligram capsule formulation of this medication. With the addition of the former Apothecon, we have become one of the top four competitors in the US generic pharmaceuticals business.

The globally active Biochemie GmbH ("Biochemie"), headquartered in Kundl/Austria, achieved considerable sales growth (5%) in 2001, providing products in both the Industrial Business segment as well as Generic Pharmaceuticals Business segment. Main growth drivers were the generic version of the antibiotic amoxicillin/clavulanic acid as well as active ingredients and intermediates for penicillins and cephalosporines.

In 2001, our Industrial Generics Business succeeded in realizing considerable volume growth in active ingredients (penicillins, cephalosporin and intermediates). In addition, due to the shift to high-value-compounds for cephalosporin antibiotics and additional long-term contracts with major pharmaceutical and biotech companies, we achieved improved performance in 2001 in our Industrial Generics Business.

Key Marketed Products

Approximately 67% of the sales of Generics are derived from our Generic Pharmaceuticals Business and approximately 33% of sales are derived from our Industrial Business.

Key marketed product areas are antibiotics (such as penicillins, cephalosporins, macrolides and medicines for the treatment of tuberculosis), central nervous system drugs, cardiovascular drugs, alimentary tract preparations and hormonal tract preparations.

Recently launched products

- A ten miligram capsule formulation of fluoxetine (the generic form of Prozac® from Eli Lilly); an essential treatment for depression.
- A generic combination amoxicillin/clavulanic acid under the brand names Curam® and Clavamox®. This antibiotic combination is an important treatment for bacterial infections.
- The antibiotics Roxythromycin AZU® and Ciprofloxacin® AZU®, Felodipin AZU® for heart disease, and Loratadin for allergies.

In 2001, Generics affiliate Biochemie began manufacturing enzymatically produced 7-ACA in Frankfurt, Germany as a complement to the manufacture of this product at its Austrian plant (which uses chemical methods in production). Biochemie is the world leader in the production of this key intermediate for cephalosporin antibiotics**.** Biochemie also entered into several new alliances with several international pharmaceutical companies for the manufacture of specific custom-made intermediates for cephalosporine antibiotics.

In Spain, a Biochemie affiliate began manufacturing active ingredients for semisynthetic macrolides. This extension is a major step in our strategy to diversify our anti-infectives portfolio and to become a leading player in this market segment.

Principal Markets

The principal markets of Generics are the two largest generics markets in the world: the United States and Europe. The following table sets forth the aggregate 2001 sales of Generics by region:

Generics	**Sales 2001**	
	(CHF millions)	**(%)**
United States	789	32
Americas (except the United States)	209	9
Europe	1,022	42
Japan	53	2
Rest of the World	360	15
Total	**2,433**	**100**

In 2001, sales growth in the United States (39%) was mainly due to the successful integration of the product range of Apothecon's unbranded generics business and the launch of generic fluoxetine in the second half of 2001.

Sales growth in Latin America (34%) was due to the continuous development of the Mexican operation and the market entry in Argentina through the acquisition of Labinca SA. Novartis Generics intends to improve its market share through continued sales growth in Mexico and Venezuela, in addition to the new market entry in Argentina and a greenfield market entry in Brazil. Success in both Argentina and Brazil are dependent on those countries overcoming present financial difficulties.

Sales growth in Western-Europe (21%) was due to a greenfield market entry strategy in Scandinavian countries, Belgium and Greece; the acquisition of Lagap Pharmaceuticals in the United Kingdom and the

acquisition of the BASF generics business in several European countries, including France and Italy. In 2001 Germany remained the most important generics market in Europe. Due to changes in legislation the pharmaceutical markets in France and Italy opened for generic medicines.

Sales development in Asia/Pacific/Africa remained at a high level (6%).

Production

For finished dosage forms, the principal production facilities are located in Broomfield, Colorado (United States); Dayton, New Jersey (United States); Gerlingen, Germany; Kundl, Austria; Jakarta, Indonesia; Spartan, South Africa; Tongi, Bangladesh; and Buenos Aires, Argentina. Plants for active pharmaceutical ingredients are located in Kundl and Schaftenau, Austria; Frankfurt, Germany; Rovereto, Italy; Les Franqueses, Spain; Jakarta, Indonesia, and Turbhe/Mumbai, India.

Agricultural raw materials such as flours and sugars are sourced from multiple suppliers based in both the United States and the EU. Chemicals and other raw materials are globally sourced with a focus on United States and EU-based suppliers. Raw materials are priced for the most part on world markets and price fluctuations are partially avoided through the use of long-term supply contracts. In addition, e-procurement methods are being initiated by several Generics affiliates to further strengthen their purchasing productivity.

Biotech substances like enzymes for detergents, and many of the active pharmaceutical ingredients, like penicillins, are produced using modern bio-technological methods. Primary production methods include fermentation processes, chemical syntheses and physical production methods, such as sterile precipitation. The fermentation process uses genetically modified micro-organisms, such as e-coli bacteria and molds. Other new manufacturing processes are constantly being developed.

Marketing and Distribution

In our Generics Pharmaceuticals Business, we have a broad portfolio of off-patent medicines that are sold to pharmacies, hospitals, and other healthcare outlets. Depending on the structure of local markets, these markets are serviced either by the field service team of the local Generics affiliate or by well established partners or joint venture associates.

In our Industrial Business, active pharmaceutical ingredients and biotech substances are sold to manufacturers in the pharmaceutical industry.

In response to rising healthcare costs, many governments and private medical care providers, such as HMOs, have instituted reimbursement schemes that favor the substitution of generic pharmaceuticals for more expensive brand-name pharmaceuticals. In the United States, generic substitution statutes have been enacted by virtually all states and permit or require the dispensing pharmacist to substitute a less expensive generic drug instead of an original ethical drug. In Europe, use of generic drugs is growing, but penetration rates are still below those reached in the United States because, in some EU countries, reimbursement practices do not create an efficient incentive for generic substitution.

Competition

In our Generics Pharmaceuticals Business, key competitors in the United States are Barr, Mylan, Teva/Novopharm/Copley, and Watson/Schein. In Europe, key competitors are Hexal, Ratiopharm, Stada Teva, Merck Generics and Alpharma.

In our Industrial Business, the main competitors for active pharmaceutical ingredients are Antibioticos and DSM-Anti-Infectives (both headquartered in the EU). East-Asian manufacturers are increasingly competing in selected markets.

The market for generic products is characterized by increasing demand for high-quality pharmaceuticals which can be produced at lower costs due to minimized initial research and development

investments. Increasing pressure on healthcare expenditures and numerous patent expirations have created a favorable market environment for the generics industry. This positive market trend, however, brings increased competition within the generics industry, leading to ongoing price pressure on generic pharmaceuticals.

Research and Development

There is intensive development work required in order to demonstrate the bioequivalency of a generic drug to the original ethical drug. Nevertheless, research and development costs associated with generic drugs are much lower than those of their original counterparts., Thus, off-patent drugs can be offered for sale at prices much lower than those of patented drugs, which must recoup substantial basic research and development costs through higher prices over the life of the product's patent.

Currently, the affiliates of Generics employ approximately 700 researchers who explore alternative routes for the manufacture of known compounds and who aim to develop innovative forms of generic drugs. Most of these researchers are based at facilities in Kundl, Austria; Dayton, New Jersey; and Mumbai, India. Generics invested CHF 169 million, CHF 170 million, and CHF 126 million in research and development related to generic products in 2001, 2000, and 1999, respectively.

In Vienna, Austria, we opened a new research center with a staff of 50 where new active substances are being developed for use as antibiotics.

Regulation

The Waxman-Hatch Act in the United States (and similar legislation in some other countries) eliminated the repetition of extensive clinical trials for generic drugs so long as they could be shown to be of identical quality and purity and to be biologically equivalent to the original ethical drug.

In the EU, although certain new drugs are subject to a Centralized Registration Procedure, most applications for marketing approval still need to be filed on the national level. However, in an effort to streamline the registration process, a national registration may be used as the basis for EU marketing approval under the Mutual Recognition Procedure. See "Pharmaceuticals—Regulation."

Intellectual Property

Wherever possible our products are protected by trademarks and patents. Patents may cover products, product formulations, processes, intermediate products or product uses. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

CONSUMER HEALTH

The business of Consumer Health is conducted by a number of affiliated companies throughout the world, operating in three business units: "Over-the-Counter" (OTC) self-medication, Health and Functional Nutrition (including Infant and Baby products), and Medical Nutrition. Through these units, we develop, manufacture and market a wide range of health and medical nutrition products and a portfolio self-medication brands. In 2001, the affiliates of Consumer Health employed 12,824 people and had CHF 6,675 million in sales, which represented 21% of the Group's sales. Headquartered in Nyon, Switzerland, Novartis Consumer Health affiliates operate in 52 countries worldwide.

On February 4, 2002, we announced our intention to divest certain parts of the Health and Functional Food business part of Health and Functional Nutrition before the year end 2002. This reorganization will better meet customer needs and strengthen growth initiatives, furthering the Group's strategic focus on healthcare with pharmaceuticals at the core. Among the brands to be divested include Céreal®, Gerblé®, Ovaltine®, Ovalmatine®, Isotar®, Gerlinea®, and Pesofarma®. We intend to retain the Infant and Baby Food Business, including Gerber®.

The present form of Consumer Health was created on January 1, 1999 by merging the Group's OTC and nutrition businesses. At that time non-core brands were divested. All significant restructuring and integration activities relating to the merger have been successfully completed.

The three business units: OTC, Health and Functional Nutrition and Medical Nutrition, contributed to sales as follows:

Consumer Health	Sales 2001	Sales 2000[1]	Sales 2000	Sales 1999
	(%)	(%)	(%)	(%)
OTC	40.0	40.2	39.1	40.2
Health and Functional Nutrition	49.7	50.1	51.0	49.9
Medical Nutrition	10.3	9.7	9.9	9.9
Total	**100.0**	**100.0**	**100.0**	**100.0**

(1) Historical data have been restated to reflect the transfer of certain products from Novartis Pharmaceuticals.

Key Marketed Products

OTC

Our OTC business provides products for the treatment and prevention of common medical conditions and ailments to enhance people's overall health and well being. Our OTC business is ranked as a global top 5 self-medication business with strong positions in Europe and North America. The current product portfolio includes 40 key marketed brands.

The main product categories are cough, cold and allergy treatments, gastrointestinal treatments, dermatological treatments, analgesics, vitamins, minerals and supplements, venous disorder treatments and smoking cessation treatment. The major OTC brands are:

Key brands	Market/segment
Voltaren® Emulgel	Topical Muscle Pain
Nicotinell/Habitrol®	Smoking cessation
Lamisil®AT Cream	Athlete's foot treatment
Sandoz®	Minerals
Triaminic®	Pediatric cough & cold
Maalox®	Antacid
Otrivin®	Nasal decongestant
NeoCitran®, TheraFlu® & Triaminic®	Cold remedies and flu
Venoruton®	Venous disorders
Tavegyl®/Tavist®	Cough, cold, allergy

Life-cycle management has become an important tool following the transfer of two key brands from Pharmaceuticals: Voltaren® Emulgel and Lamisil®AT Cream. In the United States, Lamisil®AT Cream rapidly built a strong OTC market share following its switch from prescription only to OTC status by providing consumers with a new standard in efficacy for the common problem of athlete's foot. We

followed this success with a number of innovative line extensions including the introduction of the cream in other global markets during 2001.

Voltaren® Emulgel, a topical analgesic for muscular pain, has also enjoyed significant growth when it switched to OTC from prescription-only status. In the EU, a winning marketing campaign, first introduced in Germany for Voltaren® Schmerzgel, has now been rolled out to numerous other markets with similar success. The prescription to OTC switch of this brand is now ranked in Europe as the second most successful switch in history of the OTC industry.

In 2001, we introduced new improved formulations for Maalox® liquid antacid in the United States and Quick Dissolves® chewable tablets for the Sandoz® mineral line in Europe.

At the beginning of the third quarter of 2001, Pharmaceuticals transferred to Consumer Health the antiviral Denavir® for the US market, and it is currently sold under prescription.

Health and Functional Nutrition

The Health and Functional Nutrition Business encompasses foods designed to serve the particular nutritional needs of target groups including infants, athletes, and the elderly. Products include baby foods, consumer products such as sports drinks, slimming aids and functional health foods. On February 4, 2002, we announced our intention to divest the Health and Functional Food portion of this business before the year-end 2002. The Infant and Baby Food business, including Gerber®, will be retained.

In 2001, the Health and Functional Nutrition business refocused advertising and promotion investments through innovative programs in the core-based businesses: Gerber®, Ovaltine®/Ovomaltine®, Isostar®, Céreal®/Gerblé® and Gerlinea®.

We have mutually agreed with our joint venture partner, The Quaker Oats Company, not to proceed further with our alliance known as Altus Food Company.

The major brands and product groups in Health and Functional Nutrition are:

Key Brands	Product groups	Main markets
Gerber®, Galactina®, Tender Harvest®, Graduates®	Baby food	US, Latin America, Europe, Asia
Céréal®, Gerblé®	Health foods[1]	Europe
Ovaltine®/Ovomaltine®	Food drinks[1]	US, Europe, Asia
Isostar®	Sports nutrition[1]	Europe
Modifast®, Gerlinea®, Pesofarma®	Slimming[1]	Europe

(1) Proposed to be divested as part of Health and Functional Foods.

Gerber® continued to build on its position as a leader in infant feeding and care with a number of innovations in 2001. Gerber® is the first company to deliver single-serve plastic packages, ideal for out-of-home feeding. Gerber® now offers all juices and top selling fruit purees in plastic containers. The premium/organic Tender Harvest® line was extended to include 1st food segment for the baby's progression to cereal, and 3rd food segment for older babies learning how to chew and mash foods.

Within the Gerber® Care/Wellness line, new hypoallergenic products such as foaming shampoo, baby powders and oils, moisturizers (for both face and body) were launched in 2001. In addition, an advanced line of pacifier (Gentleflex®) and nipple products (New Traditions®) provides for a smoother transition

from breastfeeding to bottle-feeding. Lastly, a new highly absorbent variety of pads for nursing mothers are now available.

The conversion of glass containers to plastic will continue in 2002 and beyond to make products more convenient for on-the-go parents. In addition, innovative multi-compartment "dinners" offering greater convenience are being developed for a 2002 launch.

In Health Food, the focus for 2002 will continue to be on the high growth categories of Sports Nutrition and Slimming, driven by Isostar®, which was launched in 2001 in a new 500 milliliter PET bottle in selected European markets and through an improved range of slimming products offering more complete meal replacement.

Medical Nutrition

Our Medical Nutrition business focuses on the nutritional needs of people with serious (often chronic) conditions as well as hospitalized or convalescing patients. Our product portfolio ranges from enteral tube feeds and devices to oral supplements. Our main brands and product groups in this area include:

Key brands	Product groups
Isosource®, Novasource®, IMPACT®, Vivonex®	Tube feeds
Isosource®, Novasource®, IMPACT®, Resource® Professional®	Clinical supplements
Resource®	Health Care Food Service
Compat®	Medical devices

45% of our 2001 incremental revenues have been generated by products launched in 2001, principally for gastro-intestinal and diabetes indications, under the brands Resource®, Isosource® and Novasource®.

We expect that future growth will be generated by increased penetration in the Care/Hospital & Home Health Care trade channels and continued development of products that help normalize blood glucose levels, reduce the risk of infections or improve tissue healing.

Principal Markets

In 2001, Consumer Health realised the majority of its sales in its two principal markets: the United States and the EU. The following table sets out our 2001 sales by geographic region.

Consumer Health	Sales 2001	
	(CHF millions)	(%)
United States	3,283	49
Americas (except the United States)	689	10
Europe	2,173	33
Rest of World	530	8
Total	**6,675**	**100**

Apart from the cough and cold business which represents 25% of OTC sales, Consumer Health sales are not characterized by seasonal fluctuations. A number of our OTC brands currently benefit from reimbursable status by governments and other third party payers in European and other global markets.

Production

Major production sites ranked by importance are in the United States, Switzerland, Mexico, France, Germany, Puerto Rico, Poland, Costa Rica and China. In 2001, a major consolidation of the Ovomaltine® production capacity in Europe was announced, leading to the closure of the United Kingdom production facility.

The goals of our supply chain strategy include a high efficiency, low cost structure and the mitigation of risks through multiple production sources. Regional sites serve specific markets but are also capable of providing support as needed to other regions in the event of supply disruption. In addition, we source a large quantity of OTC products from factories owned and operated by the affiliates of Pharmaceuticals thereby providing flexibility and predictable sources of supply in the event of capacity constraints or other potential disruptions to ongoing supply.

Raw materials for the manufacturing process are purchased from a number of our affiliates and third party suppliers. For the most part, the products and services we procure are not proprietary and are available from a number of suppliers. We often "single-source" supplies, but we have a policy of having at least a second approved and validated supplier registered for most key materials so that substitution is possible. Where practical and beneficial, we have long-term contracts in place on key production inputs. We also proactively monitor markets and developments that could have an adverse effect on the supply of essential materials. While we have not experienced material supply interruptions caused by vendors in the past, there can be no assurance that supply will not be interrupted in the future as a result of unforeseen circumstances. Additionally, we operate in a dynamic regulatory environment, making supply never an absolute certainty.

The non-proprietary nature of most of our raw materials allows us to benefit from attractive supply prices. Although we face volatility in the commodity markets just like any similarly situated company, prices for our unique raw materials are not overly volatile.

Marketing and Distribution

We aim to be a leading global participant in fulfilling the needs of patients and consumers for health and medical nutrition and self-medication healthcare. Strong brands, science-based products and in-house marketing and sales organisations are key strengths that allow the business to achieve this objective. We distribute our products through various channels, such as hospitals, nursing homes, pharmacies, food, drug and mass retail outlets.

Competition

The fundamental trends driving the growth of our OTC business are increasing pressures on government health funding, changing consumer attitudes towards personal well being, the rise of a self-care mentality among consumers and successful switches of prescription products to OTC status. Our principal competitors in this highly competitive market segment are major international corporations with substantial financial and other resources, including American Home Products, Aventis, Bayer, GlaxoSmithKline, Johnson & Johnson, Procter & Gamble, Roche and Pfizer.

In Health and Functional Nutrition the main competitors are multinational food companies. In the slimming and functional health foods segment, the market is very fragmented and consists of a number of competitors. In the Baby Food business, where the market is relatively flat as the number of births has stayed around 0–2% growth per-annum, competitors in the United States are Heinz and Beechnut. In the

baby care and wellness portion of the market the main competition in the United States comes from Johnson & Johnson and Playtex.

Major competitors in the Medical Nutrition market are Abbott Ross, Fresenius, Mead Johnson, Nestlé, and Numico.

Research and Development

In OTC, the focus of research and development activities is primarily on cough, cold, allergy, gastrointestinal, minerals, analgesics, dermatology, cardiovascular risk reduction (through smoking cessation programs) and management of venous diseases. Consumer Health also works closely with Pharmaceuticals to evaluate appropriate products that can be switched from prescription to OTC status. The development of line extensions to leverage the brand equities is also of high importance. These extensions can take the form of new flavor improvements or the introduction of novel galenical forms.

Currently, Consumer Health has a large number of research and development projects in progress. While the majority of these are in the OTC business unit, there is also significant activity within the Medical Nutrition and Health and Functional Nutrition business units. The affiliates of Consumer Health employ a dedicated research and development team of over 450 employees based mainly in the United States and Switzerland. We have devoted CHF 181 million, CHF 186 million and CHF 167 million to research and development relating to our Consumer Health products in 2001, 2000 and 1999 respectively.

Consumer Health continuously monitors product safety and works to make certain that the benefits outweigh the risks of all products within its portfolio.

Regulation

For OTC products, the regulatory process for bringing a product to market consists of preparing and filing a detailed dossier with the appropriate national or international registration authority and obtaining approval in the United States or registration in the EU and the rest of the world.

The FDA regulates approval of OTC products in the United States via the US Food Drug and Cosmetic Act. There are two legal bases for marketing an OTC product, either through an approved New Drug Application (NDA) to establish a product's safety and effectiveness for its intended use, or if the active ingredient is generally recognised as safe and effective, through a regulatory process known as the OTC Review.

In the OTC Review, the FDA specifies in a series of monographs (by pharmacological category) the conditions under which certain active ingredients would generally be recognised as safe and effective for their intended use (*i.e.* to change from prescription status to OTC status). Compliance with the published monograph, therefore, permits marketing without an NDA and its formal approval process. The monograph process is unique to the US market.

The prescription-to-OTC switching process exists in most countries around the world and varies from country to country.

Foodstuffs are highly regulated in order to protect public health and to prevent misleading of consumers. The following matters generally are subject to international and national food regulations: development, manufacturing, packaging, quality (food standards, ingredients), safety, labeling and advertising of foods.

Food manufacturers are responsible for product safety, not misleading consumers and complying with national food laws. Many technical aspects of food regulation are not harmonized among countries. New food ingredients and new product claims generally require special approvals from national food authorities. This applies for new medical foods, dietetic foods such as sports foods and slimming foods and some new baby foods.

In the United States, the safety of new food ingredients is assessed by the FDA. In the EU, the safety of new food ingredients is assessed with the Novel Food Process. An EU member-state makes the initial risk assessment, which may then be challenged afterwards by the EU Commission and the other EU member-states. In Japan, Foods for Special Health Use are put on the market after approval has been obtained from the Ministry of Health, Labor and Welfare. This includes approval of product quality, ingredients and product claims.

Intellectual Property

Our Consumer Health businesses are brand-oriented and, therefore, we consider our trademarks to be of utmost value. Trademarks protect most of our brands in the majority of the markets where these brands are sold, and we vigorously protect these trademarks from infringement. Our most important trademarks are used in a number of countries. Local variations of these international trademarks are employed where legal or linguistic considerations require the use of an alternative.

Wherever possible our products are protected by patents. Patents may cover products, product formulations, processes, intermediate products or product uses. It is our policy to seek the broadest possible protection for significant product developments in all major markets.

CIBA VISION

The business of CIBA Vision is conducted by a number of affiliated companies in more than 70 countries. CIBA Vision is a world leader in the research, development and manufacturing of eye care products, namely soft contact lenses, lens care products, and ophthalmic surgical products. As of December 31, 2001, the affiliates of CIBA Vision employed more than 6,700 people. In 2001, CIBA Vision had sales of CHF 1,787 million, which represented 6% of the Group's sales.

CIBA Vision completed the acquisition of Wesley Jessen VisionCare, Inc., a leading provider of specialty contact lenses in the United States, in October 2000.

On January 1, 2001, CIBA Vision's Ophthalmic Pharmaceuticals Business Unit became part of the Novartis Pharmaceuticals sector in a reorganization.

Recently Launched Products

- Focus® NIGHT & DAY™ is the first high-oxygen permeable continuous wear contact lens that can be worn for up to 30 days and nights continuously. The product was launched in the United States in November 2001. The lens was first launched in 1999 and and is now available in more than 40 countries.
- CIBA Vision launched Focus® DAILIES Progressives in the United States and Canada in June 2001. It is the first daily disposable contact lens in the world to correct presbyopia. Focus® DAILIES® Progressives are also available in Europe and Hong Kong.
- AOSept Clear Care, an enhanced formulation of our leading hydrogen peroxide disinfectant, was launched in the United States in June 2001. It is the first one-bottle, no rub lens care solution with no added preservatives in the United States.
- SOLO-care® Plus, an enhanced formulation of our one-bottle lens disinfection system, received the CE mark in April 2001 and FDA approval in December 2001. The product offers a one-bottle, no rub, no rinse cleaning and disinfection system.
- CIBA Vision introduced several innovative intraocular lenses:
    - In 2000 the CE Mark was obtained for the PRL (Phakic Refractive Lens), a foldable posterior chamber phakic refractive lens designed to float on a patient's natural lens and to self-center behind the iris. FDA clinical trials are ongoing in the United States.

- In 2001 the CV 232, the only pre-rolled intraocular lens in the world, was introduced. This product allows surgeons to insert the lens through an even smaller incision than before. It is used to restore vision in patients with cataracts.
- Vivarte™, is the first and only foldable anterior chamber phakic refractive lens. The three-point design increases the stability of the lens and is designed to provide optimum safety. Vivarte™ will be launched in Europe in early 2002.

Key Marketed Products

The table below sets out the key marketed products in each of CIBA Vision's three principal product segments:

Main Products	Description
Contact Lenses	
Focus®Toric	Corrects astigmatism
Focus®Monthly	Replaced monthly
Focus®1–2 Week	Replaced every one to two weeks
Focus®1–2 Week SoftColors	Replaced every one to two weeks; enhances the color of light eyes
Focus®DAILIES®	One-day disposable
Focus®Progressives	Corrects presbyopia
Focus®NIGHT&DAY™	Extended wear for up to 30 days and nights continuous wear
Focus® DAILIES Progressives	One day disposable to correct presbyopia
DuraSoft 3 Colors	Conventional cosmetic tinted lenses
FreshLook® Colorblends	Opaque lenses that blend three colors on one lens creating a more natural looking cosmetic tinted lens for dark or light eyes
Precision UV®	First Disposable lens with ultraviolet light protection
WildEyes®	Novelty lenses
Illusions® Opaque	Conventional lenses for changing the color of dark eyes
Cibasoft®	Conventional lenses with handling tint
Cibasoft® Softcolours®	Conventional lenses for enhancing the color of light eyes

Main Products	Description
Lens Care Products	
AOSept®	Hydrogen peroxide disinfectant system
AOSept® Clear Care/AOSept Plus	An enhanced formulation of our leading hydrogen peroxide disinfectant; the first one-bottle, no rub lens care solution with no added preservatives in the United States
SOLO-care®	One bottle lens disinfectant system
SOLO-care® Plus	An enhanced formulation of our one-bottle lens disinfection system; offers a one-bottle, no rub, no rinse cleaning and disinfection system
QuickCARE™/InstaCARE	Five-minute disinfectant system
Pure Eyes®	Two-bottle hydrogen peroxide system
Focus® Lens Drops	For lubricating contact lenses
Ophthalmic Surgical	
MemoryLens®	Pre-rolled, foldable intra-ocular lens, used in a surgical procedure to restore vision in people with cataracts
PRL (Phakic Refractive Lens)	The first and only foldable posterior chamber phakic refractive lens designed to float on a patient's natural lens and to self-center behind the iris
Vivarte™	The first and only foldable anterior chamber phakic refractive lens
Bioinsulated® Punctum Plus	Provides relief from severe dry eye symptoms
UniVisc®	Viscoelastic solution
Ophthalin™ and Ophthalin Plus™	Viscoelastic solution offered outside the United States
Sapphire Microsurgical Knives and Phaco Blades	Surgical instruments

Products in Development

CIBA Vision intends to expand its product portfolio through both its own dedicated research and development resources as well as the acquisition of new and innovative technologies. Product development is focused on contact lenses as well as ophthalmic surgical products and involves the creation and development of entirely new product offerings in these markets as well as line extensions of current products. The acquisition of Wesley Jessen VisionCare, in October 2000 included several exciting technologies and CIBA Vision anticipates incorporating these technologies into other contact lens products in its pipeline.

Principal Markets

Our principal markets, in terms of 2001 sales, were North America (United States and Canada), Japan and Europe. Sales are not subject to seasonality. The following table sets forth 2001 sales for CIBA Vision by region:

CIBA Vision	Sales 2001	
	(CHF millions)	(%)
United States:	760	43
Americas (except the United States)	98	5
Europe	543	30
Japan	259	15
Rest of the World	127	7
Total	**1,787**	**100**

Production

CIBA Vision has seven major manufacturing sites: Grosswaldstadt, Germany (contact lenses); Amwiler Facility, Atlanta, Georgia, United States (contact lenses); Johns Creek Facility, Atlanta, Georgia, United States (contact lenses); Batam, Indonesia (contact lenses); Mississauga, Canada (lens care products); Cidra, Puerto Rico (intra-ocular lenses and contact lenses); and Des Plaines, Illinois, United States (contact lenses). We purchase basic chemical commodity raw materials for our lens products from industrial vendors. These raw materials are then reformulated into the monomers and polymers required to produce contact lenses. Polymer chemistry is one of the innovative elements in our contact lens products. The technology to produce the polymers and monomers is stable and well-defined.

We enter into long-term supply contracts (generally over one to two years) with industrial raw material vendors, which limits volatility. In addition, most raw materials are basic chemical commodities and multiple suppliers are available. Certain lens products use proprietary chemicals that are produced specifically for us and sold exclusively to us. We also use a custom-designed process to synthesize macromonomers, a key raw material needed in contact lens production, which are produced by a contract vendor for a negotiated price.

Marketing and Distribution

Contact lenses are considered medical devices by regulatory authorities and, therefore, are available only with a prescription from an eye-care professional in most countries. CIBA Vision lenses can be purchased from independent eye care professionals and optical chains. CIBA Vision's lens care products can be found in major drug, food and mass merchandising retail chains in the United States, Europe, Japan and elsewhere. In addition, mail order and Internet sales are becoming increasingly important channels in major markets worldwide.

Eyecare professionals are CIBA Vision's primary marketing focus. In addition, we have direct-to-consumer ("DTC") initiatives including free trials, coupons and bundling.

Competition

Contact Lenses

Growth in the contact lenses market is driven primarily by an increased demand for lenses and an increasingly varied product mix. As consumers move toward frequent replacement lenses, including

one-day disposable lenses, consumer demand for lenses is increasing. Additionally, the customer base is expanding with the development of new contact lens options, such as daily disposable, 30-night continuous wear, toric lenses for astigmatic patients and lenses to correct presbyopia, a condition prevalent among the "Baby Boom" generation. We are well-positioned in the contact lens market as the second-leading player on the basis of market share. With the acquisition of Wesley Jessen, we now have the broadest product portfolio of any competitor in the industry. Although the market has experienced the successful introduction of laser vision correction as an alternative to contact lenses, we have a number of products for consumers who are not candidates for laser correction such as teenagers and presbyopes. The colored lens technology acquired with Wesley Jessen also creates a strong combination with our CIBA Vision products that should prove attractive to teenagers and others. Our principal competitors in contact lenses are Bausch & Lomb and Johnson & Johnson.

Lens Care

We expect to increase our presence in the one-bottle market segment with our SOLO-care® lens care product and to maintain a leadership position in the peroxide category with AOSept Clear Care. Lens care, which is required by wearers of frequent replacement and conventional contact lenses, is a mature market and the products will continue to face competitive pressure due to the increasing preference for daily disposable and continuous wear lenses, which require little or no lens care.

CIBA Vision is a global leader in the peroxide lens care category with AOSept®, although this is a declining segment of the market. Market segment share is increasing in the growing one-bottle market segment with our SOLO-care® disinfection system. Our principal competitors in lens care are Alcon, Allergan and Bausch & Lomb.

Ophthalmic Surgical

The Ophthalmic Surgical market includes intra-ocular lenses and phaco equipment for cataracts, laser vision correction, surgical devices, surgical adjuncts and vitreo-retinal products. We are present in the cataract segment with our intra-ocular lens, MemoryLens®, which is the only pre-folded, intraocular lens on the market. We are the only competitor with a position in both the anterior and posterior phakic refractive lens market where we have acquired licenses. Phakic refractive lenses are used for patients requiring a high degree of correction. Our principal competitors in the ophthalmic surgical market are Alcon, Allergan, Bausch & Lomb, Pharmacia and Staar Surgical.

Research and Development

The research results of other Novartis affiliates provide CIBA Vision with new chemical compounds for future products and access to developments in biotechnology. These resources are complemented by CIBA Vision's internal research and development capabilities, licensing agreements and joint research and development partnerships with third parties (companies, individuals and universities). We invested CHF 98 million, CHF 150 million (inclusive of CHF 83 million for Ophthalmic Pharmaceuticals), and CHF 144 million (inclusive of CHF 80 million for Ophthalmic Pharmaceuticals) in research and development of eye care products in 2001, 2000, and 1999 respectively.

Regulation

Contact lenses, surgical devices and lens care products are regulated as medical devices in the United States, the EU and Japan. These jurisdictions each have risk-based classification systems that determine the type of submission or dossier required.

Medical devices in the United States are classified by the FDA into one of three classes: Class I, II or III, on the basis of the controls deemed by the FDA to be necessary to reasonably ensure their safety and effectiveness. All devices must receive pre-market approval by the FDA. There are two review procedures to gain this pre-market approval: a pre-market application ("PMA") and 510(k) submission. Under a PMA

the manufacturer must, with supporting evidence, prove the safety and effectiveness of the device. The FDA has 180 days to review a PMA. Certain products, however, may qualify for a submission authorized by Section 510(k) of the US Food Drug and Cosmetic Act, wherein the manufacturer gives the FDA a pre-market notification of the manufacturer's intention to commence marketing the product having established that it is substantially equivalent to another marketed product. The FDA has 90 days to review a 510(k) submission. In the United States, extended-wear lenses are deemed high risk and are therefore classified as Class III devices requiring a PMA. Ophthalmic surgical devices fall into both PMA or 510(k) categories depending on the availability of data from previously approved devices. Lens care products are Class II devices and generally qualify for 510(k) submission. The FDA may inspect all manufacturing facilities in order to ensure compliance with manufacturing requirements under its regulations.

The CE Mark, is required for all medical devices sold in the EU. The CE Mark is granted based on certification of compliance to the ISO standards for Quality System requirements and a review of product conformity to the essential requirements of the Medical Device Directive ("MDD"). Contact lenses, surgical devices and lens care products are evaluated according to the criteria of the MDD in order to determine risk for which essential requirements must be followed.

In Japan, contact lenses are categorized as medical devices and are subject to an approval process similar to that in the United States. Although there is an improvement in the willingness to accept foreign data and a movement toward harmonization of requirements, in order to enter the Japanese market, local clinical trials often are required and local protocols must then be observed. Lens care products for soft lenses take several years to gain approval due to the extensive amount of additional data and clinical testing required. Surgical devices are also categorized by risk level and a lengthy testing, review and approval process is required. Saline solutions for hard lenses are unregulated.

Intellectual Property

The majority of our products are protected by patents and trademarks. It is our policy to seek the broadest possible protection allowable under the law for significant product developments in all major markets. Patents may cover products *per se*, product formulations, processes, intermediate products and product uses.

ANIMAL HEALTH

The Animal Health business enhances and extends the life of companion animals and improves the health and productivity of farm animals. At December 31, 2001, the affiliates of Animal Health employed 1,997 people and had sales of CHF 962 million which represented 3% of Group's sales.

Represented by affiliates in approximately 40 countries, Animal Health researches, develops, manufactures and markets a wide variety of products for both companion and farm animals including farmed fish. The companion animal segment and the farm animal segment (including Aquaculture) each account for 50% of our total Animal Health sales. Products include parasiticides in companion and farm animals, antibacterials, vaccines and veterinary pharmaceuticals. Our Animal Health business has a dedicated research team and benefits from synergies in research and development with other Novartis businesses, most notably, Pharmaceuticals.

We acquired Grand Laboratories Inc. and ImmTech Biologics Inc. in the United States in January 2002 for a minimum of CHF 160 million. These businesses specialize in the development, manufacture and marketing of vaccine products for cattle and pigs. It is anticipated that through these acquisitions we can improve our presence in the vaccines business as well as establish our presence in the US farm animal business. The two businesses generated combined revenues of USD 33 million in 2001.

Recently Launched Products

Product	Description	Registration/Launch Status
Capstar®	Fast-acting oral flea control for dogs and cats	2001 launches in US, Canada and UK, already registered and launched in Australia, New Zealand, Switzerland, Brazil and South Africa
Program® Plus . .	Flea and intestinal worm prevention for dogs and cats	Registered and launched in UK, Spain, Portugal and Germany
Fortekor®	Claim extension for chronic renal insufficiency in cats	Claim extension registered and launched in Europe
Fasimec®	Parasite control for farm animals	Registered and launched for cattle in Australia
Clik®	All-season protection against blowflies in sheep	2001 launch in UK, already registered and launched in New Zealand and Australia
Endex®	Parasite control for farm animals	2001 launch in Switzerland, registered and launched in 12 countries worldwide

Key Marketed Products

Key products for pets (dogs and cats) include Sentinel®, Interceptor® and Program® for the prevention of fleas, heartworm and intestinal worms; and Fortekor® for the treatment of heart failure in dogs and chronic renal insufficiency in cats. Key products for farm animals include Tiamutin® (antimicrobials) to treat bacterial infections in pigs and poultry, Vetrazin® and Clik® against blowfly in sheep; Fasinex® and Endex® for the treatment and control of liver fluke and gastro-intestinal worms in cattle and sheep. Other important products are the farm fly control range as well as vaccines for farm animals and farmed fish.

Products in Development

Novartis Animal Health research and development activities focus on the area of antiparasitics for companion and farm animals. We also develop veterinary pharmaceuticals for pets in new indication areas such as dermatitis, as well as vaccines for farm animals and farmed fish.

Principal Markets

Products for companion animals are sold predominantly in the United States, the EU and Japan. In most other countries, sales of farm animal products dominate. The following table sets out 2001 total sales of our Animal Health products by region:

Animal Health	Sales 2001	
	(CHF millions)	(%)
United States	330	34
Americas (except the United States)	148	16
Europe	297	31
Rest of the World	187	19
Total	**962**	**100**

The animal health market is expected to grow slowly over the next few years due to relatively few new product launches with high sales potential in the companion animal segment, and food safety issues for farm animals. Some growth is expected from veterinary pharmaceuticals for companion animals and ecto-/endectoparasiticides products. Medicinal feed additives may be increasingly replaced. The trend towards consolidation in the animal health industry continues.

Performance in 2001 was below our expectations due to the economic slowdown and substantial inventory reductions at US companion animal veterinary clinics. In 2001 we encouraged veterinarians to "buy-as-you-need" instead of offering the traditional spring and fall campaigns during which large sales occurred. Foot-and-Mouth Disease had a negative impact, mainly in the UK. This was partly compensated by improved performance in the Latin American and Asia/Pacific countries as well as by the vaccine and aquaculture businesses which we acquired in 1999 and 2000.

Production

Approximately 80% of our production volume is manufactured by third parties, including Novartis affiliates in other business sectors. Several commodity products are produced at our Shanghai, China production site. Formulation facilities are located in France, China, the United Kingdom, Canada, Colombia, Taiwan, and Bangladesh.

Raw materials are sourced globally. We depend on suppliers to a large extent for the raw materials, intermediates and active ingredients. Price volatility is low due to defined transfer prices of final products supplied to the Sector.

Marketing and Distribution

Our products are predominantly prescription-only treatments for animals. The major distribution channels are veterinarians and wholesalers of veterinary products. Primary marketing efforts are targeted at veterinarians using such marketing tools as printed materials, direct mail, advertisements and articles in the veterinary special press, our participation at conferences for veterinarians and organization of special educational events. Our sales forces are active in over 40 countries. In addition, we engage in general public relations activities, including advertising in the general printed media and direct advertising of brand names where regulatory and legal restrictions allow it.

Competition

Our major competitors in both the companion and farm animal business are Bayer, Fort Dodge (a subsidiary of American Home Products), Intervet, Merial, Pfizer, and Schering-Plough. Most of our competitors offer a broad range of products for both companion and farm animals and their marketing efforts are comparable to ours in resources and tactics.

Research and Development

Novartis Animal Health has dedicated research facilities in Switzerland and Australia for antiparasitics. In the United States, UK and Canada, we focus on the development of new vaccines for farm animals and farmed fish. We devoted CHF 93 million, CHF 88 million and CHF 65 million to our Animal Health research and development in 2001, 2000, and 1999 respectively.

Based on high-capacity, in-vitro microscreens, high-throughput screening focuses on assessing a high number of natural products and synthetic chemicals. Our researchers collaborate with external partners to develop veterinary treatments. Drug delivery projects, also in collaboration with external partners, concentrate on the identification and development of suitable sustained release formulations for use in parasite control.

In addition to these research activities, we exploit synergies with other Novartis businesses to develop new products; products originally intended for human use are further developed to treat companion animals. The products Fortekor® and Clomicalm® are examples of effective synergies with Novartis Pharmaceuticals.

Regulation

The registration procedures for animal medicines are similar to those for human medicines. In the United States, animal health products are usually regulated by the Food and Drug Administration (FDA) and in certain cases by the Environmental Protection Agency (EPA). Within the FDA, the Center for Veterinary Medicine is responsible for animal drugs. A New Animal Drug Application for product registration must be accompanied by safety and clinical studies which support the safety and efficacy of the product, as well as information on manufacturing, quality control, environmental effects and labeling.

In the EU, veterinary medicinal products need marketing authorization from the competent authority of a member-state (national authorization) or through a community procedure, which is either the Centralized Procedure or the Mutual Recognition Procedure. In the former, applications are submitted to the EMEA, and the marketing authorization that is granted by the European Commission is then valid throughout the EU; in the latter, the marketing authorization granted by the first member-state is mutually recognized by the other member-states through a shortened approval procedure.

In Japan, veterinary medicinal products are approved by the Ministry of Agriculture Fisheries and Food (“MAFF”). The application is reviewed by the MAFF and a general investigational committee, a special investigational committee and a permanent investigational committee before authorization is granted.

Intellectual Property

The majority of our products are protected by patents and trademarks. It is our policy to seek the broadest possible protection for significant product developments in all major markets. Patents may cover products *per se*, product formulations, processes, intermediate products or product uses.

4.C Organizational Structure

The Novartis Group is a multinational group of companies specializing in research, development, manufacture, sales and distribution of innovative healthcare products. Novartis AG, our Swiss holding company, owns, directly or indirectly, 100% of all significant operating companies. For a list of our subsidiaries, see note 32 to the consolidated financial statements.

4.D Property, Plants and Equipment

Our principal executive offices are located in Basel, Switzerland. Our various businesses operate through a number of offices, research facilities and production sites.

It is our policy to own our facilities. A few (mainly in the United States) are leased under long-term leases. Some of our principal facilities are subject to mortgages and other security interests granted to secure indebtedness to certain financial institutions. As of December 31, 2001, the total amount of indebtedness secured by these facilities was not material to the Group. We believe that our production plants and research facilities are well maintained and generally adequate to meet our needs for the foreseeable future.

The following table sets forth our major production and research facilities. For a further description of our material facilities, see "—4.B Business Overview," and the sections entitled "—Production" and "—Research and Development" included within the discussions of each of our business segments.

Location/Sector	Size of Site	Major Activity
Major Production facilities:		
Pharmaceuticals		
Taboão da Serra, Brazil	539,000 square meters	Suppositories, capsules, tablets, syrups, suspensions, creams, drop solutions, powders
Ringaskiddy, Ireland	532,000 square meters	Drug substances, intermediates
Basel, Switzerland—Klybeck	283,000 square meters	Drug substances, intermediates
Basel, Switzerland—St. Johann	219,000 square meters	Drug substances, intermediates
Basel, Switzerland—Schweizerhalle	213,000 square meters	Drug substances, intermediates
Stein, Switzerland	345,000 square meters	Steriles, tablets, capsules, transdermals, intermediates
Grimsby, United Kingdom	929,000 square meters	Drug substances, intermediates
Suffern, NY (United States)	656,000 square meters	Tablets, capsules, transdermals
Horsham, United Kingdom	105,000 square meters	Tablets, capsules
Wehr, Germany	113,000 square meters	Tablets, creams, ointments
Huningue, France	412,000 square meters	Creams, ointments, ampoules, suppositories
Sasayama, Japan	104,000 square meters	Suppositories, capsules, tablets, syrups, suspensions, creams, drop solutions, powders
Generics		
Kundl, Austria	266,000 square meters total area (production and R&D facilities)	Biotech products, intermediates, active drug substances, final steps (finished pharmaceuticals)
Broomfield, CO (United States)	60,000 square meters	Pharmaceutical production of a broad range of finished dosage forms.
Consumer Health		
Fremont, MI (United States)	512,500 square meters	Gerber® jarred baby food, fruit and vegetable juices, dry boxed cereal
Nyon, Switzerland	58,400 square meters (production and R&D facilities)	Liquids and Creams (Otrivin®, Fenistil®, Zymaflour®)
Lincoln, NE (United States)	1,721,200 square meters	Triaminic®, Maalox® and Tavist®
Rzeszow, Poland	1,780,000 square meters	Gerber® baby food, Frugo® drinks, Bobo® fruit juice

Location/Sector	Size of Site	Major Activity
CIBA Vision		
Pulau Batam, Indonesia	16,700 square meters	Contact lenses
Duluth, GA United States	16,700 square meters	Molding of contact lenses
Des Plaines, IL (United States)	12,100 square meters	Freshlook® product line
Grosswallstadt, Germany	19,000 square meters	Contact lenses
Cidra, Puerto Rico	124,000 square meters	Contact lenses
Toronto, Canada	145,000 square meters	LCP production
Animal Health		
WUSI-Farm, China	42,000 square meters	Insecticides, antibacterials, acaricides, powders
Dundee, Scotland	34,000 square meters	Packaging, formulation liquids, solids, creams, sterile filling vaccines
Major Research and Development facilities:		
Pharmaceuticals		
East Hanover, NY (United States)	769,000 square meters	General
Summit, NJ (United States)[1]	356,000 square meters	General
Basel, Switzerland—Klybeck	283,000 square meters	General
Basel, Switzerland—St. Johann	219,000 square meters	General
Vienna, Austria	39,000 square meters	Dermatology and infectious diseases
Horsham, UK	105,000 square meters	Respiratory disease
Generics		
Kundl, Austria	266,000 square meters total area (production and R&D facilities)	Development of new biotech processes, innovations in antibiotic-technologies
Kolshet, India	5,000 square meters	Development of new formulations for generic pharmaceuticals
Dayton, NJ (United States)	29,000 square meters	Development of new formulations for generic pharmaceuticals
Consumer Health		
Nyon, Switzerland	58,400 square meters (production and R&D facilities)	Over-the-Counter
CIBA Vision		
Duluth, GA (United States)	9,000 square meters	General
Animal Health		
St. Aubin, Switzerland	9,000 square meters	Parasiticides

[1] The Summit, NJ site has been sold to a third party. We have leased the site back from the buyer until March 2003. All site operations will be moved to other Group sites prior to that date.

Environmental Matters

We integrate core values of environmental protection into our business strategy to add value to the business, manage risk and enhance our reputation.

We are subject to laws and regulations concerning the environment, safety matters, regulation of chemicals and product safety in countries where we manufacture and sell our products or otherwise operate our business. These requirements include regulation of the handling, manufacture, transportation,

use and disposal of materials, including the discharge of pollutants into the environment. In the normal course of our business, we are exposed to risks relating to possible releases of hazardous substances into the environment which could cause environmental or property damage or personal injuries and which could require remediation of contaminated soil and groundwater. Under certain laws, we may be required to remediate contamination at certain of our properties regardless of whether the contamination was caused by us, or by previous occupants of the property.

We believe we are in substantial compliance with environmental, health and safety requirements applicable to us. We are committed to providing safe and environmentally sound workplaces that will not adversely affect the health or environment of employees or the communities in which we operate. We believe we have obtained all material environmental permits required for the operation of our facilities as well as all material authorizations required for products produced by us. We believe that we are not currently subject to liabilities for non-compliance with applicable environmental, health and safety laws that would materially and adversely affect our business, financial condition or results of operations, although there is a risk that legislation enacted in the future could create liabilities for past activities undertaken in compliance with then current laws and regulations or that there is environmental or other damage of which we are not aware.

In recent years, the operations of all companies have become subject to increasingly stringent legislation and regulation related to occupational safety and health, product registration and environmental protection. Such legislation and regulations are complex and constantly changing, and there can be no assurance that future changes in laws or regulations would not require us to install additional controls for certain of our emission sources, to undertake changes in our manufacturing processes or to remediate soil or groundwater contamination at facilities where such clean-up is not currently required. Some of our facilities are over 50 years old, and there may be soil and groundwater contamination at such facilities. However, based on current information, we do not believe that expenditures related to such possible contamination, beyond those already accrued, will be significant.

Our expenditures, excluding Agribusiness, related to capital investments for environmental, health and safety compliance measures were approximately CHF 56 million in 2001 (CHF 12 million for environment), CHF 55 million in 2000 (CHF 20 million for environment), CHF 50 million in 1999 (CHF 28 million for environment). While we cannot predict with certainty our aggregate capital environmental investments in 2002, based on current information and existing assets, we estimate that such aggregate expenditures will be comparable to the 2001 figure.

It is difficult to estimate the future costs of environmental protection and remediation because of many uncertainties, including uncertainties about the state of laws, regulations and information related to individual locations and sites. However, given our experience to date regarding environmental matters and the facts currently known, we believe that compliance with existing and known national and local environmental laws and regulations will not have a material effect on our total capital expenditures, earnings or competitive position.

Item 5. Operating and Financial Review and Prospects

5.A Operating Results

The following operating and financial review and prospects should be read in conjunction with our consolidated financial statements included in this Form 20-F. The consolidated financial statements and the financial information discussed below have been prepared in accordance with IAS. For a discussion of the significant differences between IAS and US GAAP, see "Item 18. Financial Statements—note 33."

Overview

We are a world leader both in sales and in innovation in our continuing core businesses: pharmaceuticals, generics, consumer health, eyecare products and medicines and animal health, with global sales of CHF 32.0 billion in 2001. We aim to hold a leadership position in all of our businesses.

Novartis AG was formed in 1996 out of a merger of two global participants in the pharmaceutical and agrochemical industries, Sandoz AG and CIBA-Geigy AG. Accounting for the merger under IAS was based on a uniting of interests and therefore did not result in any goodwill nor in any goodwill amortization. Under US GAAP, the Merger is accounted for as a purchase of CIBA-Geigy AG by Sandoz AG. For a discussion of the significant differences between IAS and US GAAP purchase accounting, see "Item 18. Financial Statements—note 33." In November 2000, we spun-off and merged our Crop Protection and Seeds businesses with AstraZeneca's Zeneca Agrochemicals to create Syngenta.

Factors affecting results

The global healthcare market is growing rapidly due to, among other reasons, the aging population in developed countries, unmet needs in many therapeutic areas (such as cancer and cardiovascular disease), the adoption of more industrialized lifestyles in emerging economies, and increased consumer demand fueled by broad and rapid access to information. At the same time, the healthcare industry is coming under pricing pressures as costs come under closer scrutiny by payers, both public and private.

Our revenues are directly related to our ability to identify high performing products while they are still in development and to market them quickly and effectively. Research and development takes on crucial importance in this environment, as we, like our competitors, search for efficacious and cost-efficient pharmaceutical solutions to health problems. The need for increased resources in order to take advantage of the full range of new research and development technologies has been among the reasons for the consolidation which has taken place across the industry, and also has spawned the growing number of collaborative relationships between leading companies and niche players at the forefront of their particular technology areas. The growth in new technology, particularly genomics, will almost certainly have a fundamental impact on the pharmaceutical industry as a whole and upon our future development.

The competitive conditions in the pharmaceutical industry have intensified as a result of regulation, price reductions, reference prices, parallel imports, higher patient co-payments and increased pressure on physicians to limit prescribing. In the future, pressure on our Pharmaceuticals sector and other pharmaceutical companies to lower prices is expected to increase. The pressure on prices is influenced primarily by the following factors: government actions that reduce patient and physician reimbursement, restrict physicians' prescribing levels, increase the use of generic products and impose overall mandatory price cuts; the introduction of new, technologically innovative products and devices by competitors; and growing parallel imports, mainly in the EU. Parallel imports affect our Pharmaceuticals sector results because products sold in low-priced countries are re-exported to high-priced countries thereby reducing direct sales to those countries. See "Item 4. Information on the Group—4.A Business Overview—Pharmaceuticals—Price Controls."

Exchange rate exposure also affects our results because we have both sales and cost exposure in many currencies other than the Swiss franc, giving rise to both transaction and translation exposure when results and foreign subsidiary balance sheets are translated into our Swiss franc consolidated financial statements. See "Exchange Rate Exposure and Risk Management" below. Inflation has not had a significant impact on our results.

Critical Accounting Policies

Our main accounting policies are set out in note 1 of our consolidated financial statements and conform with IAS (International Accounting Standards). We believe our more significant judgments and estimates used in preparation of our consolidated financial statements could affect the accounting in the following areas. Actual results may differ from these estimates under different assumptions or conditions.

We review our long lived assets for impairment, including identifiable intangibles and goodwill, whenever events or changes in circumstance indicate that the carrying amount of the asset may not be recoverable. In order to assess if there is any impairment, we estimate the future cash flows expected to result from the use of the asset and its eventual disposition. If the sum of such expected discounted future cash flows is less than the carrying amount of the asset, we will recognize an impairment loss for the amount by which the asset's net book value exceeds its fair market value. For purposes of assessing

impairment, we group our assets at the lowest level for which there are separately identifiable cash flows. Fair value can be based on sales of similar assets, or other estimates of fair value such as discounting estimated future cash flows. Considerable management judgment is necessary to estimate discounted future cash flows. Accordingly, actual outcomes could vary significantly from such estimates. Factors such as changes in the planned use of buildings, machinery or equipment or closing of facilities or lower than anticipated sales for products with capitalized rights could result in shortened useful lives or impairment.

We have investments in associated companies (generally investments of between 20% and 50% in a company's voting shares) that are accounted for by using the equity method. Due to the various estimates that have been made in applying the equity method, the amounts recorded in the consolidated financial statements in respect of Roche Holding Ltd and Chiron Corporation may require adjustments in the following year as more financial and other information becomes publicly available.

We sponsor pension and other retirement plans in various forms covering employees who meet eligibility requirements. These plans cover the majority of our employees. Several statistical and other factors which attempt to anticipate future events are used in calculating the expense and liability related to the plans. These factors include assumptions about the discount rate, expected return on plan assets and rate of future compensation increases as determined by us, within certain guidelines. In addition, our actuarial consultants also use subjective factors such as withdrawal and mortality rates to estimate these factors. The actuarial assumptions used by us may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates or longer or shorter life spans of participants. These differences may result in a significant impact to the amount of pension income or expense recorded by us. Based on information currently available to us it is expected that the pension income for 2002 will not be materially different from the 2001 amount.

We have provisions for environmental remediation costs. The material components of the environmental provisions consist of a risk assessment based on investigation of the various sites. Our future remediation expenses are affected by a number of uncertainties which include, but are not limited to, the method and extent of remediation, the percentage of waste material attributable to Novartis at the remediation sites relative to that attributable to other parties, and the financial capabilities of the other potentially responsible parties. We believe that such costs will not materially affect our consolidated financial position, results of operations or cash flow.

A number of our subsidiaries are subject to litigation arising out of the normal conduct of their businesses, as a result of which claims could be made against them which might not be covered by insurance. We believe that the outcomes of such actions will not materially affect our consolidated financial position, results of operations or cash flow.

In 2002, we will continue to amortize goodwill under IAS even though for US GAAP purposes we will cease to amortize goodwill in accordance with Statement of Financial Accounting Standards ("SFAS") No. 142 "Goodwill and Other Intangible Assets." SFAS 142 requires us to perform an initial review of our US GAAP goodwill for impairment in 2002 and an annual impairment review thereafter. We intend to perform a similar review of our IAS goodwill. We currently do not expect a material impairment charge; however there can be no assurance that at the time the review is completed a material impairment charge will not be recorded.

Results of Operations

The following table sets forth selected income statement data for each of the periods indicated.

	Year ended December 31,			
	2001	**2000[1]**	**2000**	**1999**
	(CHF millions)	**(CHF millions)**	**(CHF millions)**	**(CHF millions)**
Sales to third parties				
Pharmaceuticals	20,181	18,150	17,611	15,275
Generics	2,433	1,973	1,938	1,823
Consumer Health—ongoing	6,675	6,514	6,395	5,570
Divested Consumer Health activities				182
CIBA Vision	1,787	1,392	2,085	1,632
Animal Health	962	1,083	1,083	927
Sales from continuing activities	**32,038**	**29,112**	**29,112**	**25,409**
Sales from discontinued Agribusiness activities[2]		6,693	6,693	7,056
Group sales	**32,038**	**35,805**	**35,805**	**32,465**
Sales from continuing activities	**32,038**	**29,112**	**29,112**	**25,409**
Cost of goods sold	(7,886)	(7,316)	(7,316)	(6,647)
Marketing and distribution	(11,098)	(9,556)	(9,556)	(7,786)
Research and development	(4,189)	(4,011)	(4,011)	(3,515)
Administration and general overheads	(1,588)	(1,502)	(1,502)	(765)
Operating income from continuing activities	**7,277**	**6,727**	**6,727**	**6,696**
Operating income from discontinued activities[2]		1,156	1,156	647
Group Operating income	**7,277**	**7,883**	**7,883**	**7,343**
Operating income by sectors				
Pharmaceuticals	5,677	5,401	5,403	4,676
Generics	281	242	227	347
Consumer Health—ongoing	920	869	824	807
Divested Consumer Health activities				375
CIBA Vision	174	100	158	250
Animal Health	138	179	179	216
Corporate and other expenses	87	(64)	(64)	25
Operating income from continuing activities	**7,277**	**6,727**	**6,727**	**6,696**
Income from associated companies	139	97	97	376
Financial income, net	1,067	1,216	1,216	990
Taxes	(1,440)	(1,504)	(1,504)	(1,683)
Minority interests	(19)	(25)	(25)	(20)
Net income from continuing activities	**7,024**	**6,511**	**6,511**	**6,359**
Operating income, income from associated companies, financial income, taxes and minority interest of discontinued Agribusiness sector[2]		699	699	300
Group net income	**7,024**	**7,210**	**7,210**	**6,659**

(1) 2000 sector reporting has been restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors.

(2) Agribusiness: Crop Protection and Seeds businesses.

2001 Compared to 2000

Overview

The following compares our results in the year ended December 31, 2001 to those of the year ended December 31, 2000. All 2000 information has been restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors. In addition, the results of operations from continuing activities for the year ended December 31, 2000 has been restated to exclude the discontinued Novartis Agribusiness sector.

In Swiss francs, our sales in 2001 increased by 10% over 2000 to CHF 32.0 billion (14% in local currencies); our operating income increased by 8% to CHF 7.3 billion; our net income increased by 8% to CHF 7.0 billion; and our free cash flow (excluding acquisitions of subsidiaries, of 21.3% of the voting shares of Roche Holding Ltd and of marketing and product rights) increased by 25% in Swiss francs to CHF 4.1 billion. 47% of our sales were generated in the NAFTA region (43% in the United States), 32% in Europe and 21% in the rest of the world.

Growth from our continuing activities was driven by an 8% increase in our sales volume. All of our sectors except for Generics benefited from price increases which in total amounted to 2%. The sales increase due to the acquisition of new products and subsidiaries was 4%. Our sales performance in Swiss francs suffered from a 4% unfavorable currency effect as the Swiss franc rose against the yen by an average of 12% and against the Euro by 3%.

Overall, Pharmaceuticals accounted for 63% of our total sales. Of the remaining businesses, Generics contributed 7% of our total sales, Consumer Health 21%, CIBA Vision 6% and Animal Health 3%.

Our operating margin from continuing activities in 2001 was 22.7% of sales, a decrease of 0.4 percentage points compared with 2000 (23.1%). Although our cost of goods sold (+8%) and research and development expenses (+4%) increased at a lower rate than sales, our marketing and distribution expenses (+16%) increased at a significantly higher rate than did our sales. Overall, our marketing and distribution expenses reached 35% of sales (2000: 33% of sales). This was due to investments associated with sales force enhancements and new product launches, particularly in Pharmaceuticals. Our research and development expenses as a percentage of sales fell slightly in 2001 to 13.1% from 13.8% in 2000, primarily because of the strong growth in our sales.

Sales

The following table sets forth selected sales data for each of the periods indicated.

	Year ended December 31,			
	2001	2000	Change in CHF	Change in local currencies
	(CHF millions)	(CHF millions)	(%)	(%)
Sales				
Pharmaceuticals	20,181	18,150[1]	11	15
Generics	2,433	1,973[1]	23	26
Consumer Health	6,675	6,514[1]	2	4
CIBA Vision	1,787	1,392[1]	28	33
Animal Health	962	1,083	(11)	(7)
Sales from continuing activities	**32,038**	**29,112**	**10**	**14**
Sales from discontinued Agribusiness activities[2]		6,693		
Group sales	**32,038**	**35,805**	**(11)**	**(8)**

(1) Restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceutical sector and the switch of certain products between sectors.

(2) Agribusiness: Crop Protection and Seeds businesses spun-off on November 6, 2000.

Sales from continuing activities

Pharmaceuticals. Sales increased by 11% in Swiss francs or by 15% in local currencies to CHF 20.2 billion in 2001 from CHF 18.2 billion in 2000. In the United States, where 43% of turnover was generated, sales increased by 24% reaching CHF 8.6 billion. This performance was driven by numerous product launches, particularly in the United States, most notably Glivec®/Gleevec™ (chronic myeloid leukemia), which achieved sales of CHF 257 million in less than 8 months. As a result of the Glivec®/Gleevec™ launch, oncology product sales expanded by 28% in local currencies. Acquisitions, principally Famvir® (antivirals), which was acquired late in 2000, contributed 2% to the sector's sales growth. Continued marketing focus on key products such as Diovan®/Co-Diovan® (hypertension), Lotrel® (hypertension), Lamisil® (fungal infections) and Exelon® (Alzheimer's) was also a major factor in the sales growth.

Diovan®/Co-Diovan® (hypertension) surpassed Sandimmun®/Neoral® (transplantation) as our best-selling product in 2001 with CHF 1.9 billion in sales (+58% in local currencies). Diovan®, an angiotensin-2 receptor blocker, took the leadership position in new prescriptions from Cozaar® (the competitor product by Merck) in the United States. Diovan® is the only drug of its class to have shown a clinical benefit with regard to heart failure. We have received an approvable letter from the US FDA for this indication.

Lotrel® (hypertension), another key product in the cardiovascular therapeutic area, continued to expand its share of new prescriptions in its sector to 22%, and achieved sales of CHF 813 million, which was an increase of 48% in local currencies. Lotrel® sales were also the key driver behind the performance of the Cibacen® group which achieved total sales of CHF 1.5 billion, an increase over last year of 22% in local currencies.

The decline in sales due to generic erosion or new competition continued to be limited for both Sandimmun®/Neoral® (−7% in local currencies) and Voltaren® (−8% in local currencies). Sandimmun®/Neoral® achieved sales of CHF 1.8 billion and Voltaren® of CHF 1.1 billion.

Aredia® (bone metastasis) expanded beyond last year's sales and reached CHF 1.3 billion, although the first competing generic products entered the market at the beginning of December. Our follow-on product Zometa® received approval during 2001 both in Europe and in the United States for its first indication, hypercalcemia of malignancy, and received approval during 2002 in the US for bone metastasis, its second indication. An application for approval for this second indication is pending in Europe. We expect our combined Aredia®/Zometa® sales to decline slightly in 2002, since Zometa® is not yet likely to fully compensate for the anticipated decline in Aredia® sales.

Overall, Pharmaceuticals' top ten products reached total sales of CHF 12.0 billion reflecting an increase of 13% in local currencies. Pharmaceuticals' top twenty products expanded sales by 19% in local currencies to CHF 15.6 billion.

Top 20 Pharmaceutical Products—2001

Brands	Therapeutic Area	United States	% change in local currencies	Rest of the World	% change in local Currencies	Total	% change	
							In CHF	In local currencies
		(CHF m)		(CHF m)		(CHF m)		
Diovan®/Co-Diovan®	Hypertension	943	47	937	70	1,880	53	58
Sandimmun®/Neoral®	Transplantation	525	(20)	1,304	(2)	1,829	(11)	(7)
Cibacen®/Lotensin®	Hypertension	1,309	28	209	(7)	1,518	21	22
(of which Lotrel®)		*813*	*48*	—	—	*813*	*47*	*48*
Lamisil® (group)	Fungal infections	730	22	675	16	1,405	(15)[1]	19
Aredia® (group)	Cancer complications	835	17	435	12	1,270	13	15
Voltaren®	Inflammation/pain	24	(51)	1,042	(7)	1,066	(15)[1]	(8)
Sandostatin® (group)	Acromegaly	343	38	473	20	816	23	26
Lescol®	Cholesterol reduction	388	15	426	18	814	12	17
Miacalcic®	Osteoporosis	443	(6)	264	10	707	(2)	0
Tegretol®	Epilepsy	263	9	420	(4)	683	(3)	1
Top ten products		**5,803**	**17**	**6,185**	**10**	**11,988**	**9**	**13**
Leponex®/Clozaril®	Schizophrenia	229	(16)	310	5	539	(8)	(5)
Estraderm® (group)	Hormone replacement	221	30	263	(7)	484	5	6
Exelon®	Alzheimer's disease	219	158	184	65	403	100	104
Foradil®	Asthma	17	—	373	16	390	18	21
Visudyne™	Wet form of age-related macular degeneration	238	114	139	154	377	123	127
Famvir® (group)	Antivirals	244	NA	79	NA	323	NA	NA
Nitroderm® TTS	Heart disease	3	(55)	317	(3)	320	(11)	(4)
Zaditen®	Asthma, allergy	—	—	265	(6)	265	(16)	(6)
Glivec®/Gleevec™	Chronic myeloid leukemia Leukemia	176	NA	81	NA	257	NA	NA
Trileptal®	Epilepsy	170	129	80	36	250	84	87
Top twenty total		**7,320**	**29**	**8,276**	**12**	**15,596**	**15**	**19**
Rest of portfolio		1,316	4	3,269	4	4,585	(1)	4
Total		**8,636**	**24**	**11,545**	**10**	**20,181**	**11**	**15**

NA Not applicable as insignificant or non-existent prior year sales.

(1) Restated based on 2000 sales after switches to other sectors.

Generics. Sales increased by 23% in Swiss francs or by 26% in local currencies to CHF 2.4 billion from CHF 2.0 billion in 2000. Strategic acquisitions completed in early 2001 in the United States, Argentina, the UK and Germany account for 20 percentage points of this increase. In the United States (32% of sales), sales increased by 39% in local currency (4% excluding acquisitions) as a result of reorganization initiatives, the successful integration of the Apothecon acquisition, and the launch of a generic version of Eli Lilly's Prozac® (fluoxetine). Generics' US affiliate, Geneva Pharmaceuticals, holds 6-month exclusivity rights to commercialize the 10 mg capsule formulation of fluoxetine.

Our Generics Pharmaceuticals Business (for finished pharmaceutical products) achieved a sales increase of 39% in Swiss Francs due to acquisitions, product launches and the global roll-out of the generic version of the combination of amoxicillin and clavulanic acid.

Our Industrial Business (active pharmaceutical ingredients and biotech substances) grew by 6% in Swiss francs as a result of focused efforts in high quality intermediates and the expansion of the biotechnology business.

Consumer Health. Sales increased by 2% in Swiss francs or 4% in local currencies, to CHF 6.7 billion in 2001 from CHF 6.5 billion in 2000. In the United States, sales reached CHF 3.3 billion (49% of the sector's total sales), reflecting an increase of 4% in local currencies despite the economic slowdown.

Sales of over-the-counter medicines (OTC) rose 5% in local currencies (2% in Swiss francs) driven by the key brands Nicotinell™/Habitrol® (smoking cessation), Voltaren® Emulgel™ (topical pain relief) and Lamisil® Cream (antifungal).

Medical Nutrition sales increased by 11% in local currencies (9% in Swiss francs) driven by growth in the Home Care market, a strong performance in Europe, and a strong second half in the United States.

Health and Functional Nutrition sales were up 3% in local currencies (2% in Swiss francs), as solid sales from France and the UK offset a decline in the juice business in Poland. In addition, Gerber® reached a new record market share with 75.9% in the US baby/toddler food segment, while Gerber® Care and Gerber® Wellness products continued to make progress in a competitive marketplace. On February 4, 2002, we announced our intention to divest the Health and Functional Foods portion of this business, while retaining the Infant and Baby Business, including Gerber®.

CIBA Vision. Sales increased by 28% in Swiss francs, or 33% in local currencies, to CHF 1.8 billion in 2001 from CHF 1.4 billion in 2000. Excluding the impact of the Wesley Jessen acquisition, sales increased by 5% in local currencies. The innovative Focus® range of lenses, led by Focus® Dailies and Focus® Night & Day™, and the acquired FreshLook® brand of cosmetic lenses, were drivers of sales growth. Focus® Night & Day™ also became the first high-oxygen extended wear contact lens for up to 30 nights of continuous wear to receive US FDA approval. Innovative product launches including Aosept® Plus/Aosept® Clear Care and SOLO-care® Plus, as well as upcoming specialty lens product developments, are aimed at addressing the overall declining lens care and specialty lens markets.

Animal Health. Sales fell by 11% in Swiss francs, or 7% in local currencies, to CHF 962 million in 2001 from CHF 1.1 billion in 2000, as the companion animal market in the U.S suffered from inventory reductions at the veterinary clinic level and competitive pressures in the flea product market continued. The farm animal business saw a flat performance as the impact of the foot-and-mouth disease crisis in Europe was felt. The acquired vaccine and aquaculture businesses grew sales, but these businesses are at present too small to offset these events.

Discontinued Agribusiness sector. Agribusiness was only included in our Group figures up to its spin-off on November 6, 2000.

Expenses

The following table sets forth our operating expenses for each of the periods indicated.

	Discontinued activities	Continuing activities	Group
	(CHF millions)	(CHF millions)	(CHF millions)
2001			
Cost of goods sold		(7,886)	(7,886)
Marketing and distribution		(11,098)	(11,098)
Research and development		(4,189)	(4,189)
Administration and general overheads		(1,588)	(1,588)
2000			
Cost of goods sold	(2,926)	(7,316)	(10,242)
Marketing and distribution	(1,389)	(9,556)	(10,945)
Research and development	(646)	(4,011)	(4,657)
Administration and general overheads	(576)	(1,502)	(2,078)

The following table set forth our continuing operating expenses for each of the periods indicated.

	Year ended December 31,		
	2001	2000	Change
	(CHF millions)	(CHF millions)	(%)
Sales from continuing activities	**32,038**	**29,112**	**10**
Cost of goods sold	(7,886)	(7,316)	8
Marketing and distribution	(11,098)	(9,556)	16
Research and development	(4,189)	(4,011)	4
Administration and general overheads	(1,588)	(1,502)	6
Operating income from continuing activities	**7,277**	**6,727**	**8**

Cost of goods sold

Our cost of goods sold for continuing activities decreased as a percentage of our sales from 25.1% in 2000 to 24.6% in 2001. This was mainly due to continued improvements in productivity and product mix in Pharmaceuticals.

Marketing and distribution

Our marketing and distribution expenses for continuing activities as a percentage of our sales increased from 32.8% in 2000 to 34.6% in 2001 as significant investments were made in the Pharmaceuticals field force and in promotional activities to support key products.

Research and development

Our research and development expenses for continuing activities as a percentage of our sales were 13.1% in 2001 compared to 13.8% in 2000. This is primarily the result of strong growth in Pharmaceuticals' sales.

Administration and general overheads

The costs of implementing state-of-the-art information technology systems in Pharmaceuticals and other sectors led to an increase in our administration and general overheads by 5.7%. As a percentage of sales from continuing activities, however, there was a fall in administration and general overheads to 5.0% in 2001 from 5.2% in 2000.

Operating Income

The following table sets forth selected operating income data for each of the periods indicated.

	2001 (CHF millions)	2000 (CHF millions)	Change (%)
Pharmaceuticals	5,677	5,401[1]	5
Generics	281	242[1]	16
Consumer Health	920	869[1]	6
CIBA Vision	174	100[1]	74
Animal Health	138	179	(23)
Corporate and other income/expense	87	(64)	
Operating income from continuing activities	**7,277**	**6,727**	**8**
Operating income from discontinued Agribusiness activities[2]	—	1,156	
Group operating income	**7,277**	**7,883**	**(8)**

(1) 2000 sector reporting has been restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors.

(2) Agribusiness: Crop Protection and Seeds businesses.

Operating income from continuing activities

Our operating margin on continuing activities was 22.7% of our sales, a decrease of 0.4 percentage points compared with 2000 (23.1%).

Pharmaceuticals. Operating income increased 5% to CHF 5.7 billion in 2001 from CHF 5.4 billion in 2000. Operating margin fell by 1.7 percentage points to 28.1% in 2001, due to a 24% increase in marketing and distribution expenses, which now represent almost 36% of sales, compared to 32% in 2000 as field force and promotion activities were increased due to new product launches. The operating income also includes a charge of CHF 216 million for impairment of pitavastatin marketing rights which were written down from their initial value of CHF 722 million. Research and development expenses fell slightly as a percentage of sector sales, to 17% of sales compared to 18% in 2000, even though the actual amount increased by 4% in Swiss franc terms. Additional productivity improvements also were achieved reducing the cost of goods sold as a percentage of sales.

Generics. The sector had an operating income of CHF 281 million in 2001, an increase of 16% compared with CHF 242 million in 2000. The operating margin declined from 12.3% in 2000 to 11.5% in 2001 due to several factors. These included integration costs associated with completing several acquisitions during the year; increased price pressure, especially in the United States; costs related to legal actions in the United States; and stepped-up investment in marketing.

Consumer Health. Operating income increased by 6% from CHF 869 million in 2000 to CHF 920 million in 2001. Operating margins rose from 13.3% in 2000 to 13.8% in 2001, despite a CHF 21 million restructuring charge resulting from a 2001 closure of a UK production site. Marketing and distribution expenses as a percentage of sales decreased slightly in 2001 as compared to 2000. Research and development expense remained at 3% of sales. Cost of goods sold remained stable in 2001, in percentage of sales terms.

CIBA Vision. Operating income increased by 74% from CHF 100 million in 2000 to CHF 174 million in 2001 and operating margin increased from 7.2% in 2000 to 9.7% in 2001. The 2001 operating income includes the impact of the Wesley Jessen business on revenue and costs for the full twelve months of 2001 compared to only three months in 2000. On a comparable basis, excluding exceptional integration costs related to the acquisition of Wesley Jessen of CHF 34 million (2000: CHF 110 million), operating income decreased slightly by 1% from CHF 210 million in 2000 to CHF 208 million in 2001, and the operating margin declined from 15.1% in 2000 to 11.6% in 2001, principally due to goodwill charges.

Animal Health. Operating income fell by 23% from CHF 179 million in 2000 to CHF 138 million principally due to the significantly reduced level of sales, particularly in the companion animal business. The sector's operating margin also declined from 16.5% in 2000 to 14.3% in 2001, principally due to a decline in US sales in the higher-margin companion animal business.

Corporate and Other Income/Expense

Corporate and other income/expense include the costs of corporate and country management, offset by employee benefit, share and share option plan charges levied on the operating companies and credited to corporate other income. In 2001, Corporate and other income/expense achieved a net income of CHF 87 million, compared with a net expense of CHF 64 million in 2000, principally due to higher share and share option charges to sector companies.

Net income

The following table sets forth selected income statement data for the periods indicated.

	Discontinued activities	Continuing activities	Group
	(CHF millions)	(CHF millions)	(CHF millions)
2001			
Operating income		**7,277**	**7,277**
Income from associated companies		139	139
Financial income, net		1,067	1,067
Taxes		(1,440)	(1,440)
Minority interests		(19)	(19)
Net income		**7,024**	**7,024**
2000			
Operating income	**1,156**	**6,727**	**7,883**
Income from associated companies	1	97	98
Financial income, net	(125)	1,216	1,091
Taxes	(316)	(1,504)	(1,820)
Minority interests	(17)	(25)	(42)
Net income	**699**	**6,511**	**7,210**

Net Income from continuing activities

The following table sets forth selected income statement data from continuing activities for the periods indicated.

	2001	2000	Change
	(CHF millions)	(CHF millions)	(%)
Operating income from continuing activities	**7,277**	**6,727**	**8**
Income from associated companies	139	97	43
Financial income, net	1,067	1,216	(12)
Income before taxes and minority interests	**8,483**	**8,040**	**6**
Taxes	(1,440)	(1,504)	(4)
Income before minority interests	**7,043**	**6,536**	**8**
Minority interests	(19)	(25)	(24)
Net income from continuing activities	**7,024**	**6,511**	**8**

Income from associated companies

We account for income from our associated companies using the equity method where we own between 20% and 50% of the voting shares of such companies. In 2001, income from associated companies was mainly derived from our stakes in Roche Holding Ltd (Roche) and in Chiron Corporation (Chiron).

Our ownership of 21.3% of Roche voting shares, which represents a 4% interest in the total Roche voting and non-voting equity instruments, was acquired in the first half of 2001. The income statement effect after taking into account the required charges due to additional depreciation and amortization arising from allocating the purchase price to tangible and intangible assets and goodwill, resulted in a pre-tax loss of CHF 39 million. Our ownership of 41.9% of Chiron shares resulted in pre-tax income of CHF 185 million (2000: CHF 97 million).

Our share of the net income of both Roche and Chiron is based upon analysts' estimates of their net income for the full year 2001. Any differences between these estimates and actual results will be recorded in 2002. In 2001, our income statement includes five quarters of results for Chiron, including an estimate of Chiron's fourth quarter results. Up to 2000, income from Chiron was included in our financial statements with a three month lag, with only the four quarters through to September 30 of the year being consolidated.

Financial income/expense, net

We realized financial income, net from continuing activities of CHF 1.1 billion in 2001 despite difficult market conditions. This result was achieved through successful management of liquid funds and a gain from the sale of US dollar denominated bonds. Our 2001 financial income was CHF 149 million lower than the CHF 1.2 billion achieved in 2000. The 2000 figure excludes CHF 125 million of interest expense which was allocated to the discontinued Agribusiness activity, because it related to the debt which was transferred to Syngenta on its spin-off.

Interest income from our investments fell from CHF 1.0 billion in 2000 to CHF 639 million in 2001 due to lower interest rates and less liquidity. Interest expense fell slightly from CHF 385 million in 2000 (excluding CHF 125 million allocated to Agribusiness) to CHF 367 million in 2001.

Increased capital gains realized from our sale of US dollar bonds and from other sources contributed an additional CHF 359 million to our financial results. The net result from our financial derivative transactions (mainly options and forward contracts) improved by CHF 405 million, largely as a result of our management of liquid funds. We do not write uncovered options, so a large part of our net derivative expense is compensated by gains on the underlying assets.

The financial impact from the different currencies held by our affiliates changed from a gain of CHF 329 million in 2000 to a loss of CHF 118 million in 2001. This change was largely the result of major currency losses during 2001 from the currency devaluations in Turkey and Brazil.

Taxes

Our 2001 tax charge on continuing activities was 4% less in 2001 than in 2000. Our 2001 tax charge totaled CHF 1.4 billion as compared to the 2000 tax charge on continuing activities of CHF 1.5 billion (excluding CHF 316 million allocated to the discontinued Agribusiness activities). Taxes on our continuing activities as a percentage of income before tax were reduced to 17.0% compared with 18.7% in 2000. This is due to a change in the geographic mix of taxable income.

Net income

Net income from our continuing activities as a percentage of our total sales decreased slightly from 22.4% in 2000 to 21.9% in 2001. This decrease was principally due to profit margin declines in some of our businesses and to lower financial income.

2000 Compared to 1999

Overview

The following compares the results of the year ended December 31, 2000 to those of the year ended December 31, 1999, but do not reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors.

In Swiss francs, our sales in 2000 increased by 10% over 1999 to CHF 35.8 billion, operating income by 7% to CHF 7.9 billion, net income by 8% to CHF 7.2 billion, and free cash flow (excluding acquisitions of subsidiaries and product rights) by 28% in Swiss francs to CHF 4.5 billion.

The 2000 figures include the discontinued Novartis Agribusiness sector only up to November 6, 2000, the date it was spun-off.

Results of operations from ongoing activities not only exclude the Novartis Agribusiness sector but also, in 1999, the divested Novartis Consumer Health business.

In Swiss francs, our sales from ongoing activities in 2000 grew by 15% to CHF 29.1 billion, and operating income grew by 6% to CHF 6.7 billion.

The operating margin from ongoing activities in 2000 was 23.1% of sales, a decrease of 2 percentage points compared with 1999 (25.1%). Cost of goods sold and research and development expenses increased at a lower rate than sales. Marketing and distribution expenses increased sharply (23%). Overall, marketing and distribution expenses reached 33% of sales (1999: 31% of sales). Research and development expenses were maintained at 14% of sales.

Administration and general overheads in 2000 increased by CHF 384 million to CHF 1.5 billion in 2000. The increase was principally due to a number of exceptional or one-off items such as product withdrawal costs in Consumer Health of CHF 84 million, integration costs for the acquisition of Wesley Jessen of CHF 41 million, increases in provisions for legal and product liabilities and Agribusiness related spin-off costs. Furthermore, 1999 benefited from CHF 76 million of exceptional insurance recoveries.

Margins were retained at 1999 levels at Pharmaceuticals (31%) but declined in all other sectors. At Generics and Animal Health, declines were due to competitive pressures in the market and an increase in investments in research and development. At CIBA Vision and at Consumer Health, marketing and distribution was increased at the expense of operating margins to support the launch of new products.

Sales

The following table sets forth selected sales data for each of the periods indicated.

	Year ended December 31,			
	2000	1999	Change in CHF	Change in local currencies
	(CHF millions)	(CHF millions)	(%)	(%)
Sales				
Pharmaceuticals	17,611	15,275	15	7
Generics	1,938	1,823	6	4
Consumer Health (excluding divested activities)	6,395	5,570	15	7
CIBA Vision	2,085	1,632	28	18
Animal Health	1,083	927	17	9
Sales from ongoing activities	**29,112**	**25,227**	**15**	**8**
Sales from discontinued Agribusiness activities[1]	6,693	7,056	(5)	(11)
Sales from divested Consumer Health activities		182		
Group sales	**35,805**	**32,465**	**10**	**3**

[1] Agribusiness: Crop Protection and Seeds businesses.

Sales from ongoing activities

Sales from ongoing activities increased by 15% (8% in local currencies) to CHF 29.1 billion in 2000 from CHF 25.2 billion in 1999. 44% of sales was generated in the NAFTA region (42% in the United States), 32% in Europe and 24% in the rest of the world. Diovan® was the most important contributor to increased sales in 2000 with sales of CHF 1.2 billion, an increase of CHF 489 million over the year. Strongest sector sales growth was recorded by CIBA Vision, as a result of the launch of Visudyne™ (age-related macular degeneration) and the consolidation of Wesley Jessen for three months. Overall, growth from ongoing activities was driven by a volume increase of 6%. There was less than a 2% benefit from price increases and acquisition effects. The sales performance was supported by a 7% favorable currency effect as the Swiss franc depreciated against the US dollar by an average of 12% and against the yen by 17%.

Pharmaceuticals. Sales increased by 15% in Swiss francs or by 7% in local currencies to CHF 17.6 billion in 2000 from CHF 15.3 billion in 1999. Growth was driven by a good performance in Europe and by an improved performance in the United States. Increased focus on marketing and distribution to support the five key growth drivers Diovan® (hypertension), Lotrel® (hypertension), Lamisil® (fungal infections), Miacalcic® (osteoporosis) and Exelon® (Alzheimer's disease) resulted in superior growth rates in local currencies and in market share gains in their respective market segments. Sandimmun®/Neoral® (transplantation) achieved more than CHF 2 billion of sales for the second year running. Sales in local currencies terms declined by 5%, as the first generic cyclosporin capsules were launched in the US market in May. Sales of this product are expected to decline in the coming years, mainly driven by generic erosion in the US. Voltaren® (antirheumatic) sales continued to come under pressure (−12% in local currencies)

from generic products in the United States and from the launch of a new class of anti-inflammatory drugs (Cox-2 inhibitors). Aredia® (bone metastasis) continued with a strong performance as its sales exceeded CHF 1.1 billion. The follow-up product Zometa® has been launched in Canada and in March 2001 received approval in the EU. Diovan® (hypertension) achieved sales of over CHF 1.2 billion and a growth rate of 55% in local currencies. It is the only product in its class to have demonstrated a positive effect in congestive heart failure. Cibacen® (hypertension) posted 29% growth, driven in particular by the performance of Lotrel® (combination of Cibacen® with a calcium channel blocker). A new direct-to-consumer (DTC) campaign in the United States boosted sales of Lamisil® (fungal infections), for which the share in the onychomycosis segment of the overall market in the United States has been increased by 5.1% to 69.5%. In 2000, Exelon®(Alzheimer's disease) as well as Trileptal® (epilepsy) were launched in the United States contributing to the overall sector sales growth.

Top 20 Pharmaceutical Products—2000

Brands	Therapeutic area	Sales 2000 (CHF millions)	Change in local currencies (%)
Sandimmun®/Neoral®	Transplantation, rheumatoid arthritis, psoriasis	2,052	(5)
Voltaren®	Antirheumatic	1,355	(12)
Lamisil®	Fungal infections	1,278	12
Cibacen® /Lotensin®	Hypertension	1,260	29
Diovan®	Hypertension	1,229	55
Aredia®	Oncology (bone metastasis)	1,121	24
Lescol®	Cholesterol reduction	724	(4)
Miacalcic®	Osteoporosis	718	18
Tegretol®	Epilepsy	705	2
Sandostatin®	Acromegaly	663	16
Leponex® /Clozaril®	Schizophrenia	584	(9)
Estraderm®	Hormone replacement	430	7
Nitroderm®	Angina pectoris, congestive heart failure	357	0
Foradil®	Respiratory	332	25
Zaditen®	Asthma, allergy	316	(7)
Sandoglobulin®	Immunodeficiency syndromes	280	(7)
Ritalin®	Attention deficit/hyperactivity disorder	241	(5)
Parlodel®	Parkinson's disease	227	(12)
Exelon®	Alzheimer's disease	202	196
Desferal®	Oncology/hematology	162	(7)

Generics. Sales increased by 6% in Swiss francs or by 4% in local currencies to CHF 1.9 billion from CHF 1.8 billion in 1999. The continuing rise in healthcare expenditures in most countries created a favorable market environment for the increased use of generic pharmaceuticals but also led in some countries to strong price competition within the generics industry. In the United States, Geneva Pharmaceuticals, Inc. achieved strong volume growth and gained market share, but suffered severely from strong price erosion and wholesaler rebates. Our Generics Pharmaceuticals Business (finished pharmaceutical products) achieved sales growth of 8% due to many product launches and the global

introduction of the new generic version of the combination of amoxicillin and clavulanic acid. Our Industrial Business (active pharmaceutical ingredients and biotech substances), experienced continued low prices for bulk antibiotics. Sales growth was achieved by increased volumes and a shift to higher value products.

Consumer Health. Sales increased by 15% in Swiss francs or 7% in local currencies, to CHF 6.4 billion in 2000 from CHF 5.6 billion in 1999. Gerber® sales continued to grow in the United States where market share reached 74% and expansion in Latin America continued. OTC sales grew in particular in the United States with Lamisil® Cream (athlete's foot) and in Europe with Voltaren® Emulgel (anti-inflammatory). Medical Nutrition sales expanded in all segments: in tube feeding products, healthcare food services, clinical supplements and medical devices, with marked expansion in Europe.

CIBA Vision. Sales increased by 28% in Swiss francs, or 18% in local currencies, to CHF 2.1 billion in 2000, (including Wesley Jessen fourth quarter sales of CHF 106 million), from CHF 1.6 billion in 1999. Apart from the impact of the Wesley Jessen acquisition, sales were driven by the strong performance in ophthalmic drugs owing to the launches of Visudyne™ (age-related macular degeneration) and Rescula™ (glaucoma). Visudyne™ achieved worldwide sales of CHF 169 million, only 8 months after its first introduction to the US market. Strong sales growth was also generated with the lens business, particularly with the new generation Focus® contact lenses, which includes Focus® DAILIES®, the daily disposable lenses. Sales of lens care products continued to suffer in an overall declining market.

Animal Health. Sales increased by 17% in Swiss francs, or 9% in local currencies, to CHF 1.1 billion in 2000 from CHF 927 million in 1999. In the companion animal business, the flea product Program® was under significant competitive pressure, while Interceptor® against heartworms and Fortekor® against heart failure in dogs achieved excellent growth. The farm animal business grew overall, driven by the anti-infective Tiamutin®, which has become one of the top three Animal Health sector brands.

Discontinued Agribusiness sector and divested Consumer Health activities. Agribusiness is only included in our Group figures up to its spin-off on November 6, 2000. In 1999, certain divested Consumer Health activities were included in sales up to their respective divestment dates in the first half of 1999.

Expenses

The following table sets forth our operating expenses for each of the periods indicated.

	Discontinued/ divested activities	Ongoing Activities	Group
	(CHF millions)	(CHF millions)	(CHF millions)
2000			
Cost of goods sold	(2,926)	(7,316)	(10,242)
Marketing and distribution	(1,389)	(9,556)	(10,945)
Research and development	(646)	(4,011)	(4,657)
Administration and general overheads	(576)	(1,502)	(2,078)
1999			
Cost of goods sold	(3,334)	(6,488)	(9,822)
Marketing and distribution	(1,775)	(7,786)	(9,561)
Research and development	(731)	(3,515)	(4,246)
Administration and general overheads	(376)	(1,117)	(1,493)

The following table sets forth our ongoing operating expenses for each of the periods indicated.

	2000 (CHF millions)	1999 (CHF millions)	Change (%)
Sales from ongoing activities	**29,112**	**25,227**	**15**
Cost of goods sold	(7,316)	(6,488)	(13)
Marketing and distribution	(9,556)	(7,786)	(23)
Research and development	(4,011)	(3,515)	(14)
Administration and general overheads	(1,502)	(1,117)	(34)
Operating income from ongoing activities	**6,727**	**6,321**	**6**

Cost of goods sold

Cost of goods sold for ongoing activities decreased as a percentage of sales from 25.7% in 1999 to 25.1% in 2000. This was mainly due to productivity increases and the positive currency effect of the stronger US dollar and Japanese yen against the Swiss franc.

Marketing and distribution

Marketing and distribution expenses for ongoing activities as a percentage of sales increased from 30.9% in 1999 to 32.8% in 2000 as significant investments were made in field force and promotion activities to support key products, such as Diovan® and Exelon® in Pharmaceuticals and *Focus® DAILIES®* in CIBA Vision. Within marketing and distribution, further resources were allocated from low priority products to high priority products.

Research and development

Research and development expenses for ongoing activities as a percentage of sales were 13.8% in 2000 compared with 13.9% in 1999. This reflects the continuing heavy emphasis on development in Pharmaceuticals, where numerous key projects are in late phase clinical development or have been filed for registration. Increases in research and development expenses were also recorded in most other sectors, in order to support the development of new products.

Administration and general overheads

As a percentage of sales from ongoing activities, there was an increase in administration and general overheads to 5.2% in 2000 from 4.4% in 1999. The increase was due to a number of exceptional or one-off items such as the Wesley Jessen related restructuring costs of CHF 41 million, the recall of Consumer Health products containing phenylpropanolamine (PPA) of CHF 84 million, additional Generics litigation expenses and Agribusiness related spin-off costs. Furthermore, 1999 benefited from non-recurring income of CHF 76 million resulting from the settlement of environmental litigation with insurance companies.

Operating Income

The following table sets forth our operating income for the years presented.

	2000 (CHF millions)	1999 (CHF millions)	Change (%)
Pharmaceuticals	5,403	4,676	16
Generics	227	347	(35)
Consumer Health (excluding divested activities)	824	807	2
CIBA Vision	158	250	(37)
Animal Health	179	216	(17)
Corporate and other expenses	(64)	25	
Operating income from ongoing activities	**6,727**	**6,321**	**6**
Operating income from discontinued Agribusiness activities[1]	1,156	647	79
Gains on Consumer Health divestments and related operating income		375	
Group operating income	**7,883**	**7,343**	**7**

(1) Agribusiness: Crop Protection and Seeds businesses.

Operating income from ongoing activities

The operating margin on ongoing activities was 23.1% of sales, a decrease of 2 percentage points compared with 1999 (25.1%). Margins remained flat in Pharmaceuticals as a result of increased marketing and distribution expenditures to support key new products. Strong margin declines were seen in Generics and Animal Health owing to competitive pressures in the US market and an increase in research and development spending. CIBA Vision's margin was affected by one-time acquisition related charges of CHF 110 million. Furthermore, in both CIBA Vision and Consumer Health, marketing and distribution were also increased at the expense of operating margins to support the launch of new products.

Pharmaceuticals. Operating income increased 16% to CHF 5.4 billion from CHF 4.7 billion in 1999. Our operating margin was maintained at 31% despite the increase in marketing and distribution expense from 30% to 32% of sales as field forces and promotion activities were increased in preparation for major product launches. Research and development expenses on the other hand were maintained at over 18% of sales. Further improvements were achieved in reducing the cost of goods sold and administration and general overheads as a percentage of sales. The impact of a CHF 42 million restructuring charge required primarily in connection with the sale of the Summit site in the United States was substantially compensated by CHF 30 million released from other restructuring provisions as settlements could be made at amounts less than initially anticipated.

Generics. Generics had an operating income of CHF 227 million, a decrease of 35% compared with CHF 347 million in the prior year. The operating margin suffered a decline from 19.0% to 11.7% due to several factors. These included increased price pressure especially in the United States; some US product launches had to be postponed due to changes in the US regulatory environment; costs related to legal actions in the United States and finally investments in marketing and distribution as well as in research and development were stepped up. With these investments in marketing and distribution and research and development, mid-term competitiveness should be strengthened, especially in the United States where research and development expenses were increased from 7% to 9% of sales.

Consumer Health. Operating income on a comparable basis increased by 2% from CHF 807 million in 1999 to CHF 824 million despite additional marketing and distribution expenses to support new initiatives. Operating margins, however, fell from 14.5% to 12.9%. Results were also negatively affected by a one-time expense of CHF 84 million relating to the voluntary withdrawal of products containing phenylpropanolamine (PPA) in response to FDA recommendations. Research and development expense remained at 3% of sales, while general and administration costs declined slightly over the year when compared to sales. The cost of goods sold remained stable as a percentage of sales.

CIBA Vision. Operating income declined from CHF 250 million in 1999 to CHF 158 million (−37%) principally due to the incurrence of one-time costs for the integration of Wesley Jessen of CHF 110 million (inventory adjustments of CHF 69 million and restructuring charges of CHF 41 million) and one-time costs related to the transfer of the Ophthalmics business to the Pharmaceuticals sector from January 1, 2001. Additionally, productivity improvements were more than offset by increased marketing and distribution expenses in support of Visudyne™ (age-related macular degeneration) and Rescula™ (glaucoma), primarily in the United States and in Europe. Research and development expenses increased by 4% representing 7.2% of sales. As a result of these factors, the operating margin dropped from 15.3% in 1999 to 7.6% in 2000.

Animal Health. Operating income fell by 17% from CHF 216 million in 1999 to CHF 179 million and the operating margin declined from 23.3% in 1999 to 16.5% in 2000. Although the sector showed good sales growth, 2000 operating income suffered from major changes in the product mix and one-time expenses due to the Vericore acquisition; the full operational separation in the wake of the Agribusiness sector spin-off; the implementation of a new US distribution strategy and an increase in research and development expenditure to 8.1% of sales.

Corporate and Other Expenses. Corporate and other expenses, which include the costs of corporate and country management, were partially offset by employee benefit, share and share option plan charges levied on the operating companies. Corporate and other expenses were CHF 64 million in 2000 compared with a gain in 1999 of CHF 25 million. Also included in 2000 are one-time costs such as expenses incurred as a result of the Agribusiness sector spin-off, whereas 1999 included the positive impact of environmental litigation settlements of CHF 76 million and releases from merger-related restructuring provisions due to settlements at less than initially anticipated amounts of CHF 121 million.

Operating income from discontinued Agribusiness activities. The Agribusiness sector is only included for the period up to its spin-off on November 6, 2000. During 2000, the Agribusiness sector experienced a sharp recovery in performance so that the operating income generated in the period consolidated in 2000 amounted to CHF 1.2 billion compared with only CHF 647 million for the whole of 1999. Improved performance was due to generally more favorable market conditions and the effects of cost control and restructuring measures.

Net Income

The following tables set forth selected income statement data for the periods indicated.

	2000	1999	Change
	(CHF millions)	(CHF millions)	(%)
Group operating income	**7,883**	**7,343**	**7**
Income from associated companies	98	383	(74)
Financial income, net	1,091	793	38
Income before taxes and minority interests	**9,072**	**8,519**	**6**
Taxes	(1,820)	(1,833)	1
Income before minority interests	**7,252**	**6,686**	**8**
Minority interests	(42)	(27)	56
Net income	**7,210**	**6,659**	**8**

	Discontinued and divested activities[1]	Ongoing activities	Group
	(CHF millions)	(CHF millions)	(CHF millions)
2000			
Operating income	**1,156**	**6,727**	**7,883**
Income from associated companies	1	97	98
Financial income, net	(125)	1,216	1,091
Taxes	(316)	(1,504)	(1,820)
Minority interests	(17)	(25)	(42)
Net income	**699**	**6,511**	**7,210**
1999			
Operating income	**1,022**	**6,321**	**7,343**
Income from associated companies	7	376	383
Financial income, net	(197)	990	793
Taxes	(207)	(1,626)	(1,833)
Minority interests	(7)	(20)	(27)
Net income	**618**	**6,041**	**6,659**

[1] Agribusiness: Crop Protection and Seeds businesses and divested Consumer Health activities.

	2000 (CHF millions)	1999 (CHF millions)	Change (%)
Net income from ongoing activities			
Operating income from ongoing activities	**6,727**	**6,321**	**6**
Income from associated companies	97	376	(74)
Financial income, net	1,216	990	23
Income before taxes and minority interests	**8,040**	**7,687**	**5**
Taxes	(1,504)	(1,626)	8
Income before minority interests	**6,536**	**6,061**	**8**
Minority interests	(25)	(20)	(25)
Net income from ongoing activities	**6,511**	**6,041**	**8**

Income from associated companies

Income from associated companies is mainly due to the investment in Chiron. In 1999 income from this investment was boosted by an exceptional gain of CHF 208 million as a result of Chiron divesting its diagnostic businesses.

Financial income, net

Total Group financial income increased from CHF 793 million to CHF 1.1 billion. This was mainly the result of higher investment income, in particular gains on the sale of US dollar denominated bonds and successful currency management.

Taxes

Despite increased profits, the tax charge of CHF 1.8 billion was almost the same as in 1999. Taxes as a percentage of income before tax were reduced to 20.1% compared with 21.5% in 1999. This was a result of higher financial income which is taxed at lower than average Group rates and due to a change of the operating income mix.

Net income

Total Group net income (including divested and discontinued activities) as a percentage of total sales reduced slightly from 20.5% in 1999 to 20.1% in 2000. This decrease was due to margin declines in some of the businesses and one-time gains in 1999 such as a gain of CHF 208 million arising from the divestment of Chiron's diagnostics business and the CHF 352 million one-time gain from the divestiture of the non-core Consumer Health activities.

Exchange Rate Exposure and Risk Management

We do business in many currencies other than the Swiss franc. In 2001, 45% of our sales were generated in US dollars, 23% in Euro, 5% in Swiss francs, 8% in Japanese yen and 19% in other currencies. In 2000, 44% of sales were generated in US dollars, 24% in Euro, 6% in Swiss francs, 8% in Japanese yen and 18% in other currencies. In 1999, 42% of sales were generated in US dollars, 26% in Euro, 6% in Swiss francs, 7% in Japanese yen and 19% in other currencies.

In 2001, 31% of our operating costs were generated in US dollars, 22% in Euro, 26% in Swiss francs, 5% in Japanese yen, and 16% in other currencies. In 2000, 33% of operating costs were generated in US dollars, 23% in Euro, 26% in Swiss francs, 5% in Japanese yen, and 13% in other currencies. In 1999, 31%

of operating costs were generated in US dollars, 23% in Euro, 23% in Swiss francs, 5% in Japanese yen and 18% in other currencies.

As a result of our foreign currency exposure, exchange rate fluctuations have a significant impact in the form of both translation risk and transaction risk on our income statement. Translation risk is the risk that our consolidated financial statements for a particular period or as of a certain date may be affected by changes in the prevailing rates of the various currencies of the reporting subsidiaries against the Swiss franc. Transaction risk is the risk that the local currency impact of transactions executed in currencies other than the local currency may vary according to currency fluctuations.

On average in 2001, as compared with 2000, the Swiss franc was stronger against the Japanese yen, Euro and British pound, yet remained almost at the same level against the US dollar. The total negative currency effect in 2001 on our continuing sales growth was 4%, and the total negative impact on our continuing operating income growth was 1%.

On average in 2000, as compared with 1999, the Swiss franc was weaker against the US dollar, but strengthened against the currencies participating in the Euro. The total positive currency effect in 2000 on our continuing sales growth was 7% and the total positive impact on our continuing operating income growth was 4%.

New Accounting Pronouncements

See note 33(k)(12) and (13) to the consolidated financial statements for a discussion of the effect of new accounting standards.

Introduction of the Euro

We implemented dual currency reporting (legacy currencies and Euro) on January 1, 2000 without any operational or technological difficulties. We believe that the introduction of the Euro in January 2002 will reduce our cost of bearing foreign currency exchange risk and will diminish uncertainties relating to currency fluctuations from export sales within the European Monetary Union. The foreign currency exposure from transactions in US dollar or Japanese yen or other currencies outside the European Monetary Union will not be changed by the introduction of the Euro.

5.B Liquidity and Capital Resources

The following table sets forth certain information about our cash flow and net liquidity for each of the periods indicated.

	Year ended December 31,		
	2001	**2000**	**1999**
	(CHF millions)		
Cash flow from continuing operating activities	7,342	6,175	5,943
Cash flow from continuing investing activities	(4,675)	(50)	(3,129)
Cash flow from financing activities	(354)	(4,755)	(4,320)
Net cash flow from discontinued operating and investing Agribusiness activities		1,271	502
Net cash flow from divested Consumer Health activities			560
Net effect of currency translation on cash and cash equivalents	31	(119)	74
Change in cash and cash equivalents	**2,344**	**2,522**	**(370)**
Change in short- and long-term marketable securities	(1,023)	(4,600)	3,293
Change in short- and long-term financial debts	(1,504)	3,861	(1,009)
Change in net liquidity	**(183)**	**1,783**	**1,914**
Net liquidity at January 1	14,461	12,678	10,764
Net liquidity at December 31	**14,278**	**14,461**	**12,678**

Cash Flow From Continuing Operating Activities

Our primary source of liquidity is cash generated from our operations. In 2001, cash flow from continuing operations increased to CHF 7.3 billion in 2001 from CHF 6.2 billion in 2000, and CHF 5.9 billion in 1999. Of the CHF 1.1 billion increase in 2001 over 2000, CHF 637 is attributable to reduced funding of working capital. Of the CHF 232 million increase in 2000 over 1999, CHF 103 million was attributable to reduced payments of restructuring and other provisions.

Our free cash flow on a comparable basis (including cash flow from continuing operating activities, purchases and sales of tangible fixed assets, intangibles and financial assets and dividends paid to third parties, but excluding cash paid or received in divesting or acquiring subsidiaries or minority interests, such as our acquisitions of the Roche stake and of product and marketing rights) increased by 25% to CHF 4.1 billion in 2001 from CHF 3.3 billion in 2000, and from CHF 2.9 billion in 1999.

The following table details the components of these increases.

	2001	2000	1999
	(CHF millions)		
Cash flow from continuing operating activities	7,342	6,175	5,943
Purchase of tangible fixed assets	(1,351)	(1,179)	(1,094)
Purchase of intangibles and financial assets	(7,552)	(3,088)	(616)
Sale of tangible, intangible and financial assets	1,825	749	584
Dividends paid to third parties	(2,194)	(2,064)	(1,935)
Acquisition of product and marketing rights	826	2,661	
Acquisition of 21.3% of the voting shares of Roche Holding Ltd	5,177		
Free cash flow from continuing activities (excluding Roche stake, product and marketing rights acquisitions)	**4,073**	**3,254**	**2,882**

In 2001, our gross capital expenditure on tangible fixed assets (at average rates of exchange) totaled CHF 1.4 billion, compared to CHF 1.2 billion in 2000 and CHF 1.1 billion in 1999. The level of CHF 1.4 billion reflects our ongoing investment in production and in research and development facilities. We expect 2002 capital expenditures to be approximately the same as they were in 2001. We expect to fund these expenditures with internally generated resources.

Cash Flow From Continuing Investing Activities

Our net cash outflow from investing activities increased to CHF 4.7 billion in 2001 from CHF 50 million in 2000, and CHF 3.1 billion in 1999. The more than CHF 4.6 billion increase in 2001 over 2000 was primarily the result of the CHF 5.2 billion we spent to acquire our strategic interest in Roche Holding Ltd the CHF 3.0 billion decrease in our net cash outflow between 1999 and 2000 was primarily the result of an increased cash inflow in 2000 of CHF 6.6 billion from our sales of marketable securities. This cash inflow was partly used to finance our 2000 acquisitions of subsidiaries (primarily Wesley Jessen for CHF 1.3 billion), and of intangibles (primarily Famvir®/Denavir® for CHF 2.7 billion).

Cash Flow From Financing Activities

Our net cash outflow from financing activities decreased to CHF 354 million in 2001 from CHF 4.8 billion in 2000 and CHF 4.3 billion in 1999. The CHF 4.4 billion decrease in 2001 as compared to 2000 was due mainly to proceeds we received from our issuance of equity option instruments and from a non-convertible bond issue. The increase of CHF 435 million in 2000 over 1999 was the result of our more than CHF 1 billion increase in debt repayments, and an increase of CHF 129 million in dividend payments. However, these amounts were offset by lower treasury share acquisitions. In 2001, we received CHF 1.6 billion by increasing our financial debts, as compared to payments of CHF 1.5 billion in 2000 and CHF 466 million in 1999 from reducing our financial debts.

Net Liquidity

Our overall net liquidity (cash, cash equivalents and marketable securities less financial debt) was CHF 14.3 billion as of December 31, 2001. This was a decrease of CHF 183 million from our overall net liquidity as at December 31, 2000, which totaled CHF 14.5 billion. Our net liquidity as of December 31, 1999 was CHF 12.7 billion.

Contractual Obligations

We have long-term research agreements with various institutions which require us to fund various research projects in the future. As of December 31, 2001, the aggregate total amount of payments which may be required under these agreements (including certain potential milestone or other contingent payments) was CHF 1.5 billion. We expect to fund these long-term research agreements with internally generated resources.

As of December 31, 2001, our total financial debt was CHF 7.6 billion, as compared with CHF 6.1 billion as of December 31, 2000, and CHF 9.9 billion as of December 31, 1999. The increase of CHF 1.5 billion of debt at December 31, 2001 compared to December 31, 2000 is primarily due to the issue of CHF 1.3 billion of straight debt. As a result our year-end debt/equity ratio increased slightly to 0.18:1 in 2001, from 0.16:1 in 2000. The reduction of CHF 3.8 billion of debt at December 31, 2000 compared to December 31, 1999 is primarily due to the repayment of CHF 638 million of long-term straight debt and a CHF 3.0 billion reduction in short-term debt of which a significant amount represents debt transferred to Syngenta on its spin-off in November 2000. This resulted in a drop in our year-end debt/equity ratio to 0.16:1 in 2000 from 0.27:1 in 1999.

We have long-term financial debt principally in the form of convertible and non-convertible bonds. At December 31, 2001, we had CHF 1.2 billion in convertible bonds outstanding, compared with CHF 1.1 billion at December 31, 2000, and CHF 1.1 billion as of December 31, 1999.

We had CHF 2.3 billion in non-convertible bonds at December 31, 2001, up from CHF 961 million at December 31, 2000 and CHF 1.6 billion as of December 31, 1999. The increase from 2000 to 2001 is primarily due to the issuance on October 17, 2001 by our Bermuda affiliate, Novartis Securities Investment Ltd, of EUR 900 million of 4% guaranteed notes, due 2006, guaranteed by Novartis AG. The reduction from 1999 to 2000 is primarily due to the repayment of $400 million (CHF 638 million) of straight bonds and of Euro Medium Term Notes that were due in 2000.

As of December 31, 2001, we had short-term debt (excluding the current portion of long-term debt) of CHF 3.8 billion as compared with CHF 3.7 billion as of December 31, 2000, and CHF 6.7 billion as of December 31, 1999. This short-term debt consisted mainly of CHF 1.0 billion (2000: CHF 408 million; 1999: CHF 1.0 billion) in commercial paper; and other bank and financial debt, including interest bearing employee accounts, of CHF 2.8 billion (2000: CHF 3.1 billion; 1999: CHF 4.7 billion).

We are in compliance with all covenants or other requirements set forth in our financing agreements. We do not have any rating downgrade triggers that would accelerate maturity of our debt. For details of the maturity profile of debt, currency and interest rate structure, see note 18 to the consolidated financial statements. Our debt continues to be rated by Standard & Poor's and Moody's respectively as AAA and Aaa for long-term maturities and A1+ and P1 for short-term debt. We consider our working capital to be sufficient for our present requirements.

The following summarizes our contractual obligations and other commercial commitments, and the effect such obligations and commitments are expected to have on our liquidity and cash flow in future periods.

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 year**	**2–3 years**	**4–5 years**	**After 5 years**
			(in CHF million)		
Long-Term Debt	3,788	1,296	79	2,356	57
Operating Leases	734	191	216	119	208
Research & Development Commitments	1,480	482	667	295	36
Total Contractual Cash Obligations	**6,002**	**1,969**	**962**	**2,770**	**301**

We use marketable securities and derivative financial instruments to manage the volatility of our exposures to market risk in interest rates and liquid investments. Our objective is to reduce, where appropriate, fluctuations in earnings and cash flows. We manage these risks by selling existing assets or transactions. We therefore expect that any loss in value for those securities or derivative financial instruments generally would be offset by increases in the value of those hedged transactions.

We use the Swiss franc as our reporting currency and are therefore exposed to foreign exchange movements in US dollar, Euro and in Japanese, other Asian and Latin American currencies. We enter into various contracts, which are impacted by currency movements. We manage the risk associated with currency movements by entering into various contracts to preserve the value of assets, commitments and anticipated transactions. In particular, we enter into forward contracts and foreign currency option contracts in order to hedge certain anticipated foreign currency revenues and our net investments in certain foreign subsidiaries. See "Item 11. Quantitative and Qualitative Disclosures About Market Risk," for additional information.

Share repurchase program

In February 2001, our Board of Directors approved a share repurchase program for an amount of up to CHF 4 billion by means of a second trading line established on the SWX Swiss Exchange. As of December 31, 2001, we had repurchased 59 million shares for a total of CHF 3.9 billion. An additional 1.9 million shares were then purchased during January 2002 to complete this program. The average price for the shares we acquired under this program was CHF 66. The Board will propose reducing our share capital by an amount corresponding to the nominal value of the repurchased shares (CHF 30.5 million) at the forthcoming Annual General Meeting in March 2002.

On August 27, 1999, we announced our intention to repurchase shares in the open market for an amount of up to CHF 4 billion. That repurchase program was completed in January 2001. The program was wholly financed with our surplus liquidity. The acquired shares are kept as treasury shares.

At December 31, 2001, our holding of treasury shares (excluding the amount that we will propose to be canceled at the March 2002 Annual General Meeting) amounted to 278 million shares or 9.6% of the total number of shares outstanding.

Other equity instruments

During December 2001, through indirectly held affiliates, we sold a total of 55 million ten-year Low Exercise Price Options (“LEPOs”) on our shares in two tranches, with an exercise price of CHF 0.01, for EUR 2.2 billion in proceeds (EUR 40 per LEPO). The LEPOs will be settled using Novartis treasury shares. We have accounted for the LEPOs in our balance sheet as an increase in share premium at fair value less related issuance costs. Exercises are recorded as a share issuance with no gains (losses) recorded in our consolidated statements of income.

We also sold a total of 55 million ten-year Put options (the “Put options”) on our shares in two tranches with an exercise price of EUR 51 for EUR 616 million in proceeds (EUR 11.22 per Put option). The Put options can be exercised at the third, fourth, fifth, sixth, seventh, and tenth anniversary of the date of sale and can, at our option, either be physically settled, or net-share settled, using our treasury shares. We hold the right to accelerate the exercise date and expiration date for any outstanding options at any time on or after December 6, 2006 at the accreted exercise price of the Put options. We have accounted for the option premium associated with the Put options as an increase in share premium less related issuance costs. Exercises are recorded as treasury share transactions with no gains (losses) recorded in our consolidated statements of income.

The contractual terms of the Put options place a limit on the number of shares to be delivered in a net share settlement. We cannot under any circumstances be forced into a net cash settlement by the counterparty. If we choose to physically settle the Put options, however, this could result in a cash payment to the counterparty. The total possible cash payment measured at the earliest possible exercise date for the two tranches of Put options (2004 and 2005) would amount to EUR 3.1 billion increasing to EUR 3.8 billion at the expiry dates (2010 and 2011) of the two tranches.

Convertible Bonds

On October 6, 1995, our affiliate, Sandoz Capital BVI Ltd. (now Novartis Capital Ltd., “Novartis Capital”), Tortola, British Virgin Islands, an indirectly wholly owned subsidiary of Novartis AG, issued a 2% Convertible Bond guaranteed by Sandoz AG due 2002 in the amount of $750 million. Each bond in the principal amount of $10,000 entitles the holder thereof to receive approximately 384.2 of our shares (taking into account the forty-for-one share split). The bonds do not entitle the holder to receive any shares in any other company (e.g. there is no right to convert into Syngenta shares due to the Agribusiness spin-off). The number of shares deliverable upon conversion is subject to certain adjustments under certain circumstances. Fractions of shares will not be delivered on conversion. Instead, we will make a cash payment to each bondholder entitled to a fraction of a share, payable in Swiss francs, in an amount equal to the fraction of a share owned multiplied by the then-current market price of Novartis shares. The bonds may be converted into Novartis shares up to and including September 30, 2002. As of December 31, 2001, bonds with an aggregate principal amount of $717.4 million were outstanding, entitling their holders to a maximum of 27,560,117 of our shares (taking into account the forty-for-one share split).

On October 23, 1995, Novartis Capital issued a 1¼% Convertible Bond guaranteed by Sandoz AG, and due in 2002, in the amount of CHF 750 million. Each bond in the principal amount of CHF 5,000 is convertible into 200 of our shares (taking into account the 40:1 share split) and, due to the Agribusiness spin-off, also into 5 shares of Syngenta, up to and including October 9, 2002. In case of a conversion, each bondholder will also receive an amount of CHF 239.95 per bond in cash. The conversion terms are subject to certain adjustments under certain circumstances. As of December 31, 2001, bonds with an aggregate principal amount of CHF 19.2 million were outstanding, entitling their holders to a maximum of 766,200,000 of our shares (taking into account the forty-for-one share split) and 19,155,000 shares of Syngenta AG.

Straight Bond

On October 17, 2001, our affiliate, Novartis Securities Investment Ltd., Bermuda, issued a 4% guaranteed bond by Novartis AG due 2006 in the amount of EUR 900 million.

ADS Direct Purchase Plan and Dividend Reinvestment Plan

The Direct Purchase and Dividend Reinvestment Plan for our ADSs, which are listed on the New York Stock Exchange, is a no-fee plan open to new investors as well as existing ADS shareholders in the United States. This plan features no enrollment, purchase or dividend reinvestment fees. An initial investment of $500 is required, or the deposit of a minimum of 10 Novartis ADSs into a plan account. Transaction fees are applied when ADSs are sold. To date, there have been no new issuances of Novartis shares or ADSs under this plan and no effect on our share capital or balance sheet.

5.C Research and Development, Patents and Licenses

Our research and development spending totaled CHF 4.2 billion, CHF 4.0 billion and CHF 3.5 billion for the years 2001, 2000 and 1999, respectively. The amounts set forth for 2000 and 1999 have been restated to exclude research and development spending by the discontinued Agribusiness Sector. Each of our sectors has its own research and development and patents policies. For a description of those research and development and patents policies for the last three years, see "Item 4. Information on the Company—4.B Business Overview."

5.D Trend Information

Please see "—5.A—Operating Results" for trend information.

Item 6. Directors, Senior Management and Employees

6.A Directors and Senior Management

We are fully committed to good corporate governance. In 2001, a number of changes have been introduced in the interest of transparency and accountability to our shareholders. Our principles and rules on corporate governance are laid down in our Articles of Incorporation, the Regulations Governing Internal Organization and the Charters of the Board Committees. They are reviewed by the Corporate Governance Committee from time to time with suggestions for amendment forwarded to the Board for decision.

Our Board of Directors is elected by our shareholders and holds the ultimate decision-making authority for Novartis AG, except for those matters reserved by law or by our Articles of Incorporation to the shareholders. The Board is comprised of 12 persons. The average age of the Directors is 61 and the average tenure is nearly 4.5 years. The Chairman and Chief Executive Officer is the only executive Director. Messrs. Lippuner and Jetzer were members of the Executive Committee until 1996 and 1999, respectively. The primary functions of the Board, as defined in the Swiss Code of Obligations and in our Articles of Incorporation, are

- strategic direction and management;
- accounting matters, financial control and financial planning;
- appointing and dismissing of members of the Executive Committee and other key executives;
- overall supervision of business operations; and
- setting out the motions to be presented to the General Meeting, including approval of financial statements.

The agenda for Board meetings is set by the Chairman and Chief Executive Officer. Any member of the Board (the "Directors") may request in writing that an item be included on the agenda.

The Directors receive materials in advance of Board meetings allowing them to prepare for the handling of the items on the agenda.

The Board recognizes the importance of being fully informed on material matters involving our Company and our business. Therefore, the Directors are required to hold discussions with our management, to review materials provided to them, to visit offices and plants and to participate in no less than a majority of the meetings of the Board and its Committees.

The Chairman and Chief Executive Officer recommends members of senior management who, at the invitation of the Board, attend Board meetings to report on areas of the business within their responsibility, thereby ensuring that the Board has sufficient information to make appropriate decisions.

The Board reviews the performance of the Chairman and Chief Executive Officer once a year. The Board also meets in Executive Session from time to time to consider other matters of importance to our business.

Daniel Vasella has been elected by the Board as our Chairman and also to serve Novartis AG as Chief Executive Officer. The Board has appointed Prof. Helmut Sihler as Vice Chairman and Lead Director. Hans-Jörg Rudloff has been elected Vice Chairman.

During 2001, the Board met five times. All of our Directors attended 90% or more of the regularly scheduled and special meetings of the Board and Board Committees on which they served in 2001.

Certain information regarding our directors and senior management is set out below.

Directors

Dr. Daniel Vasella (Age 48). Chairman of the Board of Directors (since April 1999), Chief Executive Officer and Head of the Group Executive Committee (since December 1996). His current term as Chairman expires in 2004. From 1995 until December 1996, Dr. Vasella was a member of the Sandoz Group Executive Committee and served as Chief Executive Officer of Sandoz Pharma Ltd. Prior to that, Dr. Vasella was Chief Operating Officer and, before that, Senior Vice President and Head of Worldwide Development of Sandoz Pharma Ltd. From 1993, Dr. Vasella was Head of Corporate Marketing of Sandoz Pharma Ltd. In addition to his duties at Novartis, Dr. Vasella is also currently a member of the Board of Directors of Credit Suisse Group in Zurich, Switzerland; the Supervisory Board of Siemens AG in Munich, Germany; the Chairman's Council of DaimlerChrysler in Stuttgart, Germany; and the Board of Directors of PepsiCo, Inc. in Purchase, New York; and of the International Board of Governors of the Peres Center for Peace in Tel Aviv, Israel. In addition, Dr. Vasella is also a member of several industry associations, including the International Business Leaders Advisory Council for the Mayor of Shanghai; a member of the Boards of INSEAD (Institut Européen d'Administration des Affaires, *i.e.,* the European Institute for Business Administration) and IMD (International Institute of Management Development); a member of the Board of Directors of Associates of Harvard Business School; and a member of the Council of the World Economic Forum in Davos, Switzerland. Dr. Vasella graduated with a Ph.D. in medicine from the University of Berne in 1980. He has published scientific papers on psychosomatics and central nervous system disorders and has lectured at the Universities of Berne and Fribourg, as well as other medical colleges and civic groups.

Prof. Dr. Helmut Sihler (Age 71). Vice Chairman of our Board and Lead Director and a member of the Chairman's Committee. He has served in these positions since the Merger in December 1996. His current term expires in 2004. From 1983 until the Merger, he was a member of the Board of Directors and the Chairman's Committee of Ciba-Geigy AG, and Vice Chairman of the Board since 1993. From 1980 to 1992, Prof. Sihler was Chairman of the Central Board of Management of Henkel KGaA in Düsseldorf, Germany, and has served as a member of the Shareholders' Committee of that company since 1992. Prof.

Sihler also is Chairman of the Dr. Ing. h.c. F. Porsche AG in Stuttgart, Germany, and Member of the Supervisory Board of Deutsche Telekom AG, Bonn, Germany. Prof. Sihler serves as honorary professor for economics in Münster, Germany. Prof. Sihler studied philology and law in Graz, Austria and Vermont and graduated with a Ph.D. in philology and in law.

Hans-Jörg Rudloff (Age 61). Vice Chairman of our Board of Directors. Mr. Rudloff has served in this position since the Merger in December 1996. His current term expires in 2004. From 1995 to 1996, Mr. Rudloff was Vice Chairman of the Board of Directors of Sandoz AG. He was elected a Director of Sandoz AG in 1994. Mr. Rudloff has been the Head of Investment Banking of the Barclays Group since 1998. From 1995 to 1998, he served as Chairman of Marcuard Cook & Cie and Chairman of MC-BBL. From 1989 to 1994, he was Chairman and Chief Executive Officer of Credit Suisse First Boston in London, UK, and also served as a member of the Executive Board of Credit Suisse Holding from 1993 to 1994. Mr. Rudloff also is a member of the boards of various companies, including Pargesa S.A. in Geneva, Switzerland and TBG (Thyssen-Bornemisza Group) in Monaco. He also serves on the Advisory Board of the Landeskreditbank in Baden Württemberg, Germany. Mr. Rudloff studied economics at the Universities of Berne and Grenoble and graduated in 1965.

Birgit Breuel (Age 64). Director. Mrs. Breuel has served as a Director since the Merger in 1996 and prior to that, she was a Director of Ciba-Geigy AG since 1994. Her current term expires in 2005. From 1995 to 2000, Mrs. Breuel acted as the General Commissioner and CEO of the World Exposition EXPO 2000 in Hannover, Germany. From 1990 to 1995, Mrs. Breuel was a member of the Board and from 1991 to 1995, she was President of the Treuhandanstalt, which was responsible for the privatization of the former East Germany's economy. From 1986 to 1990, she was Minister of Finance and from 1978 to 1986, Minister of Economy and Transport of the Land Niedersachsen (Lower Saxony), the second largest state of Germany. Mrs. Breuel also serves as a member of the Board of Gruner+Jahr AG in Hamburg, Germany and as a member of the Advisory Board of J.P. Morgan Chase & Co. in Frankfurt, Germany. Mrs. Breuel studied politics at the Universities of Hamburg, Oxford and Geneva.

Prof. Dr. Peter Burckhardt (Age 63). Director. Prof. Burckhardt has held this position since the Merger in December 1996. His current term expires in 2002. He has been Professor of Internal Medicine and Chairman of the Department of Internal Medicine at the University of Lausanne since 1982. He has done active research in metabolic bone disease, calcium metabolism, osteoporosis and clinical nutrition and has published over 200 articles and 150 abstracts in his fields of research. He is the Head of Medical Service at the University Hospital of Lausanne a position he has held since 1992. Prof. Burckhardt also serves as Chairman of the Board of National Osteoporosis Societies, trustee of the International Foundation of Osteoporosis and member of the Committee of Appeal of the Swiss Inter-Cantonal Office for the Control of Drugs. Until 1995, he was President of the Swiss Society of Internal Medicine and the Swiss Osteoporosis Association. Prof. Burckhardt graduated with a Ph.D. in medicine from the University of Basel in 1965.

Dr. Hans-Ulrich Doerig (Age 62). Director. Dr. Doerig has held this position since the Merger in December 1996. His current term expires in 2002. In line with our commitment to good corporate governance principles and to avoid any question of possible conflicts of interest, Dr. Doerig, who is Vice Chairman of the Executive Board and Group Chief Risk Officer of Credit Suisse Group, will be stepping down from the Board of Novartis at the 2002 annual shareholders meeting. (Daniel Vasella is a Member of the Board of Credit Suisse Group). Dr. Ulrich Lehner, CEO of Henkel AG, will be proposed for election as a new Board Member at the 2002 annual shareholders meeting.

Walter G. Frehner (Age 68). Director. Mr. Frehner has served as a Director since the Merger and prior to that, as Director of Ciba-Geigy AG since 1994. His current term expires in 2004. From 1993 until his retirement in May 1996, Mr. Frehner served as Chairman of the Board of Directors of Swiss Bank Corporation, which merged with Union Bank of Switzerland in 1997. From 1987 to 1993, Mr. Frehner was President of the Executive Board of Swiss Bank Corporation, which he joined in 1958. From 1954 to 1957,

he was an apprentice with the Bernese Cantonal Bank in Berne. Mr. Frehner is a Director of Schindler Holding AG and Vice Chairman of the insurance company Bâloise Holding AG, in Basel, Switzerland.

William W. George (Age 59). Director. Mr. George has held this position since May 1999. His current term expires in 2003. He has been Chairman (since 1996) and Chief Executive Officer (since 1991) of Medtronic, Inc. in Minneapolis, Minnesota, where he also served as President and Chief Operating Officer from 1989 to 1991. Mr. George served as corporate Vice President of Honeywell from 1978 to 1989, and prior to that, President of Litton Microwave Cooking Products. Mr. George is a member of the Boards of Directors of Target Corporation (formerly Dayton Hudson); Imation Corporation; and Allina Health Systems, all US corporations. Mr. George received his BSIE with high honors from Georgia Tech in 1964 and his MBA with high distinction from Harvard University in 1966.

Alexandre F. Jetzer (Age 61). Director. Mr. Jetzer has held this position since the Merger in December 1996. His current term expires in 2005. From the Merger until 1999, he was a member of the Executive Committee and Head of International Coordination, Legal & Taxes of the Novartis Group. From May 1995 to December 1996, he was Vice Chairman and Chief Executive Officer of Sandoz Corporation in New York, NY and Chief Executive Officer of Sandoz Pharmaceuticals Corporation in East Hanover, NJ. From 1981 to 1995 he was a member of the Sandoz Group Executive Committee. He received a degree in law and economics from the University of Neuchâtel in 1963 and 1967, respectively.

Pierre Landolt (Age 54). Director. Mr. Landolt has held this position since the Merger, and prior to that, was a Director of Sandoz AG since 1986. His current term expires in 2002. He has been the President of the Sandoz family foundation since 1994. Mr. Landolt is a member of various boards, including Emasan AG, Basel, Switzerland; Curaçao International Trust Company, Curaçao; and Parmigiani Mesure et Art du Temps, Fleurier, Switzerland. Mr. Landolt graduated with a Bachelor of Laws from the University of Sorbonne in Paris.

Heini Lippuner (Age 68). Director and a member of the Chairman's Committee. Mr. Lippuner has served as Director of the Company since the Merger in December 1996 and as a member of the Chairman's Committee since April 1999. His current term expires in 2002. From 1986 to 1996, he was a member of the Executive Committee as well as Chief Operating Officer of Ciba-Geigy AG since 1988. Mr. Lippuner is a member of the Boards of Directors of Bühler AG in Uzwil, Switzerland. He also serves in a number of industry organizations.

Prof. Dr. Rolf M. Zinkernagel (Age 58). Director. Prof. Zinkernagel has held this position since May 1999. His current term expires in 2003. He has been Professor and Director of the Institute of Experimental Immunology at the University of Zurich since 1992. Prof. Zinkernagel won the Nobel Prize for Medicine (Immunology) in 1996. He is a member of the Swiss Society of Allergy and Immunology (President, 1993 to 1994), the American Associations of Immunologists and of Pathologists, the ENI European Network of Immunological Institutions, and the International Society for Antiviral Research. Prof. Zinkernagel is a member of the Boards of Directors of Cytos Biotechnology AG, Schlieren/Zurich, Switzerland; the Lombard Odier Bank, Geneva, Switzerland; Gen-Pat 77, Berlin/Munich, Germany; AlleCure, Los Angeles, United States; Bio-Alliance Capital, Frankfurt, Germany; and Hemolytics AG, Witterswil, Switzerland. Prof. Zinkernagel is also a member of the Scientific Advisory Boards of Cytos Biotechnology AG in Schlieren/Zurich, Switzerland; CTL Therapeutics, Los Angeles, United States; Solis Therapeutics, Palo Alto, United States; and Modex, Lausanne, Switzerland. Prof. Zinkernagel graduated from the University of Basel with a Ph.D. in medicine in 1970.

We have service contracts for Board Members which are customary under Swiss law and do not provide for benefits on termination.

Executive Officers and Senior Management

Dr. Daniel Vasella (Age 48). Chairman of the Board of Directors (since April 1999), Chief Executive Officer and Head of the Group Executive Committee (since December 1996). See "—Directors."

Dr. Raymund Breu (Age 56). Chief Financial Officer and a member of the Group Executive Committee since December 1996. Dr. Breu was Head of Group Finance of the former Sandoz AG and a member of the Sandoz Group Executive Committee from 1993 until December 1996. Prior to that, he served as Group Treasurer of Sandoz AG. Dr. Breu graduated from the Swiss Federal Institute of Technology in Zurich with a Ph.D. in mathematics in 1971.

Thomas Ebeling (Age 43). Chief Executive Officer of Novartis Pharma AG (since July 2000) and member of the Group Executive Committee (since September 1998). From December 1999 to July 2000, Mr. Ebeling was Chief Operating Officer of Novartis Pharma AG. From September 1998 to December 1999, he was Chief Executive Officer of Novartis' Consumer Health Sector. Prior to that, he was Chief Executive Officer of Novartis' global nutrition operations, a position he assumed in December 1997. Mr. Ebeling joined Novartis in May 1997 as General Manager of Novartis Nutrition for Germany and Austria. Before joining Novartis, Mr. Ebeling worked for Pepsi-Cola Germany for six years, during which he served in various capacities: from 1996 to 1997, he was General Manager of Pepsi-Cola in Germany; from 1994 to 1996, he served as National Sales and Franchise Director and before that as Marketing Director for Germany and Austria. Mr. Ebeling graduated with a degree in psychology from the University of Hamburg, Germany in 1986.

Dr. Paul Choffat (Age 52). Head of Novartis Consumer Health and member of the Group Executive Committee since January 1, 2002. Prior to rejoining Novartis this year, Dr. Choffat held various senior positions within private industry, including our predecessor Sandoz AG. From 1999 through 2001, Dr. Choffat served on several boards and was an active private investor. From 1996 to 1999, he was the CEO of Fotolabo SA. He initially joined Sandoz in 1995 as Head of Management Resources and International Coordination. He served on the Executive Board and was responsible for Group Planning and Organization, heading the Novartis Merger integration office. He served as CEO of Von Roll in 1994 and previously held positions at McKinsey & Company, Landis & Gyr and Nestlé SA. Dr. Choffat holds a Ph.D. in law from the University of Lausanne and an MBA from the International Institute for Management Development, also in Lausanne, Switzerland.

Dr. Urs Bärlocher (Age 59). Head of Legal and General Affairs and a member of the Group Executive Committee since June 1999. From December 1996 until May 1999, Dr. Bärlocher was Head of Corporate Legal, Tax and Insurance. From 1995 until December 1996, he served as Chairman of the Board of Sandoz Deutschland GmbH (Germany) and Biochemie GmbH (Austria). Prior to that, he was Chief Executive Officer of Sandoz Pharma Ltd. for three years. Dr. Bärlocher graduated from the University of Basel with a Ph.D. in law in 1971.

Norman C. Walker (Age 49). Head of Human Resources (since May 1998) and a member of the Group Executive Committee (since June 1999). Before joining Novartis, Mr. Walker worked for Kraft Jacobs Suchard in Zurich for seven years, where he was responsible for human resource activities for commercial and manufacturing operations in 26 countries. Mr. Walker has a degree in Business Studies from the University of Brighton and attended the International Senior Managers Program of Harvard Business School.

Dr. Gilbert Wenzel (Age 45). Head of Strategic Planning and a member of the Group Executive Committee since November 2000. Prior to joining Novartis, Mr. Wenzel spent fifteen years with McKinsey & Company, where he was a member of the European Leadership Group of the Pharma/ Healthcare Sector and a leading member of the European New Venture Initiative, which provides consultancy services to venture capital firms and start-ups. From 1981 to 1985, he was consultant to Hoechst AG in Germany regarding global strategies for generics and over-the-counter medicines. Dr. Wenzel has a degree in Pharmaceutical Sciences and earned a Ph.D. in economics.

Dr. Glen Bradley (Age 59). Chief Executive Officer of the CIBA Vision Sector since May 1990. Dr. Bradley is responsible for all aspects of CIBA Vision's worldwide contact lens and lens care operations, and was responsible, through December 31, 2000, for our ophthalmic pharmaceuticals business. Prior to becoming the Chief Executive Officer of CIBA Vision, Dr. Bradley headed the US operations of CIBA Vision, which he joined in 1986. Dr. Bradley joined the former Geigy Chemical Company in 1969 and held senior management responsibilities in the agricultural, plastics and additives, and electronic equipment divisions of the former Ciba-Geigy Corporation. Dr. Bradley holds a Ph.D. in chemical engineering from Louisiana State University and received an MBA in Finance/Marketing from the University of Connecticut.

Hans-Beat Gürtler (Age 55). Chief Executive Officer of the Novartis Animal Health Sector since December 1996. From 1990 to 1996, he was Head of the Animal Health Sector of the former Ciba-Geigy Group. Before that, he served as Head of the former Ciba-Geigy's Animal Health Sector in the Northern hemisphere for eight years, and as Head of the Seeds business in Spain for three years. Mr. Gürtler graduated with a diploma in commerce and joined Ciba-Geigy AG in 1969.

Christian Seiwald (Age 46). Chief Executive Officer of the Generics Sector since July 2001. Mr. Seiwald has also served as Country Head of Novartis Austria since December 1998. From October 1996 to May 2001, he was Head of Austria Pharma operations. In 1982, Mr. Seiwald received a degree in Business Management from the University of Innsbruck.

Dr. Oswald Sellemond (Age 69). Retired as Chief Executive Officer of the Novartis Generics Sector in July, 2001, a position he had held since December 1996.

Al Piergallini (Age 55). Retired as Chief Executive Officer of Novartis Consumer Health and the Group Executive Committee as of December 31, 2001, a position he had held since December 1999.

None of the above directors or senior management have any family relationship with any other director or member of our senior management. Executive officers are elected by the Board for an indefinite term of office and may be removed by the Board at any time. None of the above directors or senior management were appointed pursuant to an arrangement or understanding between such officer or director and any third party.

6.B Compensation

Compensation of Directors

Non-executive members of the Board of Directors of Novartis AG received an aggregate amount of compensation in 2001 of CHF 2.8 million plus 22,000 shares of Novartis AG with an approximate market value of CHF 1.5 million.

Directors are reimbursed for travel and other related expenses associated with the performance of their duties. Directors are also eligible to participate in certain of the share programs which we offer to senior executives and selected employees.

Compensation of Senior Management

The aggregate amount of compensation expensed in 2001 by Novartis in respect of senior management for services in all capacities, including compensation for those who retired during 2001, was CHF 11.4 million, of which CHF 9.2 million was salaries and CHF 2.2 million was for cash bonuses. An additional CHF 2.6 million was set aside for pension, retirement and similar benefits.

The following is a listing of senior management:

Name	Title	Since
Daniel Vasella, MD[1]	Chief Executive Officer	1996
Raymund Breu[1]	Chief Financial Officer	1996
Thomas Ebeling[1]	Chief Executive Officer—Pharmaceuticals	2000
Paul Choffat[1]	Chief Executive Officer—Consumer Health	2002
Norman Walker[1]	Head of Human Resources	1998
Urs Bärlocher[1]	Head of Legal and General Affairs	1999
Gilbert Wenzel[1]	Head of Strategic Planning and Business Development	2000
Glen Bradley	Chief Executive Officer—CIBA Vision	1990
Hans-Beat Gürtler	Chief Executive Officer—Animal Health	1996
Christian Seiwald	Chief Executive Officer—Generics	2001

(1) Member of Executive Committee

Employee Share Participation Plans

We offer directors, executive officers and other selected employees equity compensation plans which include, depending on the plan, share options, share appreciation rights, and share grants.

Novartis Share Option Plan

As part of our compensation strategy, we implemented a Stock Option Plan in 1997 according to which directors, executive officers and other selected employees of Novartis (collectively, the "Participants") are granted options to purchase Novartis shares.

The options under the Novartis Stock Option Plan are granted both as a recognition for past performance as well as an incentive for future contributions by the Participants. They allow the Participants to benefit as the price of the shares increases over time, and thus provide the Participants with a long-term incentive to improve our profitability and success. If a Participant voluntarily leaves our employ, options not yet vested will generally be forfeited. The options under the Novartis Stock Option Plan are granted free of charge and entitle the holder thereof to sell or exercise the options during the exercise period, which begins after the lapse of a vesting period and ends at the end of the term of the options. The options may be exercised either by selling the options to the market maker, or by converting them for forty shares per option (post-split) against payment of a pre-determined exercise price. For options identified as NOVAS7 through NOVAS10, we are only informed if the options are converted, but not if a Participant sells his/her options. For the options identified as NOVAS11, we will be able to obtain from the market maker information on options sold by the Participants. If options are converted, the market maker will deliver to the Participant the number of shares for which options have been converted in exchange for payment of the aggregate exercise price. The shares delivered by the market maker upon conversion of the options will not be newly issued shares, but will be issued and outstanding shares.

Under the 2000 Novartis Stock Option Plan, 14,939 NOVAS10 Options each on 40 registered Novartis shares were granted to directors and senior management on March 7, 2001. The exercise price of NOVAS10 Options is CHF 70 per share and one NOVAS10 Option controls 40 Novartis shares (post-split). The NOVAS10 Options may be sold or converted at any time between March 10, 2003 and March 7, 2010.

Under the 2001 Novartis Share Option Plan, 1,645,606 NOVAS11 Options were granted to senior management. Additional options will be issued to Directors under this program. The number of these

additional options will not be known until after the date of this Annual Report on Form 20-F. The exercise price of NOVAS11 Options is CHF 62 and one NOVAS11 Option controls one Novartis share (conversion ratio 1:1) on March 7, 2002. The NOVAS11 Options may be sold or converted at any time between March 8, 2004 and March 7, 2011.

Novartis Share Appreciation Rights Plan / Novartis US ADS Incentive Plan for US employees

In 1997, the Board of Directors' Compensation Committee approved the Novartis Share Appreciation Rights Plan ("SAR-Plan") for selected directors, and executive officers and other selected employees. In accordance with the SAR-Plan, in 2000, the directors and senior management as a group were granted a total of 199,120 SARs. All SARs were granted free of charge and have an exercise price of $31.22. The SARs may be exercised from March 8, 2003 to March 10, 2010. SAR holders are entitled to receive the difference in US dollars between the exercise price and the fair market value of the Novartis American Depositary Shares ("ADSs") as reported by our Depositary, J.P. Morgan Chase & Co., at the close of business on the date of exercise.

In 2001, the Compensation Committee approved the Novartis Share Option Incentive Plan for selected US directors, executive officers and other selected employees. The SAR-Plan was then discontinued. The Novartis Share Option Incentive Plan grants options on Novartis ADSs. In 2001 eligible directors and senior management as a group were granted a total of 132,397 options giving the right to acquire one ADS per option. All ADSs were granted free of charge and have an exercise price of $41.97. The ADSs may be exercised from March 10, 2004 to March 7, 2011. Information on the options for Directors will be determined after the date of this Annual Report on Form 20-F.

On March 7, 2002, eligible senior managers, as a group, were granted a total of 169,907 options giving the right to acquire one ADS per option. All ADS were granted free of charge and have an exercise price of $37.34. The ADS may be exercised from March 7, 2005 to March 7, 2012.

As of March 11, 2002, the fair market value of a Novartis ADS stood at $37.20.

Management Share Programs

We offer to certain directors and senior managers a Long-term Performance Plan and a Restricted Share Program. These grants are designed to foster long-term participation for eligible employees by aligning their contribution to our long-term performance. Under the Long-term Performance Plan, a total of 166,770 shares and 132,397 ADSs were granted to directors and senior management in 2001. Under the Restricted Share Program a total of 23,450 shares were granted to directors and senior management in 2001.

Leveraged Share Savings Program

In 2001, a new leveraged share savings bonus compensation program was offered to certain senior managers, who could make an election to receive a cash bonus or a bonus in shares. If the manager elects to receive shares in lieu of cash, the shares granted under this plan have a 5-year blocking period. At the end of the blocking period, we will match the bonus taken in shares on a one-for-one basis. Under this leveraged share savings program, we granted 150,480 shares to selected senior managers in 2001.

6.C Board Practices

The table below shows the terms of office of the Company's Board of Directors:

Name	Start of Term	End of Term
Dr. Daniel Vasella (Chairman)	1996	2004
Prof. Dr. Helmut Sihler (Vice Chairman and Lead Director)	1996	2004
Hans-Jörg Rudloff (Vice Chairman)	1996	2004
Dr. h.c. Birgit Breuel	1996	2005
Prof. Dr. Peter Burckhardt	1996	2002
Dr. Hans-Ulrich Doerig	1996	2002
Walter G. Frehner	1996	2005
William W. George	1999	2003
Alexandre F. Jetzer	1996	2005
Pierre Landolt	1996	2002
Heini Lippuner	1996	2002
Prof. Dr. Rolf M. Zinkernagel	1999	2003

Board Committees

Decisions are made by the Board of Directors as a whole. To assist the Board in carrying out its duties four committees have been created: the Chairman's Committee, the Compensation Committee, the Audit and Compliance Committee and the Corporate Governance Committee (the "Board Committees"). Each Board Committee has a written Charter outlining its duties and responsibilities and a chair elected by the Board. The Board Committees meet regularly and are charged with making full reports and recommendations to the Board at its regular meetings. The meeting agendas of the Board Committees are determined by their chairs. The Board Committee members receive in advance of Committee meetings materials allowing them to prepare for the handling of the items on the agenda.

The Chairman's Committee

The Chairman's Committee consists of the Chairman and Chief Executive Officer, the two Vice Chairmen, one of which is the Lead Director, and such other members as are elected by the Board from time to time. The Chairman's Committee deals with all matters delegated to it according to its Charter. It prepares the agenda for meetings of the Board and can take any preliminary and required action on behalf of the Board. The Chairman's Committee also interfaces with the Executive Committee of Novartis, specifically approving personnel appointments and financial measures which exceed the authority of the Executive Committee but which do not require approval by the full Board.

Current members of the Chairman's Committee are Dr. Daniel Vasella (Chairman), Prof. Dr. Helmut Sihler, Hans-Jörg Rudloff, Heini Lippuner and William W. George.

The Compensation Committee

The Compensation Committee is composed of three to five independent Directors.

The Compensation Committee reviews and approves our compensation policies and programs, including share option programs and other incentive-based compensation. It is responsible for reviewing and approving the compensation paid to members of the Executive Committee and other selected key executives, and for reviewing the performance of the Chairman and Chief Executive Officer. The

Compensation Committee from time to time seeks outside expert advice to support recommendations and decisions.

Current members of the Compensation Committee are Prof. Dr. Helmut Sihler (Chairman), Hans-Jörg Rudloff and William W. George.

The Audit and Compliance Committee

The Audit and Compliance Committee consists of three to five members. The Board of Directors has determined that all of the members of the Committee are independent, as defined by the rules of the New York Stock Exchange. Members of the Committee shall have sufficient financial and compliance experience and ability to enable them to discharge their responsibilities as members. The Committee's main duties are:

- To select, evaluate and propose to the Board the external auditors to be nominated for approval by the annual Shareholders' Meeting.
- To review annually the external audit scope, audit plans and relevant processes, the results of the external audit, and whether recommendations made have been implemented by our management.
- To discuss with the external auditors the results of the audit, any unusual items or disclosures contained in the audit, and the matters required by Statement on Auditing Standards No. 61, as amended.
- To review annually the internal audit scope, audit plans and relevant processes, the results of the internal audit, and whether recommendations made have been implemented by our management.
- To review with external and internal auditors, and with our financial and accounting personnel, our accounting policies and financial controls.
- To review with management, internal auditors and external auditors any significant risks or exposures we may face, and to assess the steps management has taken to minimize such risks.
- To review the annual financial statements and annual report to consider whether they conform to accepted accounting principles and with the standards we have set.
- To review the processes and procedures for management's monitoring of our compliance with laws, regulations and with our Code of Conduct, as well as major legislative and regulatory developments that may have a significant impact on us.
- To review compliance by our management with those of our policies designated by the Board from time to time, including the Insider Trading Policy.
- To oversee our participation in the Global Compact.

Current members of the Audit and Compliance Committee are Prof. Dr. Helmut Sihler (Chairman), Dr. h.c. Birgit Breuel, Dr. Hans-Ulrich Doerig and Walter G. Frehner.

The Corporate Governance Committee

The Corporate Governance Committee consists of three to five independent Directors. The Committee's main duties are:

- To develop principles of corporate governance and recommend them to the Board for its approval.
- To review periodically the principles of corporate governance approved by the Board to ensure that they remain relevant and are being complied with.

- To review the composition and size of the Board in order to ensure the Board has the proper expertise and its membership consists of persons with sufficiently diverse backgrounds.
- To determine the criteria for selection of the Chairman and Chief Executive Officer, Directors and Board Committee members.
- To plan for continuity on the Board as existing Board members retire or rotate off the Board.
- To prepare and annually review succession plans for the Chairman and Chief Executive Officer in case of his resignation, retirement or death.
- To evaluate the performance of current Directors proposed for re-election, and recommend to the Board as to whether Directors should stand for re-election.
- To conduct an annual evaluation of the Board as a whole.
- With the Chairman and Chief Executive Officer, to periodically review the Charter and composition of each Board Committee and make recommendations to the Board for the creation of additional Board Committees or the change in mandate or dissolution of Board Committees.
- To ensure that each Board Committee is comprised of Directors suitable for the tasks of the Committee and that each Committee conducts the required number of meetings and makes sufficient reports to the Board on its activities and findings.

Current members of the Corporate Governance Committee are William W. George (Chairman), Prof. Dr. Helmut Sihler, Hans-Jörg Rudloff and Prof. Dr. Rolf Zinkernagel.

6.D Employees

The table below sets forth the breakdown of the total average number of our full time equivalent employees by main category of activity and geographic area for the past three years. The totals set forth for 2000 have been adjusted to exclude employees of the divested Agribusiness sector. The totals set forth for 1999 have not been adjusted.

For the year ended December 31, 2001 (full time equivalents)	Research & Development	Production & Supply	Marketing & Distribution	General & Administration	Total
Europe	5,804	9,875	10,531	4,734	30,944
The Americas	3,043	9,081	11,750	3,083	26,957
Asia/Africa/Australia	741	3,502	7,146	1,030	12,419
Total	**9.588**	**22,458**	**29,427**	**8,847**	**70,320**

For the year ended December 31, 2000 (full time equivalents)	Research & Development	Production & Supply	Marketing & Distribution	General & Administration	Total
Europe	5,627	9,961	9,461	5,662	30,711
The Americas	2,957	9,656	10,941	2,905	26,459
Asia/Africa/Australia	674	3,691	6,537	996	11,898
Total	**9,258**	**23,308**	**26,939**	**9,563**	**69,068**

For the year ended December 31, 1999 (full time equivalents)	Research & Development	Production & Supply	Marketing & Distribution	General & Administration	Total
Europe	7,881	13,234	11,782	7,379	40,276
The Americas	4,230	10,170	10,422	3,232	28,054
Asia/Africa/Australia	1,086	4,157	7,371	1,515	14,129
Total	**13,197**	**27,561**	**29,575**	**12,126**	**82,459**

A relatively small number of our employees are represented by unions. We have not experienced any material work stoppages in recent years, and we consider our employee relations to be good.

6.E Share Ownership of Directors and Senior Management

The aggregate amount of our shares personally owned by current directors and senior management as of December 31, 2001 was 840,970 shares, which amount is less than 1% of our outstanding shares. No individual director or member of senior management owned 1% or more of our outstanding shares.

The aggregate amount of Novartis share and ADS options, including other information regarding the options, held by current directors and senior management as of March 7, 2002, is set forth below:

Title of Options	Amount of shares called for by the options	Exercise Price[1] (CHF)	Purchase Price (if any)	Expiration Date	Total number of options held
Novas07 Options	40	42.75	0	January 15, 2007	6,752
Novas08 Options	40	68.35	0	January 16, 2008	7,718
Novas09 Options	40	51.325	0	March 10, 2009	16,114
Novas10 Options	40	70	0	March 7, 2010	14,939
Novas11 Options	1	62.00	0	March 7, 2011	1,645,606[2]
Total Novartis Share Options					**1,691,129**
Novartis ADS Options Cycle V	1	$41.97		March 7, 2011	132,397
Novartis ADS Options Cycle VI	1	$37.28		March 7, 2012	170,133
Total Novartis ADS Options					**302,530**

(1) Exercise price indicated is per share.

(2) Directors are not included in the total number of options held as their number of options will not be known until after the Annual General Meeting.

Novartis Employee Ownership Plans

Pursuant to the Novartis Employee Ownership Plan, which was approved by the Board of Directors in 1998, all employees of our Swiss subsidiaries are entitled to purchase 120 shares, at a predetermined discount price, after each full year of service. In 2001, the price was set at CHF 12.50 per share. 80 of the shares were freely disposable, and 40 of the shares must be deposited with us until the person concerned leaves the employment, or retires from, the relevant Swiss affiliate. These employees were then required to immediately buy the shares to which they became entitled. During 2001, 2000 and 1999, an aggregate of 862,720, 1,429,520 and 1,623,280 shares, respectively, were acquired by these employees under this plan.

A new Novartis Employee Ownership Plan was introduced in January 2002 for all employees of our Swiss subsidiaries, which will replace the existing plan. These employees will receive an annual incentive bonus delivered in Novartis shares at a fixed date at the then valid fair market value of the share. The new plan will allow these employees to immediately sell either all or half of the shares received, or to keep all the shares for a three year vesting period, at which time we will give the employee one additional free share for every two shares retained and deposited by the employee under this plan.

Beginning in 2002, two share ownership plans were introduced for employees of our UK affiliates. The first is the Novartis UK Share Ownership Plan, a UK Inland Revenue approved plan set up under a Trust. For every two shares purchased employees will receive one share free. However, the employee would forfeit the matching share and any tax relief received if the employee were to leave the employ of his/her UK employer within 3 years of the award. If the shares are held in the plan for 5 years or more then the employee will not be liable for any form of tax on both the shares they purchased and the free matching shares. The employee's maximum annual investment under this plan is EUR 1,500.

Under the second UK plan, the Novartis UK Incentive Conversion Plan, employees can invest their net incentive, which is the maximum allowable payment to the Novartis UK Share Ownership Plan. For

every two shares purchased the employee will receive one free share. But the employee would forfeit the free share if the employee leaves the employee of his/her UK employer within 3 years of the award.

Item 7. Major Shareholders and Related Party Transactions

7.A Major Shareholders

Based on our share register, we believe that we are not directly or indirectly owned or controlled by another corporation or government, and there are no arrangements that may result in a change of control.

As of December 31, 2001, our registered share capital was CHF 1,442,602,340, divided into 2,885,204,680 shares with a nominal value of CHF 0.50 each. Based on our share register, it appears that approximately 78% of our registered shares are held in Switzerland, and approximately 11% of our shares are held in the United States. However, since certain of our shares are held by brokers or other nominees, the above numbers are not representative of the actual number of US and Swiss persons who are beneficial owners of our shares.

As of December 31, 2001, the only person or entity which was the registered owner of more than 5% of our shares, whether or not the voting rights of such shares were exercisable, was J.P. Morgan Chase & Co., in its capacity as Depositary of the ADSs. Our next largest registered shareholders, owning between 1% and 5% of our share capital, are Emasan AG (3.8%), the Novartis Foundation for Employee Participation (3.5%) and Swiss Life Insurance and Pension Company (1.0%). In 2000, these shareholders held 3.8%, 3.2% and 2.1%, respectively. Each of these shareholders is entered in the share register with voting rights for its entire shareholdings. The largest registered nominee shareholder with voting rights is Chase Manhattan (6.33%), which entered into a nominee agreement with us and disclosed the names, addresses and number of shares of the beneficial owners for whose account it holds the shares. No other nominee shareholders nor any beneficial owner known to us holds more than 1% of our shares.

7.B Related Party Transactions

We have formed certain foundations for the purpose of advancing employee welfare, employee share participation, research and charitable contributions. The charitable foundations foster health care and social development in rural countries, and conduct agricultural development and research. The foundations are autonomous, and their boards are responsible for administering the foundations in accordance with the foundations' purpose and applicable law.

The employee share participation foundation has not been included in our consolidated financial statements prepared under IAS, as the International Accounting Standards Committee, Standing Interpretations Committee No. 12, exempts post-employment and equity compensation plans from its scope. The total assets of this foundation, as of December 31, 2001, included 101.3 million of our shares with a market value of approximately CHF 6.1 billion. As of December 31, 2000, the assets included 98 million of our shares with a fair market value of CHF 7.0 billion. This foundation has been consolidated with our financial statements under US GAAP, and is included as a reconciling item in the US GAAP reconciliation.

In 2001 we granted short-term loans totaling CHF 1.2 billion to the employee welfare and other foundations and received short-term loans totaling CHF 10 million from them. In 2000, we granted short-term loans totaling CHF 936 million to these foundations, received short-term loans totaling CHF 6 million from them and sold 1.4 million of our shares to them at market rates.

In 1999 we granted short-term loans totaling CHF 330 million to these foundations, received short-term loans totaling CHF 192 million from them and sold 11.1 million of our shares to them at market rates.

Approximately twenty of these foundations were established for charitable purposes and have not been consolidated, as we do not receive a benefit from them. As of December 31, 2001 these foundations held approximately 6.2 million of our shares with a cost of approximately CHF 39 million. See notes 5, 26 and 27 to the consolidated financial statements for disclosure of other related party transactions and balances.

7.C Interests of Experts and Counsel

Not applicable.

Item 8. Financial Information

8.A Consolidated Statements and Other Financial Information

8.A.1 See Item 18.

8.A.2 See Item 18.

8.A.3 See Report of Independent Accountants, page F-1.

8.A.4 We have complied with this requirement.

8.A.5 Not applicable.

8.A.6 Not applicable.

8.A.7 Legal proceedings.

We are involved in a number of legal proceedings and claims incidental to the normal conduct of our businesses, relating to such matters as product liability, patent infringement, antitrust, licensing, environmental claims and other matter. Although the outcome of these claims, legal proceedings and other matters cannot be predicted with any certainty, we do not believe that any liability resulting from the resolution of any such claims or proceedings would have a material adverse effect on our financial condition, results of operations or cash flow.

We maintain general liability insurance, including product liability insurance, covering claims on a worldwide basis with coverage limits and retention amounts which we believe to be reasonable and prudent in light of our businesses and the risks to which they are subject.

8.A.8 Dividend policy.

Subject to the dividend policy described below, our Board of Directors expects to recommend the payment of a dividend in respect of each financial year. If approved by our shareholders at the relevant annual Shareholders' Meeting, which is normally held in March, the dividends will be payable immediately following such approval. Any shareholder who purchased our shares on or before the second trading day after the shareholders' meeting shall be deemed to be entitled to receive the dividends and, in bonus issues, new shares, and to exercise shareholders' preemption rights to participate in issues of securities. Dividends are reflected in our financial statements in the year in which they are approved by our shareholders.

Our Board's stated policy is that, over the long term, the size of the dividend should be geared to growth in our after-tax earnings. All future dividends paid by us will depend upon our financial condition at the time, the results of our operations and other factors.

Because we pay dividends in Swiss francs, exchange rate fluctuations will affect the US dollar amounts received by holders of ADSs.

8.B Significant Changes

On March 22, 2001, our shareholders approved a reduction in the nominal value of our shares to CHF 0.50 per share, which was effective on May 7, 2001. This reduction had the effect of splitting our shares by a factor of 40.

We have submitted a proposal to our shareholders, to be voted upon at their next annual Shareholders Meeting on March 21, 2002, for a reduction of our share capital by CHF 30,527,340, as a means of fully retiring those shares acquired in the share repurchase program announced in February, 2001.

Item 9. The Offer and Listing

9.A Listing Details

Our shares are listed in Switzerland on the SWX Swiss Exchange ("SWX"). The principal trading market for our shares is the virt-x. Prior to the creation of virt-x in June 2001, our shares were traded on the SWX. Since 1996, our shares have also been quoted on London's SEAQ International. The ADS program has existed since December 1996, and was established pursuant to a Deposit Agreement which we entered into with J.P. Morgan Chase & Co. as Depositary (the "Deposit Agreement"). Our ADSs have been listed on the NYSE since May 2000, and are traded under the symbol "NVS."

The table below sets forth, for the periods indicated, the high and low closing sales prices for our shares traded in Switzerland and for ADSs traded in US. The data below regarding our shares reflects price and volume information for trades completed by members of the virt-x (or the SWX, as applicable) during the day as well as for inter-dealer trades completed off the virt-x (or the SWX, as applicable) and certain inter-dealer trades completed during trading on the previous business day. The data below has been adjusted to reflect the 40-for-1 share split and diminution in nominal share value from CHF 20 to

CHF 0.50 and the ADS-share ratio change from 40-for-1 to 1-for-1 effective May 7, 2001. The share data was taken from virt-x and SWX. The ADS data was taken from Bloomberg:

	Shares		ADSs	
	High	Low	High	Low
	(CHF per share)		($ per ADS)	
Annual information for the past five years				
2001	74.15	54.95	45.00	32.98
2000[1]	73.90	49.72	44.94	34.63
1999[1]	72.95	42.68	53.13	34.63
1998[1]	69.35	48.30	53.25	35.50
1997[1]	63.12	35.88	44.25	25.44
Quarterly information for the past two years				
2001				
First Quarter	74.15	62.88	44.28	38.14
Second Quarter	72.10	61.30	41.04	35.21
Third Quarter	65.25	54.95	37.58	33.61
Fourth Quarter	65.29	55.80	39.74	34.15
2000[1]				
First Quarter	59.18	49.72	36.38	28.62
Second Quarter	64.92	56.20	39.12	33.08
Third Quarter	67.70	63.15	39.61	35.03
Fourth Quarter	73.90	66.25	44.94	36.68
Monthly information for most recent six months				
October 2001	65.20	60.75	39.39	38.72
November 2001	63.65	57.80	38.32	36.00
December 2001	60.00	55.80	36.50	34.15
January 2002	59.00	56.60	35.79	34.30
February 2002	64.75	58.75	37.96	34.32
March 2002 (through March 11)	64.25	61.90	37.36	37.04

(1) Share prices have been revised for 2000, 1999, 1998, and 1997 to reflect the share split which occurred on May 7, 2001 resulting in a share: ADS ratio change from 40:1 to 1:1.

Fluctuations in the exchange rate between the Swiss franc and the US dollar will affect any comparisons of Swiss share prices and US ADS prices.

The average daily volumes traded on the virt-x (or the SWX, as applicable) for the years 2001, 2000, and 1999 were 5,999,640, 6,648,080 and 7,198,280 respectively. These numbers were based on total annual turnover statistics supplied by the virt-x (or the SWX as applicable) via the Swiss Market Feed, which supplies such data to subscribers and to other information providers.

A 2-for-1 share split for the ADSs was affected on May 11, 2000. A 40-for-1 share split of the shares was affected on May 7, 2001 simultaneously with an ADS-to-share ratio change from 40-for-1 to 1-for-1. On March 11, 2002, the closing sales price per share on the virt-x was CHF 62.40 (approximately $37.14 per share) and per ADS on the NYSE was $37.20.

9.B Plan of Distribution

Not applicable.

9.C Market

The principal trading market for our shares is the virt-x. Since 1996, our shares have also been quoted on SEAQ International.

ADSs, each representing one share, have been available in the United States through an American Depositary Receipts ("ADR") program since December 1996, which was established pursuant to a Deposit Agreement we entered into with J.P. Morgan Chase & Co. as Depositary. ADSs in the United States are traded on the NYSE under the symbol "NVS." The Depositary has informed us that as of March 11, 2002, there were 105,161,125 ADSs outstanding, each representing one Novartis share (approximately 3.64% of all issued and outstanding shares, including treasury shares). See "Item 9. The Offer and Listing—9.A Listing Details."

9.D Selling Shareholders

Not applicable.

9.E Dilution

Not applicable.

9.F Expenses of the Issue

Not applicable.

Item 10. Additional Information

10.A Share capital

Not applicable.

10.B Memorandum and articles of association

Set forth below is a summary of the material provisions of our Articles of Association (the "Articles") and the Swiss Code of Obligations relating to the shares. This summary cannot be assumed to be complete and is subject always to Swiss law and to the Articles.

Shares

We have one class of registered shares. The 40-for-1 split in our shares took effect on May 7, 2001. As of December 31, 2001, a total of 2,885,204,680 shares were registered, with a nominal value of CHF 0.50 each. The shares are fully paid-in and non-assessable.

We may issue certificates representing several shares. Shareholders may exchange these certificates at any time for certificates representing smaller numbers of shares, or for individual share certificates. If the owner of the shares consents, we may renounce the printing and delivery of share certificates.

Capital Structure

As of December 31, 2001, our share capital was CHF 1,442,602,340, made up of 2,885,204,680 fully paid-in registered shares, each with the nominal value of CHF 0.50. We intend to propose at the next shareholders' meeting to reduce the share capital by CHF 30,527,340, in order to fully retire the shares which we acquired during the 2001 share repurchase program.

As of December 31, 2001, we held 438,336,420 shares in our treasury, calculated in accordance with US GAAP. When calculated in accordance with IAS, the number of treasury shares was 337,024,420. These numbers differ because of varying rules regarding whether shares held by certain foundations, which are independent from Novartis under Swiss company law, must be consolidated with shares held by the Group as treasury shares. US GAAP requires that we consolidate shares held by the employee share participation foundation. This is not required under IAS. See "—Repurchase of shares."

In May 2001 we made available to US investors a direct share purchase and dividend reinvestment program for ADRs through our depositary bank, J.P. Morgan Chase & Co. See "Item 5. Operating and Financial Review and Prospects—5.B. Liquidity and Capital Resources."

Share Register and Voting Restrictions

Shares represented by a certificate and individually held are transferred by an endorsement. Shares not represented by a certificate and shares represented by a certificate in a common deposit are transferred by assignment. The transfer of such shares not represented by a certificate or represented by a certificate in a common deposit is effected by corresponding entries in the books of a bank or depositary institution following an agreement in writing by the selling shareholder and notification of such assignment to us by the bank or the depositary institution.

Each share is entitled to one vote at the shareholders' meeting. A shareholder may exercise its right to vote its shares only after the shareholder has been recorded in the share register as being entitled to such rights. In order to do so, the shareholder must file a share registration form with us, setting forth the shareholder's name, address and citizenship (or, in the case of a legal entity, its registered office). If the shareholder has not filed the form, then the shareholder may not vote at, or participate in, shareholders' meetings.

To vote its shares, the shareholder must also explicitly declare that it has acquired the shares in its own name and for its own account. If the shareholder refuses to make such a declaration, the shares may not be voted unless the Board of Directors grants voting rights to a nominee for those shares. The Board of Directors may grant such nominees the right to vote up to 0.5% of the total number of registered shares. We have agreed with J.P. Morgan Chase & Co., as Depositary, however, pursuant to the Deposit Agreement, to register the Depositary or its nominee or the custodian or its nominee (but no individual holders), as the case may be, in our share register as holding voting rights with respect to shares deposited with the Depositary or the custodian up to a limit of 5% of our registered shares, for the benefit of the holders of ADSs.

No shareholder or group of shareholders may vote more than 2% of the registered shares. If a shareholder holds more than 2% of Novartis' shares, that shareholder will be entitled to register the excess shares, but not to cast votes based upon them. For purposes of this 2% rule, groups of companies and groups of shareholders acting in concert are considered to be one shareholder.

The Board of Directors may, on a case by case basis, allow exceptions from both the 2% rule for shareholders and the 0.5% rule for nominees. The Board may delegate this power.

There are no limitations under Swiss law or our Articles on the right of non-Swiss residents or nationals to own or vote shares other than the restrictions applicable to all shareholders.

Shareholders' Meetings

Under Swiss law, we must hold an annual ordinary shareholders' meeting within six months after the end of our financial year. Shareholders' meetings may be convened by the Board of Directors or, if necessary, by the statutory auditors. The Board is further required to convene an extraordinary shareholders' meeting if so resolved by a shareholders meeting, or if so requested by shareholders holding an aggregate of at least 10% of the registered shares. Shareholders holding shares with a nominal value of at least CHF 1,000,000 (*i.e.*, 2,000,000 Novartis shares) have the right to request that a specific proposal be

put on the agenda and voted upon at the next shareholders meeting. A shareholders' meeting is convened by publishing a notice in the Swiss Official Commercial Gazette (*Schweizerisches Handelsamtsblatt*) at least 20 days prior to such meeting. Shareholders may also be informed by mail.

There is no provision in the Articles requiring a quorum for the holding of a shareholders' meeting.

Shareholders' resolutions generally require the approval of a majority of the votes present at a shareholders' meeting. As a result, abstentions have the effect of votes against the resolution. Shareholders' resolutions requiring a vote by such "absolute majority" include (1) amendments to the Articles; (2) elections of directors and statutory auditors; (3) approval of the annual report and the annual accounts; (4) setting the annual dividend; (5) decisions to discharge directors and management from liability for matters disclosed to the shareholders' meeting; and (6) the ordering of an independent investigation into specific matters proposed to the shareholders' meeting.

The following types of shareholders' resolutions require the approval of a "supermajority" of at least two-thirds of the votes present at a shareholders' meeting: (1) an alteration of our corporate purpose; (2) the creation of shares with increased voting powers; (3) an implementation of restrictions on the transfer of registered shares and the removal of such restrictions; (4) an authorized or conditional increase of the share capital; (5) an increase of the share capital by conversion of equity, by contribution in kind, or for the purpose of an acquisition of property or the grant of special rights; (6) a restriction or an elimination of shareholders' preemptive rights; (7) a change of our domicile; (8) our dissolution without liquidation (*e.g.*, by a merger); or (9) any amendment to the Articles which would create or eliminate a supermajority requirement.

At shareholders' meetings, shareholders can be represented by proxy. However, a proxy must either be the shareholder's legal representative, another shareholder with the right to vote, a proxy appointed by us, an independent representative nominated by us, or a depositary. Votes are taken by a show of hands unless the shareholders' meeting resolves to have a ballot or where a ballot is ordered by the chairman of the meeting. We intend to propose at our next shareholders' meeting a resolution to allow electronic voting at future shareholder's meetings.

Net Profit and Dividends

Swiss law requires that at least 5% of our annual net profits be retained as general reserves, so long as these reserves amount to less than 20% of our registered share capital. The law permits a corporation's articles to require additional mandatory reserves, but our Articles do not.

Under Swiss law, we may only pay dividends if we have sufficient distributable retained earnings from previous business years, or if our reserves are sufficient to allow distribution of a dividend. In either event, while the Board of Directors may propose that a dividend be paid, we may only pay dividends upon shareholder approval at a shareholders' meeting. Our auditors must confirm that the dividend proposal of the Board conforms with the Swiss Code of Obligations and the Articles. Our Board of Directors intends to propose a dividend once each year. See "Item 3. Key Information—3.A. Selected Financial Data—Cash Dividends per Share."

Dividends are usually due and payable immediately after the shareholders have passed a resolution approving the payment. Under Swiss law, the statute of limitations in respect of dividend payments is five years. For information about deduction of the withholding tax, see "Item 10. Additional Information—10.E Taxation."

Preemptive Rights

Under Swiss law, we may not issue new shares without the prior approval of the shareholders. If a new issue is approved, then our shareholders would have certain preemptive rights to obtain newly issued shares in an amount proportional to the nominal value of the shares they already hold. These preemptive

rights could be modified in certain limited circumstances with the approval of a resolution adopted at a shareholders' meeting by a supermajority of shares.

Borrowing Power

Neither Swiss law nor the Articles restrict in any way our power to borrow or raise funds. The decision to borrow funds is made by, or under the direction of, our Board of Directors and no shareholders' resolution is required.

Conflict of Interests

Swiss law does not have a general provision on conflicts of interests. However, the Swiss Code of Obligations requires directors and members of senior management to safeguard the interests of the corporation and, in this connection, imposes a duty of care and a duty of loyalty on such persons. This rule is generally interpreted to mean that directors and members of senior management are disqualified from participating in decisions which affect them personally. Directors and officers are personally liable to the corporation for any breach of these provisions. In addition, Swiss law contains a provision under which a shareholder or a director, or any other persons associated with them, must refund to the corporation any payments made to them by the corporation, other than payments made at arm's length.

Repurchase of shares

Swiss law limits a corporation's ability to hold or repurchase its own shares. We and our subsidiaries may only repurchase shares if we have free reserves equal to the purchase price to be paid for the shares. The aggregate nominal value of all Novartis shares held by us and our subsidiaries may not exceed 10% of the nominal value of our share capital. In addition, we are required to create a special reserve on our balance sheet in the amount of the purchase price of the acquired shares. Repurchased shares held by us or our subsidiaries do not carry any rights to vote at the shareholders' meeting, but are entitled to the economic benefits generally connected with the shares. It should be noted that the definition of what constitutes subsidiaries, and therefore, treasury shares, for purposes of the above described reserves requirement and voting restrictions differs from the definition included in the consolidated financial statements. The definition in the consolidated financial statements requires consolidation for financial reporting purposes of special purpose entities, irrespective of their legal structure, in instances where we have the power to govern the financial and operating policies of the entity so as to obtain benefits from its activities.

We may also repurchase shares for the purpose of capital reduction, which can only take place if the shareholders pass a resolution approving such reduction. We intend to propose to the next shareholders' meeting a capital reduction of CHF 30,527,340.

Notices

Under Swiss law, notices to shareholders are validly made by publication in the Swiss Official Commercial Gazette. However, the law permits the corporation's Board of Directors to designate additional means of communication for publishing notices to the shareholders.

Notices required under the listing rules of the Swiss Stock Exchange ("SWX") will be published in two Swiss newspapers. We, the SWX or the virt-x, may also disseminate the relevant information on the virt-x online exchange information system.

Purpose, Duration, Liquidation, Merger

Our business purpose, as stated in the Articles, is to hold interests in enterprises in the area of health care or nutrition. We may also hold interests in enterprises in the areas of biology, chemistry, physics,

information technology or related areas. We may acquire, mortgage, liquidate or sell real estate and intellectual property rights in Switzerland or abroad.

The duration of our company is unlimited. We may be dissolved at any time by a shareholders' resolution. In the case of a dissolution by way of liquidation, such resolution would require the approval of the majority of votes present at the shareholders' meeting. In the case of a dissolution without liquidation, at least two-thirds of the votes present at the meeting would have to vote their shares in favor of such resolution. Dissolution is also possible by adjudication of bankruptcy or by decision of a judge, if shareholders holding at least 10% of the registered share capital requested dissolution for valid reasons. Under Swiss law, any surplus arising out of a liquidation (*i.e.*, after the settlement of all claims of all creditors) would be distributed to the shareholders in proportion to the paid-in nominal value of their shares.

Shareholders may pass a resolution to merge with another corporation at any time. Such a resolution would require the consent of at least two-thirds of all votes present at the necessary shareholders' meeting.

Disclosure of Principal Shareholders

Under the Swiss Stock Exchange Act, holders of our voting shares would be required to notify us and the SWX of the level of their holdings whenever such holdings reach or exceed, or in some cases, fall short of, certain thresholds—5%, 10%, 20%, 33⅓%, 50% and 66⅔%—of our registered share capital, whether or not the shareholder has the right to cast votes based on the shares. Following receipt of such notification we would be required to inform the public by publishing the information in the Swiss Official Commercial Gazette and in at least one of the principal electronic media that disseminate stock exchange information.

Mandatory Tender Offer

Under the Swiss Stock Exchange Act, shareholders and groups of shareholders acting in concert who acquire more than 33⅓% of the voting rights of Novartis shares would be required to submit a takeover bid to all remaining shareholders. This mandatory bid obligation may be waived by the Swiss Takeover Board or the Swiss Federal Banking Commission under certain circumstances, in particular if another shareholder owns a higher percentage of voting rights than the acquirer. If no waiver is granted, the mandatory takeover bid would have to be made pursuant to the procedural rules set forth in the Swiss Stock Exchange Act and the ordinances enacted thereunder.

Board of Directors

Pursuant to Swiss law, each member of our Board must hold at least one of our shares. Directors must retire when they reach age 71, although the General Meeting may grant an exemption from this rule. We have no mandatory retirement age for executive officers.

American Depositary Shares

We incorporate by reference the disclosure regarding our ADS program included in the registration statement on Form 20-F/A (File No. I-15024), as filed with the Commission on May 9, 2000, in the section entitled "Part II—Item 14. Description of Securities to be Registered—American Depositary Receipts."

On May 3, 2001, we filed an Amendment No. 2 to the Amended and Restated Deposit Agreement, dated as of May 7, 2001, pursuant to the Registration Statement on Form F-6 (File No. 333-13446). The Amendment No. 2 changed the ADS-to-share ratio from 40-to-1 to 1-to-1.

On January 31, 2002, we filed a Restricted Issuance Agreement dated as of January 11, 2002, supplementing Amendment No. 2 to the Amended and Restated Deposit Agreement dated as of May 3, 2001, as an exhibit to the Registration Statement on Form F-3 (File No. 333-81862). The Restricted Issuance Agreement supplemented the Deposit Agreement to permit the deposit of restricted ADSs into a parallel facility to the ADR facility established in the Deposit Agreement.

10.C Material contracts

On December 2, 1999, we signed a Master Agreement with AstraZeneca to spin-off and merge our Crop Protection and Seeds businesses with AstraZeneca's Zeneca Agrochemicals business to create Syngenta. This agreement was amended and restated on September 7, 2000, and the transaction closed in November 2000. Our Agribusiness sector, which was made up of Crop Protection and Seeds, is accordingly shown as a discontinued activity. There are no other material contracts other than those entered into in the ordinary course of business.

10.D Exchange controls

There are no Swiss governmental laws, decrees or regulations that restrict the export or import of capital, including any foreign exchange controls, or that affect the remittance of dividends or other payments to non-residents or non-citizens of Switzerland who hold Novartis' shares.

10.E Taxation

The taxation discussion set forth below is intended only as a descriptive summary and does not purport to be a complete analysis or listing of all potential tax effects relevant to the acquisition, ownership, exercise or disposition of our shares or ADSs. The statements of US and Swiss tax laws set forth below are based on the laws and regulations in force as of the date of this 20-F, including the current Convention Between the United States and the Swiss Confederation for the Avoidance of Double Taxation with Respect to Taxes on Income, entered into force on December 19, 1997 (the "Treaty"), and the US Internal Revenue Code of 1986, as amended (the "Code"), and may be subject to any changes in US and Swiss law, and in any double taxation convention or treaty between the United States and Switzerland occurring after that date, which changes may have retroactive effect.

Swiss Taxation

Swiss Residents

Withholding Tax on Dividends and Distributions. Dividends which we pay and similar cash or in-kind distributions which we may make to a holder of shares or ADSs (including distributions of liquidation proceeds in excess of the nominal value, stock dividends and, under certain circumstances, proceeds from repurchases of shares by us in excess of the nominal value) are subject to a Swiss federal withholding tax (the "Withholding Tax") at a current rate of 35%. We are required to withhold this Withholding Tax from the gross distribution and to pay the Tax to the Swiss Federal Tax Administration. The Withholding Tax is refundable in full to Swiss residents who are the beneficial owners of the taxable distribution at the time it is resolved and duly report the gross distribution received on their personal tax return or in their financial statements for tax purposes, as the case may be.

Income Tax on Dividends. A Swiss resident who receives dividends and similar distributions (including stock dividends and liquidation surplus) on shares or ADSs is required to include such amounts in the shareholder's personal income tax return. A corporate shareholder may claim substantial relief from taxation of dividends and similar distributions received if the shares held represent a fair market value of at least CHF 2 million.

Capital Gains Tax upon Disposal of shares. Under current Swiss tax law, the gain realized on shares held by a Swiss resident who holds shares or ADSs as part of his private property is generally not subject to any federal, cantonal or municipal income taxation on gains realized on the sale or other disposal of shares or ADSs. However, gains realized upon a repurchase of shares by us may be characterized as taxable dividend income if certain conditions are met. Book gains realized on shares or ADSs held by a Swiss

corporate entity or by a Swiss resident individual as part of the shareholder's business property are included in the taxable income of such person.

Residents of Other Countries

Recipients of dividends and similar distributions on the shares who are neither residents of Switzerland for tax purposes nor holding shares as part of a business conducted through a permanent establishment situated in Switzerland ("Non-resident Holders") are not subject to Swiss income taxes in respect of such distributions. Moreover, gains realized by such recipients upon the disposal of shares are not subject to Swiss income taxes.

Non-resident Holders of shares are, however, subject to the Withholding Tax on dividends and similar distributions mentioned above and under certain circumstances to the Stamp Duty described below. Such Non-resident Holders may be entitled to a partial refund of the Withholding Tax if the country in which they reside has entered into a bilateral treaty for the avoidance of double taxation with Switzerland. Non-resident Holders should be aware that the procedures for claiming treaty refunds (and the time frame required for obtaining a refund) may differ from country to country. Non-resident Holders should consult their own tax advisors regarding receipt, ownership, purchase, sale or other dispositions of shares or ADSs and the procedures for claiming a refund of the Withholding Tax.

As of January 1, 2001, Switzerland has entered into bilateral treaties for the avoidance of double taxation with respect to income taxes with the following countries, whereby a part of the above-mentioned Withholding Tax may be refunded (subject to the limitations set forth in such treaties):

Albania	Germany	Luxembourg	Slovak Republic
Australia	Greece	Macedonia	Slovenia
Austria	Hungary	Malaysia	South Africa
Belarus	Iceland	Mexico	Spain
Belgium	India	Moldavia	Sri Lanka
Bulgaria	Indonesia	Morocco	Sweden
Canada	Italy	Netherlands	Thailand
China	Ivory Coast	New Zealand	Trinidad and Tobago
Croatia	Republic of Ireland	Norway	Tunisia
Czech Republic	Jamaica	Pakistan	United Kingdom
Denmark	Japan	Poland	United States of America
Ecuador	Kazakhstan	Portugal	Venezuela
Egypt	Republic of Korea	Romania	Vietnam
Finland	(South Korea)	Russia	Commonwealth of
France	Kuwait	Singapore	Independent States[1]

(1) Excluding Estonia, Latvia, Lithuania and Russia.

Tax treaty negotiations are under way, or have been concluded, with Armenia, Chile, Ethiopia, Estonia, Georgia, Israel, Kyrgyzstan, Latvia, Lithuania, Turkey, Turkmenistan, Uzbekistan, and Zimbabwe.

A Non-resident Holder of shares or ADSs will not be liable for any Swiss taxes other than the Withholding Tax described above and the Stamp Duty described below if the transfer occurs through or with a Swiss bank or other Swiss securities dealer. If, however, the shares or ADSs of Non-resident Holders can be attributed to a permanent establishment or a fixed place of business maintained by such person within Switzerland during the relevant tax year, the shares or ADSs may be subject to Swiss income taxes in respect of income and gains realized on the shares or ADSs and such person may qualify for a full refund of the Withholding Tax based on Swiss tax law.

Residents of the United States. A Non-resident Holder who is a resident of the United States for purposes of the Treaty is eligible for a reduced rate of tax on dividends equal to 15% of the dividend, provided that such holder (i) qualifies for benefits under the Treaty, (ii) holds, directly and indirectly, less than 10% of our voting stock, and (iii) does not conduct business through a permanent establishment or fixed base in Switzerland to which the shares or ADSs are attributable. Such an eligible holder must apply for a refund of the amount of the Withholding Tax in excess of the 15% Treaty rate. The claim for refund must be filed on Swiss Tax Form 82 (82C for corporations; 82I for individuals; 82E for other entities), which may be obtained from any Swiss Consulate General in the United States or from the Federal Tax Administration of Switzerland at the address below, together with an instruction form. Four copies of the form must be duly completed, signed before a notary public of the United States, and sent to the Federal Tax Administration of Switzerland, Eigerstrasse 65, CH-3003 Berne, Switzerland. The form must be accompanied by suitable evidence of deduction of Swiss tax withheld at source, such as certificates of deduction, signed bank vouchers or credit slips. The form may be filed on or after July 1 or January 1 following the date the dividend was payable, but no later than December 31 of the third year following the calendar year in which the dividend became payable. For US resident holders of ADSs, J.P. Morgan Chase & Co. as Depositary, will comply with these Swiss procedures on behalf of the holders, and will remit the net amount to the holders.

Stamp Duty upon Transfer of Securities. The sale of shares, whether by Swiss residents or Non-resident Holders, may be subject to federal securities transfer Stamp Duty of 0.15%, calculated on the sale proceeds, if the sale occurs through or with a Swiss bank or other Swiss securities dealer, as defined in the Swiss Federal Stamp Duty Act. The Stamp Duty has to be paid by the securities dealer and may be charged to the parties in a taxable transaction who are not securities dealers. Stamp Duty may also be due if a sale of shares occurs with or through a non-Swiss bank or securities dealer, provided (i) such bank or dealer is a member of the SWX, and (ii) the sale takes place on the SWX. In addition to this Stamp Duty, the sale of shares by or through a member of the SWX may be subject to a minor stock exchange levy.

United States Federal Income Taxation

The following is a general discussion of certain US federal income tax consequences of the ownership and disposition of our shares or ADSs that may be relevant to you if you are a US Holder (as defined below). Because this discussion does not consider any specific circumstances of any particular holder of our shares or ADSs, persons who are subject to US taxation are strongly urged to consult their own tax advisers as to the overall US federal, state and local tax consequences, as well as to the overall Swiss and other foreign tax consequences, of the ownership and disposition of our shares or ADSs. In particular, additional rules may apply to dealers in securities, tax-exempt entities, certain insurance companies, broker-dealers, investors liable for alternative minimum tax, holders that hold shares or ADSs as part of a straddle or a hedging or conversion transaction, holders whose functional currency is not the US dollar, and holders of 10% or more of our voting stock. This discussion generally applies only to US Holders who qualify for benefits under the Treaty, who hold the shares as a capital asset, and whose functional currency is the US dollar.

For purposes of this discussion, a "US Holder" is a beneficial owner of Novartis shares or ADSs who is (i) an individual citizen or resident of the United States for US federal income tax purposes, (ii) a corporation created or organized under the laws of the United States or a state thereof, (iii) an estate the income of which is subject to US federal income taxation regardless of its source, or (iv) a trust subject to the primary supervision of a US court and the control of one or more US persons.

This discussion assumes that each obligation in the Deposit Agreement and any related agreement will be performed in accordance with its terms. For purposes of this discussion, US Holders of ADRs will be treated as owners of the ADSs evidenced by such ADRs and the shares represented by such ADSs.

Dividends. For US federal income tax purposes, US Holders will be required to include the full amount (unreduced by any Withholding Tax) of a dividend paid with respect to our shares or ADSs as

ordinary income. For this purpose, a "dividend" will include any distribution paid by us with respect to our shares or ADSs (other than certain distributions of our capital stock or rights to subscribe for shares of our capital stock), as the case may be, but only to the extent such distribution is not in excess of our current and accumulated earnings and profits, as defined for US federal income tax purposes. Such dividend will constitute income from sources outside the United States. Subject to the limitations and conditions provided in the Code, US Holders may deduct from their US federal taxable income, or claim as a credit against their US federal income tax liability, the 15% withholding tax withheld pursuant to the Treaty. Under the Code, dividend payments by us on the shares or ADSs are not eligible for the dividends received deduction generally allowed to corporate shareholders. Any distribution that exceeds our earnings and profits will be treated as a nontaxable return of capital to the extent of the US Holder's tax basis in the shares or ADSs and thereafter as capital gain.

In general, a US Holder will be required to determine the amount of any dividend paid in Swiss francs by translating the Swiss francs into US dollars at the spot rate on the date of receipt. The tax basis of Swiss francs received by a US Holder generally will equal the US dollar equivalent of such Swiss francs at the spot rate on the date such Swiss francs are received. Upon subsequent exchange of such Swiss francs for US dollars, or upon the use of such Swiss francs to purchase property, you will generally recognize exchange gain or loss equal to the difference between your tax basis for the Swiss francs and the US dollars received or, if property is received, the fair value of the property on the date of the exchange.

Sale or Other Disposition. Upon a sale or exchange of shares or ADSs, US Holders generally will recognize capital gain or loss in an amount equal to the difference between the amount realized on the disposition and the US Holder's tax basis in the shares or ADSs. This capital gain or loss will be long-term capital gain or loss if the holding period in the shares or ADSs exceeds one year. The deductibility of capital losses is subject to limitations. If the US Holder is an individual, any capital gain generally will be subject to US federal income tax at preferential rates if the US Holder meets the specified minimum holding periods. Such gain or loss, if any, generally will be US source gain or loss.

United States Information Reporting and Backup Withholding. Dividend payments with respect to shares or ADSs and proceeds from the sale, exchange or redemption of shares or ADSs may be subject to information reporting to the Internal Revenue Service ("IRS") and possible US backup withholding at a current rate of 30%. Certain exempt recipients (such as corporations) are not subject to these information reporting requirements. Backup withholding will not apply, however, to a US Holder who furnishes a correct taxpayer identification number or certificate of foreign status and makes any other required certification or who is otherwise exempt from backup withholding. Any US Holders required to establish their exempt status generally must file IRS Form W-9 ("Request for Taxpayer Identification Number and Certification"). Non-US holders are generally not subject to US information or backup withholding. However, such holders may be required to provide certification of non-US status in connection with payments received in the United States or through US-related financial intermediaries. Amounts withheld as backup withholding may be credited against a US Holder's federal income tax liability, and a US Holder may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS and furnishing any required information. Finalized Treasury regulations have generally expanded the circumstances under which US information reporting and backup withholding may apply. US Holders should consult their own tax advisors regarding the application of the US information reporting and backup withholding rules, including the finalized Treasury regulations.

10.F Dividends and paying agents

Not applicable.

10.G Statement by experts

Not applicable.

10.H Documents on display

The documents that are exhibits to or incorporated by reference in this annual report can be read at the US Securities and Exchange Commission's public reference facilities at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549.

10.I Subsidiary Information

Not applicable.

Item 11. Quantitative and Qualitative Disclosures about Non-Product-Related Market Risk

	Local Currencies	CHF
Growth 2001 and currency contribution (continuing activities):		
Sales	14%	10%
Operating income	9%	8%
Net income	8%	8%

	Sales	Costs
Sales and operating costs by currencies:		
$	45%	31%
Euro	23%	22%
CHF	5%	26%
Yen	8%	5%
Other	19%	16%
	100%	100%

	Liquid Funds	Financial Debt
Liquid funds and financial debt by currencies:		
$	8%	46%
Euro	35%	4%
CHF	55%	21%
Yen		24%
Other	2%	5%
	100%	100%

	Local Currencies	CHF
Growth 2000 and currency contribution (continuing activities):		
Sales	8%	15%
Operating income	2%	6%
Net income	5%	8%

	Sales	Costs
Sales and operating costs by currencies:		
$	44%	33%
Euro	24%	23%
CHF	6%	26%
Yen	8%	5%
Other	18%	13%
	100%	100%

	Liquid funds	Financial debt
Liquid funds and financial debt by currencies:		
$	27%	45%
Euro	31%	15%
CHF	41%	30%
Yen		7%
Other	1%	3%
	100%	100%

Market Risk

In addition to market risk regarding our products, we are exposed to market risk regarding our liquid assets and investments, primarily related to foreign exchange, interest rates and market value of the investments of liquid funds. We actively monitor these exposures. To manage the volatility relating to these exposures, we enter into a variety of derivative financial instruments. Our objective is to reduce, where it is deemed appropriate to do so, fluctuations in earnings and cash flows associated with changes in interest rates, foreign currency rates and market rates of investments of liquid funds. It is our policy and practice to use derivative financial instruments to manage exposures and to enhance the yield on the investment of liquid funds. We do not enter any financial transactions containing a risk that cannot be quantified at the time the transaction is concluded; *i.e.*, we do not sell short. We only sell existing assets in transactions and future transactions (in the case of anticipatory hedges) which we confidently expect we will have in the future based on past experience. In the case of liquid funds, we write call options on assets we have or we write put options on positions we want to acquire and have the liquidity to acquire. We expect that any loss in value for those instruments generally would be offset by increases in the value of the underlying transactions.

Foreign exchange rates: We use the Swiss franc as our reporting currency and we are therefore exposed to foreign exchange movements, primarily in US, European, Japanese, other Asian and Latin American currencies. On December 31, 2001, we had long and short forward exchange/option contracts with equivalent values of CHF 7.1 billion and CHF 13.3 billion, respectively. At December 31, 2000, we had long and short forward exchange/option contracts with equivalent values of CHF 8.2 billion and CHF 13.8 billion, respectively.

Net investments in foreign countries are long-term investments. Their fair value changes through movements of the currency exchange rates. In the very long term, however, the difference in the inflation rate should match the exchange rate movement, so that the market value of the real assets abroad should compensate the change due to currency movements. For this reason, we only hedge the net investments in foreign subsidiaries in exceptional cases.

Commodities: We have only a very limited exposure to price risk related to anticipated purchases of certain commodities used as raw materials by our businesses. A change in those prices may alter the gross margin of a specific business, but generally by not more than 10% of the margin and thus below materiality levels. Accordingly, we do not enter into significant commodity future, forward and option contracts to manage fluctuations in prices of anticipated purchases.

Interest rates: We manage our net exposure to interest rate risk through the proportion of fixed rate debt and variable rate debt in our total debt portfolio. To manage this mix, we may enter into interest rate swap agreements, in which we exchange the periodic payments, based on a notional amount and agreed-upon fixed and variable interest rates. Our percentage of fixed rate debt to total financial debt was 46%, 34% and 28% at December 31, 2001, 2000 and 1999, respectively.

Equity risk: We purchase equities as investments of our liquid funds. As a policy, we limit our holdings in an unrelated company to less than 5% of our liquid funds. Potential investments are thoroughly analyzed in respect of their past financial track record (mainly cash flow return on investment), their market potential, their management and their competitors. Call options are written on equities which we have and put options are written on equities which we want to buy and for which cash has been reserved.

Management summary: Use of the above-mentioned derivative financial instruments has not had a material impact on our financial position at December 31, 2001 and 2000 or on the results of our operations for the years ended December 31, 2001, 2000 and 1999.

Value at risk: We use a value at risk ("VAR") computation to estimate the potential ten-day loss in the fair value of our interest rate-sensitive financial instruments, the loss in pre-tax earnings of our foreign currency price-sensitive derivative financial instruments, and the potential ten-day loss of our equity holdings. We use a ten-day period because it is assumed that not all positions could be undone in a single day, given the size of the positions. The VAR computation includes our debt; short-term and long-term investments; foreign currency forwards, swaps and options and anticipated transactions. Foreign currency trade payables and receivables, and net investments in foreign subsidiaries are excluded from the computation.

The VAR estimates are made assuming normal market conditions, using a 95% confidence interval. We use a "Delta Normal" model to determine the observed inter-relationships between movements in interest rates, stock markets and various currencies. These inter-relationships are determined by observing interest rate, stock market movements and forward currency rate movements over a 60-day period for the calculation of VAR amounts.

The estimated potential ten-day loss in fair value of our interest rate-sensitive instruments, primarily debt and investments of liquid funds under normal market conditions, the estimated potential ten-day loss in pre-tax earnings from foreign currency instruments under normal market conditions, and the estimated potential ten-day loss on our equity holdings, as calculated in the VAR model, follow:

	At December 31,	
	2001	**2000**
	(CHF millions)	
Instruments sensitive to foreign currency rates	226	34
Instruments sensitive to equity market movements	224	164
Instruments sensitive to interest rates	64	18
Total all instruments	324	241

The average, high, and low VAR amounts for 2001 are as follows:

	Average	High	Low
	(CHF millions)		
Instruments sensitive to foreign currency rates	235	548	94
Instruments sensitive to equity market movements	396	642	234
Instruments sensitive to interest rates	39	71	23
Total all instruments	515	817	266

The VAR computation is a risk analysis tool designed to statistically estimate the maximum probable ten-days loss from adverse movements in interest rates, foreign currency rates and equity prices under normal market conditions. The computation does not purport to represent actual losses in fair value or earnings to be incurred by us, nor does it consider the effect of favorable changes in market rates. We cannot predict actual future movements in such market rates and do not present these VAR results to be indicative of future movements in such market rates or to be representative of any actual impact that future changes in market rates may have on our future results of operations or financial position.

In addition to these VAR analyses, we use stress-testing techniques. Such stress-testing is aimed at reflecting a worst case scenario. For these calculations, we use the worst movements during a period of six months over the past 20 years in each category. For 2001 and 2000, the worst case loss scenario was configured as follows:

	At December 31,	
	2001	2000
	(CHF millions)	
Bond portfolio	895	96
Money market and linked financial instruments	457	760
Equities	817	1,539
Foreign exchange risks	151	449
Total	**2,320**	**2,844**

In our risk analysis, we consider this worst case scenario acceptable inasmuch as it could reduce the income, but would not endanger the solvency and/or the investment grade credit standing of the Group. While it is highly unlikely that all worst case fluctuations would happen simultaneously, as shown in the model, the actual market can, of course, produce bigger movements in the future.

The major financial risks are managed centrally by our Group Treasury. Only residual risks and some currency risks are managed by our affiliates. The collective amount of the residual risks is, however, below 10% of the global risks.

We have a written Treasury Policy, have implemented a strict segregation of front office and back office controls, and do random checks of our positions with the counter parties. In addition, internal audits on the information management of the Treasury function are performed at regular intervals.

Item 12. Description of Securities other than Equity Securities

Not applicable.

Part II

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and use of Proceeds

None.

Item 15. [Reserved]

Item 16. [Reserved]

Part III

Item 17. Financial Statements

Not applicable.

Item 18. Financial Statements

The following financial statements are filed as part of this annual report on Form 20-F.

Item 19. Exhibits

1.1 Articles of Association, as amended March 22, 2001 (in English translation).

2.1 Amended and Restated Deposit Agreement dated as of May 11, 2000 among Novartis AG, J.P. Morgan Chase & Co., as depositary, and all holders from time to time of ADR's issued thereunder (incorporated by reference from the Registration Statement on Form F-6, File No. 333-11758, as filed with the Commission on March 30, 2000).

2.2 Amendment No. 1 to the Amended and Restated Deposit Agreement (incorporated by reference from Post-Effective Amendment No. 1 to the Registration Statement on Form F-6, File No. 333-11758, as filed with the Commission on September 8, 2000).

2.3 Amendment No. 2 to the Amended and Restated Deposit Agreement dated as of May 7, 2001 (incorporated by reference from the Registration Statement on Form F-6, File No. 333-13446, as filed with the Commission on May 3, 2001).

2.4 Fiscal Agency Agreement related to the issuance by Novartis Securities Investment Ltd. of €900,000,000 aggregate principal amount of 4% guaranteed notes, guaranteed by Novartis AG, among Novartis Securities Investment Ltd., Novartis AG, Citibank N.A., and Banque Générale dù Luxembourg S.A.

2.5 Restricted Issuance Agreement dated as of January 11, 2002 among Novartis AG, J.P. Morgan Chase & Co., as depositary, and all holders from time to time of ADRs issued thereunder (incorporated by reference from the Registration Statement on Form F-3, File No. 333-81862, as filed with the Commission on January 31, 2002).

4.1 Master Agreement dated December 2, 1999 between Novartis AG and AstraZeneca PLC, as amended and restated on September 7, 2000 (incorporated by reference from Syngenta AG's Registration Statement on Form F-1, File No. 333-12640, as filed with the Commission on September 29, 2000).

6. For Earnings per share calculation, see note 7 to our consolidated financial statements.

8.1 For a list of all of our subsidiaries, see note 32 to our consolidated financial statements.

10.1 Consent of PricewaterhouseCoopers AG to the incorporation by reference of the audit report contained in this Form 20-F into Novartis AG's Registration Statement on Form F-3 (File No. 333-81862) as filed with the SEC on January 31, 2002, the Form F-3 filed on May 11, 2002 (File No. 333-60712) and the Form S-8 filed on May 14, 2001 (File No. 333-13506).

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

NOVARTIS AG

By: /s/ DR. RAYMUND BREU

Name: Dr. Raymund Breu
Title: *Chief Financial Officer, Novartis Group*

By: /s/ DR. URS BÄRLOCHER

Name: Dr. Urs Bärlocher
Title: *Head of Legal and General Affairs, Novartis Group*

Date March 18, 2002

NOVARTIS GROUP
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Accountants

To the Shareholders and Board of Directors
of the Novartis Group, Basel

We have audited the consolidated financial statements (balance sheet, income statement, cash flow statement, statement of changes in equity and notes) of the Novartis Group as of December 31, 2001 and 2000 and for each of the three years in the period ended December 31, 2001, all expressed in Swiss francs.

These consolidated financial statements are the responsibility of the Board of Directors. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We confirm that we meet the Swiss legal requirements concerning professional qualification and independence.

Our audits were conducted in accordance with auditing standards promulgated by the profession and with International Standards on Auditing issued by the International Federation of Accountants (IFAC) and auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement. We have examined on a test basis evidence supporting the amounts and disclosures in the consolidated financial statements. We have also assessed the accounting principles used, significant estimates made and the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the financial position, of the Novartis Group as of December 31, 2001 and 2000 and the results of operations and the cash flows for each of the three years in the period ended December 31, 2001 in accordance with International Accounting Standards and comply with Swiss law.

International Accounting Standards vary in certain respects from accounting principles generally accepted in the United States of America. The application of the latter would have affected the determination of the net income of the Group expressed in Swiss francs for each of the three years in the period ended December 31, 2001 and the determination of equity of the Novartis Group also expressed in Swiss francs at December 31, 2001 and 2000 to the extent summarized in note 33 to the consolidated financial statements.

PricewaterhouseCoopers AG

S.A.J. Bachmann J. P. Herron

Basel, January 31, 2002

NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED INCOME STATEMENTS

(for the years ended December 31, 2001, 2000 and 1999)

	Notes	2001[1]	2001	2000	1999
		($ millions)	(CHF millions)	(CHF millions)	(CHF millions)
Sales	3/4	**19,070**	**32,038**	**35,805**	**32,465**
Cost of goods sold		(4,694)	(7,886)	(10,242)	(9,822)
Gross profit		**14,376**	**24,152**	**25,563**	**22,643**
Marketing & distribution		(6,606)	(11,098)	(10,945)	(9,561)
Research & development	3	(2,494)	(4,189)	(4,657)	(4,246)
Administration & general overheads		(945)	(1,588)	(2,078)	(1,493)
Operating income	3/4	**4,331**	**7,277**	**7,883**	**7,343**
Income from associated companies	11	83	139	98	383
Financial income, net	5	635	1,067	1,091	793
Income before taxes and minority interests		**5,049**	**8,483**	**9,072**	**8,519**
Taxes	6	(857)	(1,440)	(1,820)	(1,833)
Income before minority interests		**4,192**	**7,043**	**7,252**	**6,686**
Minority interests		(11)	(19)	(42)	(27)
NET INCOME		**4,181**	**7,024**	**7,210**	**6,659**
Earnings per share	7	1.63	2.73	2.75	2.50
Diluted earnings per share	7	1.62	2.72	2.75	2.50

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

The accompanying notes form an integral part of the consolidated financial statements.

NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS
CONSOLIDATED BALANCE SHEETS
(at December 31, 2001 and 2000)

	Notes	2001[1]	2001	2000
		($ millions)	(CHF millions)	(CHF millions)
ASSETS				
Long-term assets				
Tangible fixed assets	8	5,393	9,060	9,030
Intangible assets	9	3,898	6,548	5,830
Investments in associated companies	11	3,997	6,715	1,531
Deferred taxes	12	1,926	3,235	3,265
Other financial assets	13	4,182	7,027	5,601
Total long-term assets		**19,396**	**32,585**	**25,257**
Current assets				
Inventories	14	2,448	4,112	4,122
Trade accounts receivable	15	3,184	5,349	5,283
Other current assets	16	1,723	2,895	3,011
Marketable securities	10	6,367	10,697	11,720
Cash and cash equivalents		6,635	11,147	8,803
Total current assets		**20,357**	**34,200**	**32,939**
TOTAL ASSETS		**39,753**	**66,785**	**58,196**
EQUITY AND LIABILITIES				
Equity	17			
Share capital		859	1,443	1,443
Treasury shares		(100)	(169)	(139)
Reserves		24,387	40,971	35,558
Total equity		**25,146**	**42,245**	**36,862**
Minority interests		**62**	**104**	**78**
Liabilities				
Long-term liabilities				
Financial debts	18	1,483	2,492	2,283
Deferred taxes	12	2,312	3,885	3,488
Other long-term liabilities	19	2,280	3,830	3,845
Total long-term liabilities		**6,075**	**10,207**	**9,616**
Short-term liabilities				
Trade accounts payable		1,077	1,809	1,591
Financial debts	21	3,020	5,074	3,779
Other short-term liabilities	22	4,373	7,346	6,270
Total short-term liabilities		**8,470**	**14,229**	**11,640**
Total liabilities		**14,545**	**24,436**	**21,256**
TOTAL EQUITY AND LIABILITIES		**39,753**	**66,785**	**58,196**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

The accompanying notes form an integral part of the consolidated financial statements.

NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS
CONSOLIDATED CASH FLOW STATEMENTS
(for the years ended December 31, 2001, 2000 and 1999)

	Notes	2001[1]	2001	2000	1999
		($ millions)	(CHF millions)	(CHF millions)	(CHF millions)
Net income		**4,181**	**7,024**	**7,210**	**6,659**
Reversal of non-cash items					
Minority interests		11	19	42	27
Taxes		857	1,440	1,820	1,833
Depreciation and amortization on tangible fixed assets		577	969	1,196	1,261
Intangible assets		464	780	309	248
Financial assets		18	31		
Income from associated companies		(83)	(139)	(98)	(383)
Gains on disposal of tangible and intangible assets		(303)	(510)	(1)	(288)
Net financial income		(635)	(1,067)	(1,091)	(793)
Interest and other financial receipts		464	779	1,944	1,816
Interest and other financial payments		(232)	(391)	(1,211)	(815)
Taxes paid		(820)	(1,377)	(2,176)	(1,690)
Cash flow before working capital changes		**4,499**	**7,558**	**7,944**	**7,875**
Restructuring payments		(251)	(421)	(439)	(488)
Change in net current assets and other operating cash flow items	23	122	205	107	(494)
Cash flow from operating activities		**4,370**	**7,342**	**7,612**	**6,893**
Investment in tangible fixed assets		(804)	(1,351)	(1,353)	(1,371)
Proceeds from disposals of tangible fixed assets		164	275	347	286
Purchase of intangible and financial assets		(4,495)	(7,552)	(3,149)	(733)
Proceeds from disposals of intangible and financial assets		923	1,550	471	385
Acquisition/divestment of subsidiaries	24	(101)	(169)	(1,371)	239
Acquisition of minorities		(1)	(1)		(68)
Proceeds from disposals of marketable securities		1,531	2,573	4,839	(1,755)
Cash flow used for investing activities		**(2,783)**	**(4,675)**	**(216)**	**(3,017)**
Acquisition of treasury shares		(2,290)	(3,848)	(1,165)	(1,919)
Proceeds from issue of options on Novartis shares		2,414	4,056		
Change in long-term financial debts		749	1,258	(124)	(336)
Change in short-term financial debts		222	374	(1,402)	(130)
Dividends paid		(1,306)	(2,194)	(2,064)	(1,935)
Cash flow used for financing activities		**(211)**	**(354)**	**(4,755)**	**(4,320)**
Net effect of currency translation on cash and cash equivalents		19	31	(119)	74
Net change in cash and cash equivalents		**1,395**	**2,344**	**2,522**	**(370)**
Cash and cash equivalents at the beginning of the year		**5,240**	**8,803**	**6,281**	**6,651**
Cash and cash equivalents at end of the year		**6,635**	**11,147**	**8,803**	**6,281**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

The accompanying notes form an integral part of the consolidated financial statements.

NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
(for the years ended December 31, 2001, 2000 and 1999)

	Notes	Share premium	Retained earnings	Cumulative translation differences	Fair value of deferred cash flow hedges	Total reserves	Share capital	Treasury shares	Total equity
					(in CHF millions)				
January 1, 1999		**4,379**	**27,660**	**(1,971)**		**30,068**	**1,443**	**(115)**	**31,396**
Change in accounting policy on employee benefits	25a		1,071			1,071			1,071
Dividends to third parties	25b		(1,935)			(1,935)			(1,935)
Acquisition of treasury shares		(1,904)				(1,904)		(15)	(1,919)
Translation effects				1,944		1,944			1,944
Net income			6,659			6,659			6,659
December 31, 1999		**2,475**	**33,455**	**(27)**		**35,903**	**1,443**	**(130)**	**37,216**
Dividends to third parties	25b		(2,064)			(2,064)			(2,064)
Transfer of share premium	25c	(2,186)	2,186						
Acquisition of treasury shares			(1,156)			(1,156)		(9)	(1,165)
Effect of Agribusiness spin-off	25d		(3,655)	(109)		(3,764)			(3,764)
Translation effects	25e			(571)		(571)			(571)
Net income			7,210			7,210			7,210
December 31, 2000		**289**	**35,976**	**(707)**		**35,558**	**1,443**	**(139)**	**36,862**
Fair value adjustments on financial instruments	25f		1,054		(20)	1,034			1,034
Dividends to third parties	25b		(2,194)			(2,194)			(2,194)
Acquisition of treasury shares	25g		(3,825)			(3,825)		(30)	(3,855)
Issue of call options on Novartis shares	25h	3,102				3,102			3,102
Issue of put options on Novartis shares	25i	909				909			909
Translation effects	25e			(637)		(637)			(637)
Net income			7,024			7,024			7,024
December 31, 2001		**4,300**	**38,035**	**(1,344)**	**(20)**	**40,971**	**1,443**	**(169)**	**42,245**

The accompanying notes form an integral part of the consolidated financial statements.

NOTES TO THE NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

1. Accounting policies

The Novartis Group ("Group" or "Novartis") consolidated financial statements are prepared in accordance with the historical cost convention and comply with the standards formulated by the International Accounting Standards Board (IASB) and its predecessor organization the International Accounting Standards Committee (IASC) and the following significant accounting policies.

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from those estimates.

Changes in accounting principles: IASB and IASC have issued a number of new standards in recent years. The following are the most significant for the Novartis Group.

With effect from January 1, 1999, the Group has adopted revised IAS 19 relating to employee benefits. The most significant change is that the discount rate used to value the defined benefit obligation is now the current long-term rate at the balance sheet date instead of a long-term average interest rate. The transitional provisions of this Standard require that any unrecognized surpluses in the funded plans, using the appropriately revised actuarial assumptions, are recognized immediately. Furthermore, the new actuarial assumptions produced deficits in certain funds, which have also been recognized immediately.

As permitted by IAS, the Group has chosen to record the impact of this change in accounting policy, net of any deferred tax consequences, as a net credit to Group equity at January 1, 1999. For practicality reasons no restatement of prior year amounts has been made.

The following are the significant standards, which were adopted by the Novartis Group from January 1, 2000:

- IAS 36 "Impairment of Assets"
- IAS 37 "Provisions, Contingent Liabilities and Contingent Assets"
- IAS 38 "Intangible Assets"

The adoption of these standards did not have any significant impact on the comparability of the 2000 consolidated financial statements with those of 1999.

The Group adopted IAS 39 "Financial Instruments: Recognition and Measurement" from January 1, 2001. This involved the recording in the balance sheet of the unrealized gains on the available-for-sale marketable securities and derivatives portfolios.

Scope of consolidation: The financial statements include all companies which Novartis AG, Basel, directly or indirectly controls (generally over 50% of voting interest).

Special purpose entities, irrespective of their legal structure, are consolidated in instances where the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. As permitted by IAS, equity compensation and post-employment plans are not consolidated.

Investments in associated companies, (generally investments of between 20% and 50% in a company's voting shares) and joint ventures are accounted for by using the equity method.

1. Accounting policies (Continued)

Principles of consolidation: The annual closing date of the individual financial statements is December 31. The financial statements of consolidated companies operating in highly inflationary economies are adjusted to eliminate the impact of high inflation.

The purchase method of accounting is used for acquired businesses. Companies acquired or disposed of during the year are included in the consolidated financial statements from the date of acquisition or up to the date of disposal.

The Group was formed on December 20, 1996 when all assets and liabilities of Sandoz AG and Ciba-Geigy AG were transferred by universal succession to Novartis AG. The transaction was structured as a merger of equals based on an exchange of shares, providing former Sandoz AG shareholders with 55% and former Ciba-Geigy AG shareholders with 45% of the new company. The uniting of interests method was used for this transaction. The merger was consummated before the effective date of Interpretation 9 of the SIC on accounting for business combinations; if it were undertaken today, it might require a different accounting treatment.

Significant intercompany income and expenses, including unrealized gross profits from internal Novartis transactions, and intercompany receivables and payables have been eliminated.

Revenue and expense recognition: Sales are recognized on delivery or on providing services to third parties and are reported net of sales taxes and rebates. Provisions for rebates to customers are recognized in the same period that the related sales are recorded based on the contract terms. Expenses of research and service contracts in progress are recognized based on their percentage of completion.

Foreign currencies: The consolidated financial statements of Novartis are expressed in Swiss francs ("CHF" or "Swiss francs"). The local currency has primarily been used as the reporting currency throughout the world.

The Group accounts for foreign currency in accordance with IAS 21 (revised) and IAS 29.

In the respective subsidiary financial statements, monetary assets and liabilities denominated in foreign currencies are translated at the rate prevailing at the balance sheet date. Transactions are recorded using the approximate exchange rate at the time of the transaction. All resulting foreign exchange transaction gains and losses are recognized in the subsidiary's income statement.

Income, expense and cash flows of the consolidated companies have been translated into Swiss francs using average exchange rates. The balance sheets are translated using the year end exchange rates. Translation differences arising from movements in the exchange rates used to translate equity and long-term internal financing and net income are allocated to reserves.

Derivative financial instruments: The Group adopted IAS 39—*Financial Instruments: Recognition and Measurement* from January 1, 2001. Under IAS 39 derivative financial instruments are initially recognized in the balance sheet at cost and subsequently remeasured to their fair value.

The method of recognizing the resulting gain or loss is dependent on whether the derivative contract is designed to hedge a specific risk and qualifies for hedge accounting. On the date a derivative contract is entered into, the Group designates certain derivatives as either a) a hedge of the fair value of a recognized asset or liability (fair value hedge), or b) a hedge of a forecasted transaction (cash flow hedge) or firm commitment or c) a hedge of a net investment in a foreign entity.

1. Accounting policies (Continued)

Changes in the fair value of derivatives which are fair value hedges and that are highly effective are recognized in the income statement, along with any changes in the fair value of the hedged asset or liability that is attributable to the hedged risk. Changes in the fair value of derivatives in cash flow hedges are recognized in equity. Where the forecasted transaction or firm commitment results in the recognition of an asset or liability, the gains and losses previously included in equity are included in the initial measurement of the asset or liability. Otherwise, amounts recorded in equity are transferred to the income statement and classified as revenue or expense in the same period in which the forecasted transaction affects the income statement.

Hedges of net investments in foreign entities are accounted for similarly to cash flow hedges. The Group hedges certain net investments in foreign entities with foreign currency borrowings. All foreign exchange gains and losses arising on translation are recognized in equity and included in cumulative translation differences.

Certain derivative instruments, while providing effective economic hedges under the Group's policies, do not qualify for hedge accounting. Changes in the fair value of any derivative instruments that do not qualify for hedge accounting under IAS 39 are recognized immediately in the income statement.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognized in the income statement when the committed or forecasted transaction is ultimately recognized in the income statement. However, if a forecasted or committed transaction is no longer expected to occur, the cumulative gain or loss that was recognized in equity is immediately transferred to the income statement.

The purpose of hedge accounting is to match the impact of the hedged item and the hedging instrument in the income statement. To qualify for hedge accounting, the hedging relationship must meet several strict conditions with respect to documentation, probability of occurrence, hedge effectiveness and reliability of measurement. At the inception of the transaction the Group documents the relationship between hedging instruments and hedged items, as well as the risk management objective and strategy for undertaking various hedge transactions. This process includes linking all derivatives designed as hedges to specific assets and liabilities or to specific firm commitments or forecasted transactions. The Group also documents its assessment, both at the hedge inception and on an ongoing basis, as to whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

The Group's previous policy on accounting for derivative instruments not considered to be hedges was to value these at the lower of cost on inception and fair value on a portfolio basis. A net unrealized loss was included in the current year's result. A net unrealized gain was not recorded.

The Group's previous policy on accounting for derivative financial instruments considered to be hedges was very similar to IAS 39 requirements although the conditions for hedge effectiveness were less strict.

1. Accounting policies (Continued)

Tangible fixed assets: Tangible fixed assets have been valued at cost of acquisition or production cost and depreciated on a straight-line basis to the income statement, over the following estimated useful lives:

Buildings	20 to 40 years
Machinery and equipment	10 to 20 years
Furniture and vehicles	5 to 10 years
Computer hardware	3 to 7 years

Land is valued at acquisition cost, except if held under long-term lease arrangements, when it is amortized over the life of the lease. Land held under long-term lease agreements relates to upfront payments to lease land on which certain of the Group's buildings are located. Additional costs which extend the useful life of the tangible fixed assets are capitalized. Financing costs associated with the construction of tangible fixed assets are not capitalized. Tangible fixed assets which are financed by leases giving rights to use the assets as if owned are capitalized at their estimated cost at the inception of the lease, and depreciated in the same manner as other tangible fixed assets.

Long-lived assets, including identifiable intangibles and goodwill, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. When such events or changes in circumstances indicate the asset may not be recoverable, the Group estimates the future cash flows expected to result from the use of the asset and its eventual disposition. If the sum of such expected discounted future cash flows is less than the carrying amount of the asset, an impairment loss is recognized for the amount by which the asset's net book value exceeds its fair market value. For purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Fair value can be based on sales of similar assets, or other estimates of fair value such as discounting estimated future cash flows. Considerable management judgment is necessary to estimate discounted future cash flows. Accordingly, actual outcomes could vary significantly from such estimates.

Intangible assets: These are valued at their cost and reviewed periodically and adjusted for any diminution in value as noted in the preceding paragraph. Any resulting impairment loss is recorded in the income statement in general overheads. In the case of business combinations, the excess of the purchase price over the fair value of net identifiable assets acquired is recorded as goodwill in the balance sheet. Goodwill, which is denominated in the local currency of the related acquisition, is amortized to income through administration and general overheads on a straight-line basis over its useful life. The amortization period is determined at the time of the acquisition, based upon the particular circumstances, and ranges from 5 to 20 years. Goodwill relating to acquisitions arising prior to January 1, 1995 has been fully written off against reserves.

Management determines the estimated useful life of goodwill based on its evaluation of the respective companies at the time of the acquisition, considering factors such as existing market share, potential sales growth and other factors inherent in the acquired companies.

1. Accounting policies (Continued)

Other acquired intangible assets are written off on a straight-line basis over the following periods:

Trademarks	10 to 15 years
Product and marketing rights	5 to 20 years
Software	3 years
Others	3 to 5 years

Trademarks are amortized on a straight-line basis over their estimated economic or legal life, whichever is shorter, while the history of the Group has been to amortize product rights over estimated useful lives of 5 to 20 years. The useful lives assigned to acquired product rights are based on the maturity of the products and the estimated economic benefit that such product rights can provide. Marketing rights are amortized over their useful lives commencing in the year in which the rights are first utilized.

Financial assets: Associated companies and joint ventures are accounted for by the equity method. Since January 1, 2001, all other minority investments and loans are initially recorded at cost and subsequently carried at fair value. Exchange rate gains and losses on loans are recorded in the income statement. All other changes in the fair value of financial assets are deferred as a fair value adjustment in equity and recycled to the income statement when the asset is sold. Adjustments are made for other than temporary impairments in value.

Under the Group's previous accounting policy, all minority investments were carried at their acquisition cost and loans at their nominal value.

Inventories: Purchased products are valued at acquisition cost while own-manufactured products are valued at manufacturing costs including related production expenses. In the balance sheet inventory is primarily valued at standard cost, which approximates to historical cost determined on a first-in-first-out basis, and this value is used for the cost of goods sold in the income statement. Provisions are made for inventories with a lower market value or which are slow-moving. Unsaleable inventory is fully written off.

Trade accounts receivable: The reported values represent the invoiced amounts, less adjustments for doubtful receivables.

Cash and cash equivalents: Cash and cash equivalents include highly liquid investments with original maturities of three months or less. This position is readily convertible to known amounts of cash.

Marketable securities: Marketable securities consist of equity and debt securities, which are traded in liquid markets. In anticipation of the introduction of IAS 39, since December 31, 2000, the Group has classified all its marketable securities as available-for-sale, as they are not acquired to generate profit from short-term fluctuations in price. All purchases and sales of marketable securities are recognized on the trade date, which is the date that the Group commits to purchase or sell the asset. Since January 1, 2001, marketable securities are initially recorded at cost and subsequently carried at fair value. Exchange rate gains and losses on the bonds are recorded in the income statement. All other changes in the fair value of unhedged securities are deferred as a fair value adjustment in equity and recycled to the income statement when the asset is sold or impaired. The change in fair value of effectively hedged securities is recorded in the income statement where it offsets the gains and losses of the hedging derivative.

Unrealized losses on marketable securities which are considered to be other than temporary are included in financial income, net in the income statement.

1. Accounting policies (Continued)

Under the Group's previous accounting policy, marketable securities were carried at the lower of cost or market and unrealized losses were included as financial income, net in the income statement.

Up to January 1, 2000, the portfolio of bonds intended to be held-to-maturity was valued at amortized cost, whereby the discount or premium was amortized into the income statement on a pro rata basis until maturity and included in the financial result. Except for permanent diminutions in value, if any, changes in market value were not recorded for this portfolio of bonds. The majority of this portfolio was disposed of in 2000 and any remaining bonds were reclassified to available-for-sale marketable securities.

Repurchase agreements: The underlying securities are contained within marketable securities. The repurchase agreements for the securities sold and agreed to be repurchased under the agreement, are recognized gross and included in cash and cash equivalents and short-term financial debts. Income and expenses are recorded in interest income and expense, respectively.

Taxes: Taxes on income are accrued in the same periods as the revenues and expenses to which they relate. Deferred taxes have been calculated using the comprehensive liability method. They are calculated on the temporary differences that arise between the tax base of an asset or liability and its carrying value in the balance sheet of Group companies, prepared for consolidation purposes, except for those differences related to investments in subsidiaries where their reversal will not take place in the foreseeable future. Furthermore, withholding or other taxes on eventual distribution of retained earnings of Group companies are only taken into account where a dividend has been planned since, generally, the retained earnings are reinvested.

Deferred tax assets or liabilities, calculated using applicable subsidiary tax rates, are included in the consolidated balance sheet as either a long-term asset or liability, with changes in the year recorded in the income statement. Deferred tax assets are fully recognized and reduced by a valuation allowance only if it is probable that a benefit will not be realized in the future.

Pension fund, post-employment benefits, other long-term employee benefits and employee share participation plans:

(a) Defined benefit pension plans

The liability in respect of defined benefit pension plans is in all material cases the defined benefit obligation calculated annually by independent actuaries using the projected unit credit method. The defined benefit obligation is measured at the present value of the estimated future cash flows. The charge for such pension plans, representing the net periodic pension cost less employee contributions, is included in the personnel expenses of the various functions where the employees are located. Plan assets are recorded at their fair values. Significant gains or losses arising from experience adjustments, changes in actuarial assumptions, and amendments to pension plans are charged or credited to income over the service lives of the related employees.

(b) Post-employment benefits other than pensions

Certain subsidiaries provide healthcare and insurance benefits for a portion of their retired employees and their eligible dependents. The cost of these benefits is actuarially determined and included in the related function expenses over the employees' working lives. The related liability is included in long-term liabilities.

1. Accounting policies (Continued)

(c) Other long-term employee benefits

Other long-term employee benefits represent amounts due to employees under deferred compensation arrangements mandated by certain jurisdictions in which the Group conducts its operations. Benefits cost is recognized on an accrual basis in the personnel expenses of the various functions where the employees are located. The related obligation is accrued in other long-term liabilities.

(d) Employee share participation plans

No compensation cost is recognized in these financial statements for options or shares granted to employees from employee share participation plans.

Research and development: Research and development expenses are fully charged to the income statement. The Group considers that the regulatory and other uncertainties inherent in the development of its key new products preclude it from capitalizing development costs. Acquired projects, which have achieved technical feasibility, usually signified by US Food & Drug Administration or comparable regulatory body approval, are capitalized because it is probable that the costs will give rise to future economic benefits. Laboratory buildings and equipment included in tangible fixed assets are depreciated over their estimated useful lives.

Government grants: Government grants are deferred and recognized in the income statement over the period necessary to match them with the related costs which they are intended to compensate for.

Restructuring charges: Restructuring charges are accrued against operating income in the period in which management has committed to a plan and it is probable a liability has been incurred and the amount can be reasonably estimated. Restructuring charges or releases are included in general overheads. Releases of accrued amounts are recognized in the period in which it is decided that the amounts will not be required.

Environmental liabilities: Novartis is exposed to environmental liabilities relating to its past operations, principally in respect of remediation costs. Provisions for non-recurring remediation costs are made when expenditure on remedial work is probable and the cost can be estimated. Cost of future expenditures do not reflect any claims or recoveries. The Group records recoveries at such time the amount is reasonably estimable and collection is probable. With regard to recurring remediation costs, the discounted amount of such annual costs for the next 30 years are calculated and recorded in long-term liabilities.

Dividends: Dividends are recorded in the Group's financial statements in the period in which they are approved by the Group's shareholders.

Treasury shares and share split: Treasury shares are deducted from equity at their nominal value of CHF .50 per share. Prior to the share split, which became effective on May 7, 2001, the nominal value was CHF 20.00 per share. Differences between this amount and the amount paid for acquiring, or received for disposing of, treasury shares are recorded in consolidated equity. Except where indicated, all share related data has been restated to reflect the effect of the share split.

2. Changes in the scope of consolidation

The following significant changes were made during 2001, 2000 and 1999:

Acquisitions: 2001

Generics

In January 2001, the sector acquired the generic business line in the USA of Apothecon Inc., the generic arm of Bristol-Myers Squibb, for CHF 66 million in cash. No financial debts were acquired. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 51 million which is being amortized on a straight-line basis over 15 years.

In January 2001, the sector acquired the generic business in six European countries from BASF AG, Germany for CHF 119 million in cash and the assumption of CHF 53 million of debt. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 121 million which is being amortized on a straight-line basis over 20 years.

In April 2001, the sector acquired 100% of Labinca SA, Buenos Aires, Argentina for CHF 118 million in cash and the assumption of CHF 14 million of debt. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 95 million which is being amortized on a straight-line basis over 20 years.

In April 2001, the sector acquired 100% of Lagap Pharmaceuticals Ltd., UK, from Adcock Ingram Ltd for CHF 32 million in cash and the assumption of CHF 33 million of debt. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 53 million which is being amortized on a straight-line basis over 20 years.

Corporate

During the first half of 2001, the Group acquired 21.3% of the voting shares of Roche Holding Ltd for CHF 5.2 billion. This represents approximately 4% of the total shares and equity securities of Roche Holding Ltd and is accounted for using the equity method of accounting. The related goodwill was CHF 1,246 million which is being amortized on a straight-line basis over 20 years.

Acquisitions: 2000

Generics

On April 10, 2000, the sector acquired 72% of Grandis Biotech GmbH, Freiburg, Germany for CHF 26 million in cash. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 32 million, which is being amortized on a straight-line basis over 15 years.

CIBA Vision

On October 2, 2000 the sector acquired 100% of Wesley Jessen VisionCare Inc., Des Plaines, Illinois, USA for CHF 1.3 billion (USD 0.8 billion) in cash.

The net assets acquired consisted of tangible fixed assets (CHF 177 million), inventories (CHF 182 million), trade accounts receivable (CHF 93 million), deferred tax assets (CHF 56 million), other assets (CHF 118 million); deferred tax liabilities (CHF 241 million), short term financial debts (CHF 155 million) and other liabilities (CHF 330 million). The acquisition was accounted for under the purchase method of

2. Changes in the scope of consolidation (Continued)

accounting and the related goodwill and intangible assets were CHF 1.4 billion which are being amortized on a straight-line basis over 20 years.

Animal Health

In January 2000, Novartis Animal Health completed the 100% acquisition of Vericore Ltd., a UK-based company focused on vaccines, parasiticides and other products for farm animals, pharmaceuticals for companion animals, and aquaculture. The acquisition price amounted to CHF 96 million and was paid in cash.

In June 2000, Novartis Animal Health increased the 40% stake in the Canadian-based aquaculture company Cobequid Life Sciences Inc., which had been obtained in the Vericore acquisition, to 100% for CHF 38 million in cash.

These acquisitions were accounted for under the purchase method of accounting and the related goodwill was CHF 163 million which is being amortized on a straight-line basis over 15 years.

Acquisitions: 1999

Generics

On December 9, 1999, the sector company Geneva Pharmaceuticals Inc., USA acquired the assets of Invamed Inc., New Jersey, USA for CHF 149 million. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 127 million which is being amortized on a straight-line basis over 15 years.

CIBA Vision

On July 2, 1999, the sector acquired the assets of the interocular lens business of Mentor Corporation, California for CHF 60 million. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 26 million which is being amortized on a straight-line basis over 15 years.

The above mentioned 2001, 2000, and 1999 acquisitions did not have a material pro forma impact on the Group's results of operations, cash flows or financial position.

Divestments: 2000

Agribusiness sector

On December 1, 1999 the Board of Novartis approved the divestment of the Agribusiness sector by merging it with the Agrochemicals business of AstraZeneca Plc.

Novartis spun-off its Agribusiness sector on November 6, 2000 to its shareholders as part of the transactions necessary to form Syngenta AG. On the same day AstraZeneca Plc. also spun-off its Crop Protection activities which were then merged with Novartis Agribusiness. On spin-off, Novartis AG shareholders owned 61% of the new company and AstraZeneca shareholders 39%. Syngenta AG was listed on the Swiss, New York, London and Stockholm exchanges on November 13, 2000.

The sales and operating income recorded by Novartis Agribusiness up to the spin-off date were CHF 6.7 billion and CHF 1.2 billion, respectively. This transaction involved the Group transferring CHF

2. Changes in the scope of consolidation (Continued)

3.3 billion of debt to Syngenta. The Group's equity has been reduced by a net CHF 3.8 billion (after taking into account a receipt from Novartis shareholders of CHF 687 million in connection with this transaction) due to this spin-off to its shareholders. Novartis incurred costs in relation to this transaction of CHF 69 million.

Divestments: 1999

Consumer Health

The Group's 51% interest in OLW Snacks AB, Sweden and 49% interest in Chips OLW AB, Sweden was sold on January 25, 1999. The Group's 100% stake in the German Eden Group was sold on May 11, 1999, and the 100% interest in Wasa operations in Sweden, Germany, Denmark, Norway and Poland were sold on June 30, 1999.

The sales price for these divestments totaled CHF 625 million and resulted in a pre-tax gain of CHF 352 million which has been recorded in operating income in the consolidated income statement. 1999 sales of the various divested activities up to their respective date of divestment amounted to CHF 182 million.

Sales relating to these businesses generated an operating income in 1999 of CHF 23 million.

3. Sectorial breakdown of key figures 2001, 2000 and 1999

Novartis is organized on a worldwide basis into five continuing operating sectors and corporate activities. Agribusiness is presented as a discontinued sector. These sectors, which are based on internal management accounts, are as follows:

Continuing sectors

The *Pharmaceuticals* sector manufactures, distributes, and sells branded pharmaceuticals in the following therapeutic areas: cardiovascular, metabolism and endocrinology; oncology and hematology; central nervous system; transplantation; dermatology; respiratory; rheumatology; bone and hormone replacement therapy; ophthalmics.

The *Generics* sector manufactures, distributes and sells off-patent pharmaceutical products and substances.

The *Consumer Health* sector manufactures, distributes and sells health and medical nutrition products and a variety of over-the-counter (OTC) medicines.

The *CIBA Vision* sector manufactures, distributes and sells contact lenses, lens care products, and ophthalmic surgical products.

The *Animal Health* sector manufactures, distributes and sells veterinary products for farm and companion animals.

Corporate

This includes the costs of the Group headquarters and those of corporate coordination functions in major countries. In addition, it includes certain items of income and expense, which are not directly attributable to specific sectors. Usually, no allocation of Corporate items is made to the continuing sectors

3. Sectorial breakdown of key figures 2001, 2000 and 1999 (Continued)

although there are charges made by Corporate for share and share option programs and certain pension plans and in 2000 and 1999 there was an allocation of CHF 60 million and CHF 90 million respectively, of Corporate overheads to the discontinued Agribusiness sector.

Discontinued sector

The *Agribusiness* sector principally manufactured, distributed and sold insecticides, herbicides and fungicides and sold seeds for growing corn, sugarbeet, oilseeds, vegetables and flowers.

The Group's sectors are businesses that offer different products. These sectors are managed separately because they manufacture, distribute, and sell distinct products which require differing technologies and marketing strategies.

Revenues on intersector sales are determined on an arm's length basis. The accounting policies of the sectors described above are the same as those described in the summary of accounting policies except that sectors receive a Corporate charge for share and share option programs which have no net cost in the Group's IAS consolidated financial statements. The Group principally evaluates sector performance and allocates resources based on operating income.

Net sector operating assets consist primarily of tangible fixed assets, intangible assets, inventories and receivables less operating liabilities. Corporate assets and liabilities principally consist of net liquidity (cash, cash equivalents, marketable securities less financial debts), investments in associated companies and deferred and current taxes.

3. Sectorial breakdown of key figures 2001, 2000 and 1999 (Continued)

2001	Pharmaceuticals	Generics	Consumer Health	CIBA Vision	Animal Health	Corporate	Group
			(in CHF millions except employees)				
Sales to third parties	20,181	2,433	6,675	1,787	962		32,038
Sales to other sectors	230	203	29	17	15	(494)	
Sales of sectors	**20,411**	**2,636**	**6,704**	**1,804**	**977**	**(494)**	**32,038**
Operating income	**5,677**	**281**	**920**	**174**	**138**	**87**	**7,277**
Income from associated companies	190	2	(14)			(39)	139
Financial income, net							1,067
Income before taxes and minority interests							**8,483**
Taxes							(1,440)
Income before minority interests							**7,043**
Minority interests							(19)
Net income							**7,024**
Included in operating income are:							
Research and development	(3,447)	(169)	(181)	(98)	(93)	(201)	(4,189)
Depreciation of tangible fixed assets	(578)	(126)	(105)	(96)	(14)	(20)	(939)
Amortization of intangible assets	(306)	(87)	(45)	(102)	(15)	(9)	(564)
Impairment charges on tangible and intangible assets	(242)		(4)				(246)
Restructuring charges			(21)				(21)
Total assets	**18,631**	**3,362**	**4,686**	**2,909**	**735**	**36,462**	**66,785**
Liabilities	(5,487)	(740)	(2,158)	(599)	(163)	(15,289)	(24,436)
Total equity and minority interests	**13,144**	**2,622**	**2,528**	**2,310**	**572**	**21,173**	**42,349**
Less net liquidity						(14,278)	(14,278)
Net operating assets	**13,144**	**2,622**	**2,528**	**2,310**	**572**	**6,895**	**28,071**
Included in total assets are:							
Total tangible fixed assets	5,897	1,081	893	579	73	537	9,060
Additions to tangible fixed assets	617	209	129	153	19	224	1,351
Total investments in associated companies	1,554	7				5,154	6,715
Employees at year end	**41,256**	**7,230**	**12,824**	**6,797**	**1,997**	**1,012**	**71,116**

3. Sectorial breakdown of key figures 2001, 2000 and 1999 (Continued)

2000	Pharmaceuticals	Generics	Consumer Health	CIBA Vision	Animal Health	Corporate	Total continuing sectors	Discontinued Agribusiness sector	Group
					(in CHF millions except employees)				
Sales to third parties	18,150	1,973	6,514	1,392	1,083		29,112	6,693	35,805
Sales to other sectors	245	170	42	8		(465)			
Sales of sectors	**18,395**	**2,143**	**6,556**	**1,400**	**1,083**	**(465)**	**29,112**	**6,693**	**35,805**
Operating income	**5,401**	**242**	**869**	**100**	**179**	**(64)**	**6,727**	**1,156**	**7,883**
Income from associated companies	104	1	(7)	(1)			97	1	98
Financial income, net							1,216	(125)	1,091
Income before taxes and minority interests							**8,040**	**1,032**	**9,072**
Taxes							(1,504)	(316)	(1,820)
Income before minority interests							**6,536**	**716**	**7,252**
Minority interests							(25)	(17)	(42)
Net income							**6,511**	**699**	**7,210**
Included in operating income are:									
Research and development	(3,311)	(170)	(186)	(67)	(88)	(189)	(4,011)	(646)	(4,657)
Depreciation of tangible fixed assets	(622)	(115)	(101)	(86)	(12)	(32)	(968)	(221)	(1,189)
Amortization of intangible assets	(62)	(58)	(38)	(32)	(12)	(3)	(205)	(104)	(309)
Impairment charges on tangible and intangible assets	(2)						(2)	(5)	(7)
Restructuring charges	(42)	(16)	(2)	(41)			(101)		(101)
Total assets	**16,887**	**2,575**	**4,426**	**3,169**	**842**	**30,297**	**58,196**		**58,196**
Liabilities	(4,477)	(636)	(2,142)	(824)	(198)	(12,979)	(21,256)		(21,256)
Total equity and minority interests	**12,410**	**1,939**	**2,284**	**2,345**	**644**	**17,318**	**36,940**		**36,940**
Less net liquidity						(14,461)	(14,461)		(14,461)
Net operating assets	**12,410**	**1,939**	**2,284**	**2,345**	**644**	**2,857**	**22,479**		**22,479**
Included in total assets are:									
Total tangible fixed assets	5,770	974	880	648	72	686	9,030		9,030
Additions to tangible fixed assets	534	241	122	120	20	142	1,179	174	1,353
Total investments in associated companies	1,375	5	2	5		144	1,531		1,531
Employees at year end	**38,397**	**5,712**	**12,949**	**7,644**	**1,975**	**976**	**67,653**		**67,653**

2000 sector reporting has been restated to reflect the transfer as of January 1, 2001 of the Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors.

3. Sectorial breakdown of key figures 2001, 2000 and 1999 (Continued)

1999	Pharmaceuticals	Generics	Consumer Health ongoing	Consumer Health divested	CIBA Vision	Animal Health	Corporate	Total continuing sector	Discontinued Agribusiness sector	Group
					(in CHF millions except employees)					
Sales to third parties	15,275	1,823	5,570	182	1,632	927		25,409	7,056	32,465
Sales to other sectors	155	169	57		2	1	(384)			
Sales of sectors	**15,430**	**1,992**	**5,627**	**182**	**1,634**	**928**	**(384)**	**25,409**	**7,056**	**32,465**
Operating income	**4,676**	**347**	**807**	**375**	**250**	**216**	**25**	**6,696**	**647**	**7,343**
Income from associated companies	363	2			11			376	7	383
Financial income, net								990	(197)	793
Income before taxes and minority interests								**8,062**	**457**	**8,519**
Taxes								(1,683)	(150)	(1,833)
Income before minority interests								**6,379**	**307**	**6,686**
Minority interests								(20)	(7)	(27)
Net income								**6,359**	**300**	**6,659**
Included in operating income are:										
Research and development	(2,848)	(126)	(167)	(1)	(144)	(65)	(164)	(3,515)	(731)	(4,246)
Depreciation of tangible fixed assets	(589)	(107)	(105)		(57)	(9)	(139)	(1,006)	(255)	(1,261)
Amortization of intangible assets	(45)	(41)	(27)		(19)	(1)	(5)	(138)	(110)	(248)
Divestment gain				352				352		352
Restructuring charges	(70)							(70)	(100)	(170)
Total assets	**14,784**	**2,552**	**4,123**		**1,195**	**623**	**33,023**	**56,300**	**9,227**	**65,527**
Liabilities	(4,094)	(661)	(2,025)		(403)	(162)	(19,043)	(26,388)	(1,702)	(28,090)
Total equity and minority interests	**10,690**	**1,891**	**2,098**		**792**	**461**	**13,980**	**29,912**	**7,525**	**37,437**
Less net liquidity							(12,678)	(12,678)		(12,678)
Net operating assets	**10,690**	**1,891**	**2,098**		**792**	**461**	**1,302**	**17,234**	**7,525**	**24,759**
Included in total assets are:										
Total tangible fixed assets	6,285	887	865		461	59	731	9,288	2,378	11,666
Additions to tangible fixed assets	621	157	116		143	10	64	1,111	260	1,371
Total investments in associated companies	1,319	5					146	1,470	170	1,640
Employees at year end	**35,721**	**5,451**	**12,254**	**46**	**6,041**	**1,499**	**3,481**	**64,493**	**17,361**	**81,854**

Restatements made in the 2000 sector reporting figures to reflect the transfer as of January 1, 2001 of Ophthalmics business from CIBA Vision to the Pharmaceuticals sector and the switch of certain products between sectors have not been reflected in the 1999 sector reporting figures.

4. Regional breakdown of key figures 2001, 2000 and 1999

2001	Europe	The Americas	Asia/Africa Australia	Total
		(in CHF millions except employees)		
Sales[1]	**10,158**	**16,640**	**5,240**	**32,038**
Operating income[2]	**4,555**	**2,158**	**564**	**7,277**
Depreciation of tangible fixed assets included in operating income	561	311	67	939
Net operating assets[3]	**15,759**	**10,590**	**1,722**	**28,071**
Additions to tangible fixed assets included in net operating assets	560	723	68	1,351
Personnel costs	3,127	3,527	704	7,358
Employees at year end	**31,386**	**27,303**	**12,427**	**71,116**

2000	Europe	The Americas	Asia/Africa Australia	Total
		(in CHF millions except employees)		
Sales[1]	**11,729**	**17,761**	**6,315**	**35,805**
Operating income[2]	**4,469**	**2,474**	**940**	**7,883**
Depreciation of tangible fixed assets included in operating income	715	388	86	1,189
Net operating assets[3]	**11,176**	**9,774**	**1,529**	**22,479**
Additions to tangible fixed assets included in net operating assets	790	475	88	1,353
Personnel costs	3,703	3,282	828	7,813
Employees at year end	**28,815**	**27,063**	**11,775**	**67,653**

1999	Europe	The Americas	Asia/Africa Australia	Total
		(in CHF millions except employees)		
Sales[1]	**11,620**	**15,328**	**5,517**	**32,465**
Operating income[2]	**4,549**	**2,170**	**624**	**7,343**
Depreciation of tangible fixed assets included in operating income	790	351	120	1,261
Net operating assets[3]	**14,936**	**7,780**	**2,043**	**24,759**
Additions to tangible fixed assets included in net operating assets	754	510	107	1,371
Personnel costs	3,761	2,732	691	7,184
Employees at year end	**38,125**	**29,077**	**14,652**	**81,854**

(1) Sales by location of third party customer.

(2) Operating income as recorded in the legal entities in the respective region.

(3) Long-term and current assets (excluding marketable securities, cash and fixed-term deposits) less non-interest bearing liabilities.

4. Regional breakdown of key figures 2001, 2000 and 1999 (Continued)

The following countries accounted for more than 5% of the respective Group totals as at, or for the years ended, December 31, 2001, 2000, and 1999:

(in CHF millions)

	Sales[1]						Investment in tangible fixed assets						Net operating assets[2]					
Country	**2001**	**%**	**2000**	**%**	**1999**	**%**	**2001**	**%**	**2000**	**%**	**1999**	**%**	**2001**	**%**	**2000**	**%**	**1999**	**%**
Switzerland	499	2	624	2	631	2	160	12	270	20	280	20	10,548	37	3,782	17	6,383	26
USA	13,798	43	13,859	39	11,912	37	655	48	389	29	440	32	9,228	33	8,540	38	6,400	26
Japan	2,560	8	2,891	8	2,266	7	14	1	17	1	16	1	990	4	891	4	934	4
Germany	1,978	6	2,208	6	2,257	7	54	4	110	8	76	6	196	1	292	1	875	4
France	1,617	5	2,009	5	2,223	7	79	6	90	7	50	4	928	3	436	2	882	4
Austria	268	1	277	1	279	1	107	8	94	7	69	5	805	3	604	3	610	3
Other	11,318	35	13,937	39	12,897	39	282	21	383	28	440	32	5,376	19	7,934	35	8,675	33
Total Group	**32,038**	**100**	**35,805**	**100**	**32,465**	**100**	**1,351**	**100**	**1,353**	**100**	**1,371**	**100**	**28,071**	**100**	**22,479**	**100**	**24,759**	**100**

(1) Sales by location of third party customer.

(2) Long-term and current assets (excluding marketable securities, cash and fixed-term deposits) less non-interest bearing liabilities.

No single customer accounts for 10% or more of the Group's total sales.

5. Financial income, net

	2001 (CHF millions)	2000 (CHF millions)	1999 (CHF millions)
Interest income	639	1,052	1,132
Dividend income	42	91	23
Capital gains	1,143	784	628
Income on options and forward contracts	1,588	804	121
Other financial income		5	6
Financial income	**3,412**	**2,736**	**1,910**
Interest expense	(367)	(510)	(542)
Expenses on options and forward contracts	(1,713)	(1,334)	(303)
Other financial expense	(147)	(130)	(115)
Financial expense	**(2,227)**	**(1,974)**	**(960)**
Currency result, net	**(118)**	**329**	**(157)**
Total financial income, net	**1,067**	**1,091**	**793**

2001 interest income includes a total of CHF 32 million (2000: CHF 14 million, 1999: CHF 1 million) received from the foundations referred to in Note 28 at commercial interest rates on the outstanding short-term debt.

6. Taxes

Income before taxes and minority interests consists of the following:

	2001 (CHF millions)	2000 (CHF millions)	1999 (CHF millions)
Switzerland	3,372	2,482	3,575
Foreign	5,111	6,590	4,944
Total income before taxes and minority interests	**8,483**	**9,072**	**8,519**

6. Taxes (Continued)

Current and deferred income tax expense consists of the following:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Switzerland	(271)	(351)	(349)
Foreign	(1,005)	(1,571)	(1,312)
Total current income tax expense	**(1,276)**	**(1,922)**	**(1,661)**
Switzerland	(281)	(83)	(136)
Foreign	175	185	(36)
Total deferred tax (expense)/income	**(106)**	**102**	**(172)**
Share of tax of associated companies	(58)		
Total income tax expense	**(1,440)**	**(1,820)**	**(1,833)**
Temporary differences on which no deferred tax has been provided as they are permanent in nature:			
—write-down of investments in subsidiaries	1,635	1,340	2,421
—goodwill from acquisitions	1,230	1,342	

The gross value of net operating loss carryforwards with their expiry dates is as follows:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
one year	30	22	21
two years	26	74	22
three years	75	21	21
four years	36	51	23
five years	35	80	115
more than five years	565	587	810
Total	**767**	**835**	**1,012**

Of these gross values CHF 535 million has been capitalized as a deferred tax asset (2000: CHF 411 million; 1999: CHF 245 million).

6. Taxes (Continued)

Analysis of tax rate: The main elements contributing to the difference between the Group's overall expected tax rate (the weighted average tax rate based on the result before tax of each subsidiary) and the effective tax rate are:

	2001	2000	1999
	%	%	%
Expected tax rate	17.7	19.5	21.2
Effect of disallowed expenditures	3.1	1.5	1.8
Effect of utilization of tax losses brought forward from prior periods	(0.3)	(0.3)	(0.3)
Effect of income taxed at reduced rates	(1.6)	(1.9)	(3.2)
Prior year and other items	(1.9)	1.3	2.0
Effective tax rate	**17.0**	**20.1**	**21.5**

The utilization of tax loss carryforwards lowered the tax charge by CHF 22 million, CHF 26 million, and CHF 27 million in 2001, 2000 and 1999, respectively.

7. Earnings per share (EPS)

Basic earnings per share

Basic earnings per share is calculated by dividing the net income attributable to shareholders by the weighted average number of shares outstanding during the year, excluding from the issued shares the average number of shares purchased by the Group and held as treasury shares.

	2001	2000	1999
Net income attributable to shareholders (CHF millions)	7,024	7,210	6,659
Weighted average number of shares outstanding	2,571,673,365	2,613,547,597	2,653,820,040
Basic earnings per share (expressed in CHF)	**2.73**	**2.75**	**2.50**

7. Earnings per share (EPS) (Continued)

Diluted earnings per share

For the diluted earnings per share the weighted average number of shares outstanding is adjusted to assume conversion of all potential dilutive shares. The Group's convertible debt represents a potential dilution in the earnings per share to the extent that it is not covered by a hedge with non-consolidated employee share participation and employee benefit foundations to deliver the required number of shares on conversion. The diluted EPS calculation takes into account all potential dilutions to the earnings per share arising from the convertible debt and call options on Novartis shares. Net income is adjusted to eliminate the applicable convertible debt interest expense less the tax effect.

	2001	2000	1999
Net income attributable to shareholders (CHF millions)	7,024	7,210	6,659
Elimination of interest expense on convertible debt (net of tax effect) (CHF millions)	3	2	3
Net income used to determine diluted earnings per share (CHF millions)	7,027	7,212	6,662
Weighted average number of shares outstanding	2,571,673,365	2,613,547,597	2,653,820,040
Adjustment for assumed conversion of convertible debt	1,507,027	1,608,676	8,614,154
Call options on Novartis shares	4,574,401		
Adjustment for dilutive stock options	1,010,963	982,560	559,080
Weighted average number of shares for diluted earnings per share	2,578,765,756	2,616,138,833	2,662,993,274
Diluted earnings per share (expressed in CHF)	**2.72**	**2.75**	**2.50**

8. Tangible fixed asset movements

	Land	Buildings	Machinery	Plant under construction and other equipment	2001	2000
			(in CHF millions)			
Cost						
January 1	**385**	**6,346**	**9,645**	**1,175**	**17,551**	**23,013**
Consolidation changes	3	(12)	(46)	8	(47)	227
Additions	15	367	943	26	1,351	1,353
Disposals	(20)	(168)	(583)	(18)	(789)	(1,352)
Effect of Agribusiness spin-off						(5,636)
Translation effects	(6)	(70)	(79)	(42)	(197)	(54)
December 31	**377**	**6,463**	**9,880**	**1,149**	**17,869**	**17,551**
Accumulated depreciation						
January 1	**—**	**(3,072)**	**(5,449)**	**—**	**(8,521)**	**(11,347)**
Consolidation changes		19	55		74	(26)
Depreciation charge		(199)	(740)		(939)	(1,189)
Depreciation on disposals		90	396		486	900
Effect of Agribusiness spin-off						3,145
Translation effects		77	44		121	3
December 31	**—**	**(3,085)**	**(5,694)**	**—**	**(8,779)**	**(8,514)**
Impairment charge	(1)	(8)	(21)		(30)	(7)
Net book value—December 31	**376**	**3,370**	**4,165**	**1,149**	**9,060**	**9,030**
Insured value—December 31					**21,060**	**21,329**
Net book value of tangible fixed assets under finance lease contracts					**13**	**17**

At December 31, 2001 commitments for purchases of tangible fixed assets totaled CHF 309 million (2000: CHF 248 million).

9. Intangible asset movements

	Goodwill	Product and marketing rights	Trademarks	Software	Other intangibles	2001	2000
			(in CHF millions)				
Cost							
January 1	**2,379**	**3,256**	**547**	**55**	**271**	**6,508**	**3,981**
Additions	331	928	71	38	80	1,448	4,449
Disposals	(8)	(5)	(8)	(6)	(15)	(42)	(8)
Effect of Agribusiness spin-off							(1,910)
Translation effects	34	43	4	(2)	(3)	76	(4)
December 31	**2,736**	**4,222**	**614**	**85**	**333**	**7,990**	**6,508**
Accumulated amortization							
January 1	**(311)**	**(91)**	**(80)**	**(41)**	**(155)**	**(678)**	**(767)**
Amortization	(136)	(252)	(54)	(27)	(95)	(564)	(309)
Disposals	1	1	3	4	20	29	8
Effect of Agribusiness spin-off							402
Translation effects	4	(19)	(1)	2	1	(13)	(12)
December 31	**(442)**	**(361)**	**(132)**	**(62)**	**(229)**	**(1,226)**	**(678)**
Impairment charge		(216)				(216)	
Net book value—December 31	**2,294**	**3,645**	**482**	**23**	**104**	**6,548**	**5,830**

Principal additions in 2001 are pitavastatin marketing rights (2000: Famvir) and in both years goodwill on acquisitions.

10. Marketable securities and derivative financial instruments

Market risk: The Group is exposed to market risk, primarily related to foreign exchange, interest rates and market value of the investment of liquid funds. Management actively monitors these exposures. To manage the volatility relating to these exposures the Group enters into a variety of derivative financial instruments. The Group's objective is to reduce, where it is deemed appropriate to do so, fluctuations in earnings and cash flows associated with changes in interest rates, foreign currency rates and market rates of investment of liquid funds and of the currency exposure of certain net investments in foreign subsidiaries. It is the Group's policy and practice to use derivative financial instruments to manage exposures and to enhance the yield on the investment of liquid funds. The Group does not enter any financial transaction containing a risk that cannot be quantified at the time the transaction is concluded; i.e. it does not sell short assets it does not have, or does not know it will have, in the future. The Group only sells existing assets or hedges transactions and future transactions (in the case of anticipatory hedges) it knows it will have in the future based on past experience. In the case of liquid funds it writes options on assets it has, or on positions it wants to acquire, and for which it has the required liquidity.

The Group therefore expects that any loss in value for these instruments generally would be offset by increases in the value of the hedged transactions.

10. Marketable securities and derivative financial instruments (Continued)

(a) Foreign exchange rates

The Group uses the Swiss franc as its reporting currency and is therefore exposed to foreign exchange movements, primarily in US, European, Japanese, other Asian and Latin American currencies. Consequently, it enters into various contracts which change in value as foreign exchange rates change, to preserve the value of assets, commitments and anticipated transactions. The Group uses forward contracts and foreign currency option contracts to hedge certain anticipated foreign currency revenues and the net investment in certain foreign subsidiaries.

(b) Commodities

The Group has only a very limited exposure to price risk related to anticipated purchases of certain commodities used as raw materials by the Group's businesses. A change in those prices may alter the gross margin of a specific business, but generally by not more than 10% of that margin and is thus below materiality levels. Accordingly, the Group does not enter into commodity future, forward and option contracts to manage fluctuations in prices of anticipated purchases.

(c) Interest rates

The Group manages its exposure to interest rate risk by changing the proportion of fixed rate debt and variable rate debt in its total debt portfolio. To manage this mix, the Group may enter into interest rate swap agreements, in which it exchanges the periodic payments, based on a notional amount and agreed upon fixed and variable interest rates.

Use of the above-mentioned derivative financial instruments has not had a material impact on our financial position at December 31, 2001 and 2000 or the results of operations for the years ended December 31, 2001, 2000 and 1999.

Counterparty risk: Counterparty risk encompasses issuer risk on marketable securities, settlement risk on derivative and money market contracts and credit risk on cash and time deposits. Issuer risk is minimized by only buying securities which are at least AA rated. Settlement and credit risk is reduced by the policy of entering into transactions with counterparties that are usually at least AA rated banks or financial institutions. Exposure to these risks is closely monitored and kept within predetermined parameters.

The Group does not expect any losses from non-performance by these counterparties and does not have any significant grouping of exposures to financial sector or country risk.

Derivative financial instruments: The following tables show the contract or underlying principal amounts and fair values of derivative financial instruments analyzed by type of contract at December 31, 2001 and 2000. Contract or underlying principal amounts indicate the volume of business outstanding at

10. Marketable securities and derivative financial instruments (Continued)

the balance sheet date and do not represent amounts at risk. The fair values are determined by the markets or standard pricing models at December 31, 2001 and 2000.

	Contract or underlying principal amount		Positive fair values		Negative fair values	
	2001	2000	2001	2000	2001	2000
			(in CHF millions)			
Currency related instruments						
Forward foreign exchange rate contracts	7,114	8,191	94	355	(214)	(5)
Over the counter currency options	13,259	13,815	90	119	(157)	(155)
Cross currency swaps	1,332				(33)	
Total of currency related instruments	**21,705**	**22,006**	**184**	**474**	**(404)**	**(160)**
Interest related instruments						
Interest rate swaps	3,700	2,854	29	21	(5)	(30)
Forward rate agreements	6,450	2,950		1	(17)	(6)
Interest rate options	150	300			(4)	(2)
Total of interest related instruments	**10,300**	**6,104**	**29**	**22**	**(26)**	**(38)**
Options on equity securities	**12,018**	**10,386**	**79**	**503**	**(539)**	**(528)**
Total derivative financial instruments	**44,023**	**38,496**	**292**	**999**	**(969)**	**(726)**

The contract or underlying principal amount of derivative financial instruments at December 31, 2001 and 2000 are set for the by currency in the table below.

	CHF	EUR	USD	JPY	Other currencies	Total 2001	Total 2000
			(in CHF millions)				
Forward foreign exchange rate contracts			6,667	383	64	7,114	8,191
Over the counter currency options		6,513	3,862	1,813	1,071	13,259	13,815
Cross currency swaps		1,332				1,332	
Currency related derivatives	**—**	**7,845**	**10,529**	**2,196**	**1,135**	**21,705**	**22,006**
Interest rate swaps	3,700					3,700	2,854
Forward rate agreements	6,450					6,450	2,950
Interest rate options	150					150	300
Interest rate related derivatives	**10,300**	**—**	**—**	**—**	**—**	**10,300**	**6,104**
Options on equity securities	**8,383**	**153**	**3,469**		**13**	**12,018**	**10,386**
Total derivative financial instruments	**18,683**	**7,998**	**13,998**	**2,196**	**1,148**	**44,023**	**38,496**

10. Marketable securities and derivative financial instruments (Continued)

	Contract or underlying principal amount		Fair values	
	2001	**2000**	**2001**	**2000**
	(in CHF millions)			
Derivative financial instruments effective for hedge accounting purposes				
Anticipated transaction hedges				
Forward foreign exchange rate contracts	2,381	2,306	83	115
Over the counter currency options	4,661	777	66	23
Total of anticipated transaction hedges	**7,042**	**3,083**	**149**	**138**
Net investment in foreign subsidiary hedges				
Forward foreign exchange rate contracts	2,720	2,540	(133)	128
Total of net investment in foreign subsidiary hedges	**2,720**	**2,540**	**(133)**	**128**
Available-for-sale security hedges				
Options on securities	2,611	4,087	(125)	(266)
Total of available-for-sale security hedges	**2,611**	**4,087**	**(125)**	**(266)**
Total of derivative financial instruments effective for hedge accounting purposes	**12,373**	**9,710**	**(109)**	**—**

All of the hedging instruments used for anticipated transactions mature within twelve months and were contracted with the intention of hedging anticipated transactions which are expected to occur in 2002.

	Balance sheet value		Unrealized and unrecognized gains		Market value	
	2001	**2000**	**2001**	**2000**	**2001**	**2000**
			(in CHF millions)			
Marketable securities and time deposits						
Available-for-sale securities						
Equity securities	3,448	3,364		1,157	3,448	4,521
Debt securities	4,560	6,118	—	185	4,560	6,303
Total available-for-sale marketable securities	**8,008**	**9,482**	**—**	**1,342**	**8,008**	**10,824**
Time deposits longer than 90 days	**2,689**	**2,238**	—		**2,689**	**2,238**
Total marketable securities and time deposits	**10,697**	**11,720**	**—**	**1,342**	**10,697**	**13,062**

Since the introduction of IAS 39 on January 1, 2001 all marketable securities are carried in the consolidated balance sheet at fair value. Under the Group's previous policy, marketable securities were carried at the lower of cost or market and unrealized gains were not recognized. During 2001,

10. Marketable securities and derivative financial instruments (Continued)

CHF 81 million of unrealized losses on available-for-sale marketable securities were considered to be other than temporary and were charged to the income statement.

11. Investment in associated companies

Novartis has the following significant investments in associated companies which are accounted for by using the equity method:

	Balance sheet value		Pre-tax Income statement effect		
	2001	2000	2001	2000	1999
	(in CHF millions)				
Roche Holding Ltd, Switzerland	5,150		(39)		
Chiron Corporation, USA	1,544	1,360	185	97	342
Others	21	171	(7)	1	41
Total	**6,715**	**1,531**	**139**	**98**	**383**

The Group's associated companies' accounting standards are adjusted to IAS in cases where IAS is not already used.

Due to the various estimates that have been made in applying the equity method accounting treatment for Roche Holding Ltd ("Roche") and Chiron Corporation, adjustments may be necessary in succeeding years as more financial and other information becomes publicly available.

Roche Holding Ltd: The Group's holding in Roche acquired during 2001 is accounted for using the equity method as approximately 21.3% of the voting shares of the company are owned even though this represents only approximately 4% of the total outstanding voting and non-voting equity instruments. In order to apply this accounting treatment, independent appraisers have been used to estimate the fair value of Roche so as to determine the Novartis share of tangible and intangible assets and the amount of the residual goodwill. These calculations have been based on publicly available information.

The purchase price allocation is as follows:

	CHF millions
Net tangible assets	128
Identified intangible assets	3,803
Residual goodwill	1,246
Purchase price	**5,177**

The increase in value allocated to inventory has been expensed, based on its expected usage. The identified intangible assets principally relate to the value of currently marketed products and are being amortized straight-line over their estimated average useful life of 20 years. The residual goodwill is also being amortized on a straight-line basis over 20 years.

11. Investment in associated companies (Continued)

The pre-tax income statement impact for 2001 is as follows:

	CHF millions
Depreciation and amortization of fair value adjustments to tangible and intangible assets and goodwill	(213)
Novartis share of estimated 2001 Roche consolidated pre-tax income	174
Pre-tax income statement effect	**(39)**

The market value of Novartis' interest in Roche at December 31, 2001 was CHF 4.6 billion.

Chiron Corporation: The recording of the results of the strategic interest in Chiron commenced on January 1, 1995. Its equity valuation is based on the Chiron equity at December 31 of each year (for 2000 and prior years there was a three month lag as the year to September 30 was used). The amounts for Chiron incorporated in the Novartis consolidated financial statements take into account the effects stemming from differences in accounting policies between Novartis and Chiron (primarily Novartis' amortization over 10 years of in-process technology arising on Chiron's acquisitions which are written off by Chiron in the year of acquisition). The difference between the equity interest in the underlying Chiron net assets as determined under US GAAP and the carrying value of Chiron is CHF 217 million and CHF 71 million as of December 31, 2001 and September 30, 2000, respectively, and primarily relates to goodwill and in-process research and development at the time of acquisition. The effective shareholding of Novartis in Chiron was 41.9% at December 31, 2001 (2000: 43.3% at September 30, 2000) and had a market value of CHF 5.8 billion (USD 3.4 billion) and for 2000 CHF 5.8 billion (USD 3.5 billion).

A significant part of the 1999 income statement effect results from Chiron's disposal of discontinued operations.

12. Deferred taxes

	2001	2000
	(CHF millions)	(CHF millions)
Assets associated with—employee benefit liabilities	440	479
—net operating loss carryforwards	215	319
—inventory	1,303	1,159
—intangible assets	193	255
—other provisions and accruals	1,181	1,290
Less: valuation allowance	(97)	(237)
Deferred tax assets less valuation allowance	**3,235**	**3,265**
Liabilities associated with—tangible fixed asset depreciation	872	961
—prepaid pensions	1,208	1,164
—other provisions and accruals	1,526	1,054
—inventories	279	309
Total liabilities	**3,885**	**3,488**
Net deferred tax liability	**(650)**	**(223)**

A reversal of the valuation allowance could occur when circumstances make the realization of deferred tax assets probable. This would result in a decrease in the Group's effective tax rate.

At December 31, 2001 and 2000, unremitted earnings of CHF 35 billion and CHF 29 billion, respectively, have been retained by subsidiary companies for reinvestment. No provision is made for income taxes that would be payable upon the distribution of such earnings. If the earnings were remitted, an immaterial income tax charge would result based on the tax statutes currently in effect.

13. Other financial assets

	2001	2000
	(CHF millions)	(CHF millions)
Long-term loans to associated companies		6
Other investments and long-term loans	2,185	1,489
Prepaid pension	4,842	4,106
Total	**7,027**	**5,601**

At December 31, 2001 other investments and long-term loans are valued at market value. At December 31, 2000 net unrealized gains were CHF 771 million which prior to the adoption of IAS 39 on January 1, 2001 were not recognized.

During 2001, CHF 20 million of unrealized loses on investments were considered to be other than temporary and were charged to the income statement.

14. Inventories

	2001 (CHF millions)	2000 (CHF millions)
Raw material, consumables	772	1,315
Finished products	3,340	2,807
Total	**4,112**	**4,122**

At December 31, 2001, 2000 and 1999 inventory write-downs of CHF 651 million, CHF 386 million and CHF 487 million respectively were deducted in arriving at the inventory values.

15. Trade accounts receivable

	2001 (CHF millions)	2000 (CHF millions)
Total	5,645	5,531
Provision for doubtful receivables	(296)	(248)
Total trade accounts receivable, net	**5,349**	**5,283**

16. Other current assets

	2001 (CHF millions)	2000 (CHF millions)
Withholding tax recoverable	294	499
Gerber Life insurance receivables	304	462
Advance payments in respect of acquisitions		105
Fair value of financial derivatives	457	225
Prepaid expenses—third parties	303	437
—associated companies	8	4
Other receivables—third party	1,502	1,035
—associated companies	15	9
Amounts receivable from Syngenta	12	235
Total other current assets	**2,895**	**3,011**

17. Details of share capital movements

	Number of shares[1]							
	January 1, 1999	Movement in year	December 31, 1999	Movement in year	December 31, 2000	December 31, 2000 restated after share split[2]	Movement in year	December 31, 2001
Total Novartis shares	**72,130,117**		**72,130,117**		**72,130,117**	**2,885,204,680**		**2,885,204,680**
Treasury shares								
Shares reserved for convertible bonds	168,747	(37,625)	131,122	(13,206)	117,916	4,716,640	(212,886)	4,503,754
Shares reserved for call options							54,901,962	54,901,962
Unreserved treasury shares	5,602,733	777,902	6,380,635	464,676	6,845,311	273,812,440	3,806,264	277,618,704
Total treasury shares	**5,771,480**	**740,277**	**6,511,757**	**451,470**	**6,963,227**	**278,529,080**	**58,495,340**	**337,024,420**
Total outstanding shares	**66,358,637**	**(740,277)**	**65,618,360**	**(451,470)**	**65,166,890**	**2,606,675,600**	**(58,495,340)**	**2,548,180,260**
	(in CHF millions)							
Share capital	1,443		1,443		1,443	1,443		1,443
Treasury shares	(115)	(15)	(130)	(9)	(139)	(139)	(30)	(169)
Outstanding share capital	**1,328**	**(15)**	**1,313**	**(9)**	**1,304**	**1,304**	**(30)**	**1,274**

(1) On April 21, 1999 the Company's Annual General Meeting approved the conversion of all Novartis AG's 8,071,868 bearer shares into an equal number of registered shares. All shares are now registered, authorized, issued and fully paid. All are voting shares and, except for 263,613,980 treasury shares, are dividend bearing.

(2) On March 22, 2001 the Company's Annual General Meeting approved the division of each registered share of Novartis AG into 40 identical registered shares and thereby to change their nominal value from CHF 20.00 each to CHF 0.50 each.

18. Long-term financial debts

	2001 (CHF millions)	2000 (CHF millions)
Convertible bonds	1,182	1,110
Straight bonds	2,325	961
Liabilities to banks and other financial institutions[1]	277	278
Finance lease obligations	4	8
Total (including current portion of long-term debt)	**3,788**	**2,357**
Less current portion of long-term debt	(1,296)	(74)
Total long-term debts	**2,492**	**2,283**
Convertible bonds		
USD		
USD 750 million 2.00% convertible bonds 1995/2002 of Novartis Capital Ltd., British Virgin Islands[2]	1,163	1,085
CHF		
CHF 750 million 1.25% convertible bonds 1995/2002 of Novartis Capital Ltd., British Virgin Islands[3]	19	25
Total convertible bonds	**1,182**	**1,110**
Straight bonds		
USD		
USD 300 million 6.625% Euro Medium Term Note 1995/2005 of Novartis Corporation, Summit, New Jersey, USA	504	492
USD		
USD 250 million 6.625% Euro Medium Term Note 1995/2005 of Novartis Corporation, Summit, New Jersey, USA	420	410
USD		
USD 36 million 9.0% bonds 2006 of Gerber Products, Fremont	60	59
EUR		
EUR 900 million 4.0% bond 2001/2006 of Novartis Securities Investment Ltd., Hamilton, Bermuda[4]	1,341	
Total straight bonds	**2,325**	**961**

(1) Average interest rate 3.6% (2000: 3.7%).

(2) Bonds of USD 10,000 par value are convertible up to September 30, 2002 into approx. 384,167 issued and outstanding, fully paid registered shares of Novartis AG. Novartis Capital Ltd. has acquired options from the non-consolidated employee share participation and employee benefit foundations to cover partly its obligation to deliver shares under the conversion terms of the bonds. It also has options to cover the balance of its obligations from entities, which are consolidated. At December 31, 2001 the outstanding hedge with the non-consolidated entities represented 23.8 million shares. An appropriate number of treasury shares are reserved for the balance. At December 31, 2001 bonds totaling USD 32.6 million had been converted. The difference between the nominal value of USD 717.4 million and the balance sheet value of USD 692.6 million is due to the discount from the original debt value to the maturity value of 100%.

(3) Bonds of CHF 5,000 par value are convertible up to October 9, 2002 into 200 issued and outstanding, fully paid shares of Novartis AG and 5 issued and outstanding fully paid shares of Syngenta AG with each converting bondholder receiving an amount of CHF 239.95 per bond in cash. Novartis Capital Ltd. has acquired options from consolidated entities to cover its obligation to deliver shares under the conversion terms of the bonds. An appropriate number of treasury shares and Syngenta AG shares are reserved. At December 31, 2001 bonds totaling CHF 730.8 million had been converted.

(4) Swapped into Japanese yen on inception.

18. Long-term financial debts (Continued)

	2001 (CHF millions)	2000 (CHF millions)
Breakdown by maturity:		
2001		74
2002	1,296	1,204
2003	30	21
2004	49	40
2005	940	907
2006	1,416	
Thereafter	57	111
Total	**3,788**	**2,357**
Breakdown by currency:		
USD	2,174	2,068
EUR	174	124
CHF	20	26
JPY	1,392	59
Others	28	80
Total	**3,788**	**2,357**

	2001 Balance Sheet (CHF millions)	2001 Fair Values (CHF millions)	2000 Balance Sheet (CHF millions)	2000 Fair Values (CHF millions)
Fair value comparison:				
Convertible bonds	1,182	1,713	1,110	2,079
Straight bonds	2,325	2,348	961	984
Others	281	281	286	286
Total	**3,788**	**4,342**	**2,357**	**3,349**

	2001 (CHF millions)	2000 (CHF millions)
Collateralized long-term debts and pledged assets		
Total amount of collateralized long-term financial debts	235	263
Total net book value of tangible fixed assets pledged as collateral for long-term financial debts	81	168

The financial debts including short-term financial debts, contain only general default covenants. The Group is in compliance with these covenants.

The percentage of fixed rate debt to total financial debt was 46% and 34% at December 31, 2001 and 2000, respectively.

19. Other long-term liabilities

	2001 (CHF millions)	2000 (CHF millions)
Employee benefits		
—unfunded defined benefit plans	1,102	888
—other long-term employee benefits and deferred compensation	186	379
Other post-employment benefits	698	676
Liabilities for insurance activities	719	627
Environmental provisions	224	207
Provision for legal and product liability settlements	337	357
Deferred purchase consideration		217
Restructuring provision	10	17
Other provisions	554	477
Total	**3,830**	**3,845**

20. Movements in other long-term liabilities

(a) Restructuring charges

The Group has experienced significant merger and divestment activity since 1996, when Sandoz AG and Ciba-Geigy AG merged to form Novartis, and the Group divested Ciba Specialty Chemicals ("CSC") with effect from January 1, 1997. Restructuring accruals in 1996 totaled CHF 4,126 million, comprised of employee termination costs of CHF 1,945 million, other third party costs of CHF 1,594 million and tangible fixed asset impairments of CHF 587 million. Charges for restructuring plans were related to continuing operations, including the reduction of excess staffing, the streamlining of facilities and operations and other restructuring measures. 12,000 employees were identified in the original plan all of whom have now left the Group. All other significant actions associated with the restructuring charge have been completed by December 31, 2001 with the exception of CHF 82 million relating primarily to non-cancelable lease payments for unoccupied office space in the US.

In June 1999, the Agribusiness sector initiated "Project Focus". The charges of CHF 100 million incurred in conjunction with this project were comprised of employee termination costs of CHF 61 million, other third party costs of CHF 22 million and tangible fixed asset impairments of CHF 17 million. 1,100 employees were identified in the original plan, 700 of whom had left the Group as of the Agribusiness spin-off date of November 6, 2000. The remaining employees and the corresponding restructuring provisions were transferred to Syngenta.

In July 1999, charges of CHF 70 million were incurred in conjunction with the plan to downsize certain pharmaceutical production facilities mainly in the USA and Canada. The charges comprised employee termination costs of CHF 54 million and other third party costs of CHF 16 million. 146 employees were identified in the original plan, all of whom have left the Group as of December 31, 2001.

In October 2000, the CIBA Vision sector acquired Wesley Jessen VisionCare Inc., a leading worldwide developer, manufacturer and marketer of specialty contact lenses. Total costs of CHF 118 million were incurred in connection with the integration and restructuring of the CIBA Vision and Wesley Jessen activities worldwide. CHF 41 million was charged to operating income and CHF 77 million was included in the net assets acquired. The total cost comprised employee termination costs of CHF 59

20. Movements in other long-term liabilities (Continued)

million, other third party costs of CHF 35 million and tangible fixed asset impairments of CHF 24 million. 1 100 employees were identified in the original plan, of which 85 remain employed by the Group as of December 31, 2001, but all of whom are expected to leave in 2002. All other significant actions associated with the plan are expected to be completed during 2002.

In November 2000, charges of CHF 15 million were incurred in conjunction with the closure and relocation of part of the Generics operations in the USA. All of these charges are for employee termination costs. 200 employees were identified in the original plan, of which 2 remain employed by the Group as of December 31, 2001 but all of whom are expected to leave in 2002. All other significant actions associated with the plan are expected to be completed during 2002.

In December 2000, charges of CHF 40 million were incurred in conjunction with the closure and sale of the Pharmaceuticals sector Summit site in the USA. The charges comprised employee termination costs of CHF 10 million and other third party costs of CHF 30 million. 122 employees were identified in the original plan, of which 73 remain employed by the Group as of December 31, 2001, but all of whom are expected to leave in 2002. All other significant actions associated with the plan are expected to be completed by March 2003.

In May 2001, charges of CHF 21 million were incurred in relation to the closure of the Consumer Health production facility in Kings Langley, UK. The charges comprised employee termination costs of CHF 19 million and other third party costs of CHF 2 million. 250 employees were identified in the original plan, of which 240 remain employed by the Group as of December 31, 2001, but all of whom are expected to leave in 2002.

The releases to income in 2001, 2000 and 1999 of CHF 18 million, CHF 39 million and CHF 284 million, respectively were mainly due to settlement of liabilities at lower amounts than originally anticipated.

20. Movements in other long-term liabilities (Continued)

	Employee termination costs	Tangible fixed asset impairments	Other third party costs	Total
	(CHF millions)	(CHF millions)	(CHF millions)	(CHF millions)
Balance at January 1, 1999	**455**	**300**	**581**	**1,336**
Cash payments	(251)	(15)	(222)	(488)
Releases	(89)	(2)	(193)	(284)
Additions	115	17	38	170
Non-income tangible fixed asset write-offs		(278)		(278)
Translation effect, net	50	20	34	104
Balance at December 31, 1999	**280**	**42**	**238**	**560**
Cash payments	(201)		(91)	(292)
Releases	(20)	(8)	(11)	(39)
Additions	90	24	64	178
Non-income tangible fixed asset write-offs		(4)		(4)
Effect of Agribusiness spin-off	(10)	(2)	(6)	(18)
Translation effect, net	1	1	10	12
Balance at December 31, 2000	**140**	**53**	**204**	**397**
Cash payments	(85)		(83)	(168)
Releases	(16)	(1)	(1)	(18)
Additions	19		2	21
Translation effect, net	1		3	4
Balance at December 31, 2001	**59**	**52**	**125**	**236**
Included in short-term liabilities				226
Included in long-term liabilities				10
Total				**236**

Tangible fixed asset impairments are determined based on the review of the carrying values of tangible fixed assets. Write-downs are recorded for tangible fixed assets impaired or related to activities to be restructured, divested or abandoned. The provision is transferred to accumulated depreciation as the tangible fixed assets are restructured, divested or abandoned. Other third party costs are mainly associated with lease and other obligations due to the abandonment of certain facilities.

In 2000, CHF 77 million of the additions arose from provisions made during the acquisition of Wesley Jessen. In 2001, there were also CHF 30 million (2000: CHF 7 million) of tangible fixed asset impairments which were charged directly to the income statement without being recorded in the restructuring provision.

20. Movements in other long-term liabilities (Continued)

(b) Environmental matters

Novartis has provisions in respect of environmental remediation costs in accordance with the accounting policy described in Note 1. These provisions include future remediation payments totaling CHF 22 million which have been discounted at a risk free rate of 6% to a recorded liability of CHF 11 million. These discounted amounts will be paid out over the period of remediation for the applicable sites, which is expected to be 30 years. The accrual recorded at December 31, 2001 consists of CHF 106 million provided for remediation at third-party sites and CHF 122 million for remediation of owned facilities.

In the USA, Novartis Agribusiness was named under federal legislation (the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended) as a potentially responsible party ("PRP") in respect to several sites. The responsibility for these sites was allocated to Syngenta as part of the spin-off process. Novartis actively participates in, or monitors, the clean-up activities at the sites in which it is a PRP. The estimated reserve takes into consideration the number of other PRPs at each site and the identity and financial position of such parties in light of the joint and several nature of the liability.

The requirement in the future for Novartis ultimately to take action to correct the effects on the environment of prior disposal or release of chemical substances by Novartis or other parties, and its costs, pursuant to environmental laws and regulations, is inherently difficult to estimate. The material components of the environmental provisions consist of a risk assessment based on investigation of the various sites. Novartis' future remediation expenses are affected by a number of uncertainties which include, but are not limited to, the method and extent of remediation, the percentage of material attributable to Novartis at the remediation sites relative to that attributable to other parties, and the financial capabilities of the other potentially responsible parties.

Novartis believes that its reserves are adequate based upon currently available information, however, given the inherent difficulties in estimating liabilities in this area, it cannot be guaranteed that additional costs will not be incurred beyond the amounts accrued. The effect of resolution of environment matters on results of operations cannot be predicted due to uncertainty concerning both the amount and the timing of future expenditures and the results of future operations. Management believes that such additional amounts, if any, would not be material to the Novartis financial condition but could be material to the Novartis results of operations in a given period.

20. Movements in other long-term liabilities (Continued)

Environmental liability provisions

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
January 1	**214**	**379**	**310**
Cash payments	(3)	(35)	(18)
Releases	(6)		
Additions	22	24	70
Effect of Agribusiness spin-off		(166)	
Translation effect, net	1	12	17
December 31	**228**	**214**	**379**
Less short-term liability	(4)	(7)	(47)
Long-term liability at December 31	**224**	**207**	**332**

(c) Provisions for legal and product liabilities

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
January 1	**639**	**496**	**358**
Cash payments	(190)	(43)	(36)
Releases	(24)		
Additions	129	283	103
Effect of Agribusiness spin-off		(98)	
Translation effect, net	(24)	1	71
December 31	**530**	**639**	**496**
Less short-term liability	(193)	(282)	
Long-term liability at December 31	**337**	**357**	**496**

21. Short-term financial debts

	2001	2000
	(CHF millions)	(CHF millions)
Interest bearing employee accounts	1,134	1,216
Other bank and financial debt	1,629	1,837
Commercial paper	1,004	408
Current portion of long-term financial debt	1,296	74
Financial obligation for repurchase agreements	11	244
Total	**5,074**	**3,779**

21. Short-term financial debts (Continued)

The balance sheet values of short-term financial debt, other than the current portion of long-term financial debts, approximates to the estimated fair value due to the short-term nature of these instruments.

The weighted average interest rate on the bank and other financial debt was 3.8%, 4.5%, and 4.6% as of December 31, 2001, 2000, and 1999 respectively.

22. Other short-term liabilities

	2001	2000
	(CHF millions)	(CHF millions)
Income and other taxes	879	1,263
Restructuring provisions	226	380
Accrued expenses	3,479	3,098
Current portion of provision for potential claims from insurance activities	299	250
Social security/pension funds	101	150
Current portion of environmental provisions	4	7
Deferred income relating to government grants	22	25
Deferred divestment proceeds		155
Deferred purchase consideration	240	
Fair value of financial derivatives	1,134	91
Provisions for goods returned and commissions	14	14
Provision for legal and product liability settlements	193	282
Amount due to Syngenta	2	25
Other payables	753	530
Total	**7,346**	**6,270**

23. Cash flows arising from changes in working capital excluding restructuring items

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Change in inventories	(77)	230	469
Change in trade accounts receivable and other net current assets	33	(229)	(1,257)
Change in trade accounts payable	249	106	294
Total	**205**	**107**	**(494)**

24. Cash flows arising from major acquisitions and divestments of subsidiaries

The following is a summary of the cash flow impact of the major divestments and acquisitions of subsidiaries:

	2001 Acquisitions	2001 Divestments	2000 Acquisitions	2000 Divestments	1999 Acquisitions	1999 Divestments
			(CHF millions)			
Tangible fixed assets	(52)	23	(199)	2,491	(77)	148
Other long-term assets	(61)		(105)	2,415	(42)	16
Inventories	(46)		(196)	2,551	(56)	55
Trade accounts receivable and other current assets	(73)		(165)	2,631	(163)	70
Marketable securities, cash and short-term deposits	(18)		(51)	(70)	(7)	13
Long-term and short-term debt to third parties	148		200	(3,336)	106	(49)
Trade accounts payable and other liabilities	83	2	635	(2,918)	73	17
Net assets acquired/divested	**(19)**	**25**	**119**	**3,764**	**(166)**	**270**
Less acquired/divested liquidity	18		51	70	8	(13)
Less decrease in investments in associated companies	111				23	
Sub-total	**110**	**25**	**170**	**3,834**	**(135)**	**257**
Goodwill	(349)		(1,612)		(203)	
Changes in equity and minority interests due to:						
—net assets transferred to Syngenta				(4,463)		
—proceeds received from Novartis shareholders in respect of Syngenta related purchase rights				687		
—other				12	39	(7)
Divestment gains		45		1		288
Net Cash Flow	**(239)**	**70**	**(1,442)**	**71**	**(299)**	**538**

The significant changes in the companies that have been consolidated are described in Note 2.

All acquisitions were for cash. The significant divestment in 2000 was the spin-off of Novartis Agribusiness to form Syngenta AG.

24. Cash flows arising from major acquisitions and divestments of subsidiaries (Continued)

The following are the cash flows from the discontinued Agribusiness sector included in the consolidated cash flow statement.

	2000	1999
	(CHF millions)	(CHF millions)
Cash flow from operating activities	1,437	927
Cash flow from investing activities	(166)	(425)
Cash flow from financing activities	(818)	(525)

25. Changes in consolidated equity

(a) The following is a summary of the adjustments resulting from adopting IAS 19 from January 1, 1999:

	(CHF millions)
Unrecognized funded pension surpluses	1,673
Additional unfunded pension deficits	(489)
Net increase in assets from pension plans	**1,184**
Previously unrecognized actuarial gains from unfunded other post-employment benefit plans	218
Deferred tax	(316)
Minority interest	(15)
Net increase in equity at January 1, 1999	**1,071**

(b) The Board of Directors proposes a dividend of CHF 0.90 per share for 2001 (2000: CHF 0.85 per share amounting to CHF 2.2 billion which was paid in 2001; 1999: CHF 0.72 per share amounting to CHF 2.1 billion which was paid in 2000) totaling CHF 2.4 billion for all dividend bearing shares, or CHF 2.3 billion on all shares outstanding at December 31, 2001. The amount available for dividend distribution is based on the Novartis AG's shareholders' equity determined in accordance with the legal provisions of the Swiss Code of Obligations.

(c) At the extraordinary general meeting of October 11, 2000 the shareholders reduced the Novartis AG share premium account to the legal minimum by approving a transfer of the excess to the Group's available retained earnings.

(d) The effect of the Agribusiness spin-off is shown net of the amount received from shareholders for the exercise of purchase rights of CHF 687 million.

(e) During the year bonds were sold and the subsidiary holding the bonds was liquidated. This resulted in CHF 641 million (2000: CHF 1,041 million) of cumulative translation differences and a CHF 34 million hedging loss (2000: CHF 96 million hedging gain) being transferred to financial income, net.

25. Changes in consolidated equity (Continued)

(f) The amount recorded directly to equity as a result of adopting IAS 39 on financial instruments from January 1, 2001 and the 2001 changes in the fair value of financial instruments and transfers to the income statement consist of the following:

	Retained earnings	Fair value of deferred cash flow hedges	Total
	(CHF millions)	(CHF millions)	(CHF millions)
January 1, 2001 fair value adjustments			
Available-for-sale marketable securities	1,891		1,891
Derivative financial instruments	265	138	403
Deferred tax on above	(213)	(35)	(248)
Effect of introducing IAS 39 on January 1, 2001	**1,943**	**103**	**2,046**
Changes in fair value:			
—Available-for-sale marketable securities	(150)		(150)
—Cash flow hedges		18	18
Realized gains or losses transferred to the income statement:			
—marketable securities sold	(648)		(648)
—derivative financial instruments	(265)	(152)	(417)
Impaired securities and investments	101		101
Deferred tax on above	73	11	84
Fair value adjustments at December 31, 2001	**1,054**	**(20)**	**1,034**

(g) CHF 3,848 million of treasury shares were acquired during 2001 under the Group's second share buy-back program. A further CHF 7 million of treasury share movements arise from non-cash treasury share purchases by the Group's associated company, Chiron Corporation, USA.

(h) During December 2001, Novartis sold a total of 55 million ten-year call options (Low Exercise Price Options—"LEPOs") on Novartis shares, with an exercise price of CHF 0.01, to a third party receiving EUR 2.2 billion in proceeds (EUR 40 per LEPO). It is the current intention that the LEPOs will be settled using Novartis treasury shares. The Group has accounted for the LEPOs as an increase in share premium at fair value less related issuance costs. Exercises will be recorded as a share issuance with no gains or losses recorded in the consolidated income statement.

(i) Novartis sold a total of 55 million nine and ten-year put options on Novartis shares to a third party with an exercise price of EUR 51 receiving EUR 0.6 billion in proceeds (EUR 11 per put option). The put options can be exercised in annual tranches between the years three and ten, and can be either physically settled or net share settled at the discretion of Novartis. Under the terms of the put option agreement the number of Novartis shares required for settlement could change under certain circumstances. The contractual terms of the put options place a limit on the number of shares to be delivered in a net share settlement, such that Novartis cannot under any circumstances be forced into a physical settlement by the counterparty. If however the Group chooses to physically settle the put options, this would result in a cash payment to the counterparty. The total possible cash payment measured at the earliest possible exercise date for the two tranches of put options (2004 and 2005)

25. Changes in consolidated equity (Continued)

would amount to EUR 3.1 billion, increasing to EUR 3.8 billion at the expiry dates (2010 and 2011) of the two tranches. Novartis may also accelerate the exercise date and expiration date for any outstanding options at any time on or after December 6, 2006 at the accreted exercise price of the put options under certain conditions. The Group has accounted for the option premium associated with the put options as an increase in share premium less related issuance costs. Exercises will be recorded as treasury share transactions with no gains or losses recorded in the consolidated income statement.

The increase of equity due to (h) and (i) above is after deduction of fees and related taxes of CHF 118 million of which CHF 45 million has yet to be paid.

Total recognized gains and losses, representing the total of net income and translation effects allocated to equity and in 2001, the year's movement in the fair value of financial instruments, for the years ended December 31, 2001, 2000, and 1999 were CHF 5,375 million, CHF 6,639 million, and CHF 8,603 million, respectively.

26. Employee benefits

Defined benefit obligation

The Group has, apart from the legally required social security schemes, numerous independent pension plans. For certain Group companies, however, no independent assets exist for the pension and other long-term employee benefit obligations. In these cases the related liability is included in the balance sheet.

Defined benefit pension plans cover the majority of the Group's employees. The defined benefit obligations and related assets of all major plans are reappraised annually by independent actuaries.

Plan assets are recorded at fair values. The defined benefit obligations of all significant plans are covered by assets. The surplus on implementing revised IAS 19 was reported as an adjustment to the opening balance of retained earnings as of January 1, 1999.

The following is a summary of the status of the main defined benefit plans at December 31, 2001, and 2000:

	2001	2000
	(CHF millions)	(CHF millions)
Funded assets of independent defined benefit pension plans	23,361	25,426
Defined benefit obligations of active and retired employees	(18,616)	(17,662)
Funded Status	**4,745**	**7,764**
Limitation on recognition of surplus due to uncertainty of obtaining future benefits	(1,422)	(1,965)
Unrecognized actuarial loss/(gain)	417	(2,581)
Net asset in balance sheet	**3,740**	**3,218**

26. Employee benefits (Continued)

The net asset in the balance sheet consists of:

	2001	2000
	(CHF millions)	(CHF millions)
Prepaid pension expense included in financial assets	4,842	4,106
Accrued pension costs included in other long-term liabilities	(1,102)	(888)
Total net asset	**3,740**	**3,218**

The following are the principal actuarial assumptions, used for calculating the 2001, 2000, and 1999 income statement amounts and the above December 31, 2001 and 2000 funded status of the main defined benefit plans:

	Income statement			Funded status	
Weighted average %	**2001**	**2000**	**1999**	**2001**	**2000**
	%	%	%	%	%
—discount rate	4.6	4.1	3.6	4.6	4.5
—payroll indexation	2.8	2.8	2.8	2.8	2.8
—return on assets	6.1	6.2	6.1	6.1	6.2

In some Group companies employees are covered by defined contribution plans and other long-term employee benefits. The liability of the Group for these benefits is reported in other long-term employee benefits and deferred compensation and at December 31, 2001 amounts to CHF 186 million (2000: CHF 379 million). In 2001 contributions charged to the consolidated income statement for the defined contribution plans were CHF 113 million (2000: CHF 91 million, 1999: CHF 122 million).

The number of Novartis AG shares held by pension and similar benefit funds at December 31, 2001 was 34 million shares with a market value of CHF 2.0 billion (2000: CHF 44 million shares with a market value of CHF 3.1 billion).

The plan disposed of 8.5 million Novartis AG shares during the year ended December 31, 2001 (2000: 4.5 million shares). The amount of dividends received on Novartis AG shares held as plan assets was CHF 34 million for the year ended December 31, 2001 (2000: CHF 37 million).

Other post-employment benefits

The Group's post-employment healthcare, insurance and other related post-employment benefits are not funded.

26. Employee benefits (Continued)

The following are the principal actuarial assumptions used for calculating these post-employment benefits:

	2001 Weighted average	2000 Weighted average	1999 Weighted average
	%	%	%
—discount rate	7.5	7.7	7.7
—healthcare cost trend (initial)	9.0	5.9	5.9
—healthcare cost trend (ultimate)	4.8	4.8	4.8

The following is a summary of the balance sheet movements in relation to defined benefit plans and other post-employment benefits:

	Defined benefit pension plans		Other post-employment benefits	
	2001 (CHF millions)	2000 (CHF millions)	2001 (CHF millions)	2000 (CHF millions)
Asset/(liability) at January 1	**3,218**	**2,564**	**(676)**	**(630)**
Increase in prepaid pensions	736	419		
Decrease/(increase) in accrued liabilities	(214)	235	(22)	(46)
Asset/(liability) at December 31	**3,740**	**3,218**	**(698)**	**(676)**

The amounts recognized in the income statement are as follows:

	Defined benefit pension plans			Other post-employment benefits		
	2001 (CHF millions)	2000 (CHF millions)	1999 (CHF millions)	2001 (CHF millions)	2000 (CHF millions)	1999 (CHF millions)
Expected return on plan assets	1,517	1,584	1,505			
Employee contributions	33	39	35			
Current service cost	(359)	(467)	(543)	(15)	(11)	(15)
Interest cost	(825)	(857)	(784)	(52)	(48)	(47)
Amortization of actuarial gains and losses	(21)	49		(5)	(18)	
Income/(expense)[1]	**345**	**348**	**213**	**(72)**	**(77)**	**(62)**

[1] In 2001 CHF 108 million of settlement gains associated with Group restructuring were included in pension income. In 2000, settlement gains of CHF 52 million resulting from the Agribusiness spin-off were directly credited to equity.

26. Employee benefits (Continued)

The actual return on plan, assets for 2001 taking into account realized and unrealized capital gains and losses was a loss of CHF 737 million (2000: CHF 2,949 million gain; 1999: CHF 1,429 million gain).

27. Employee share participation plans

In May 2001 Novartis AG shares were split 40 to 1. All references to 2000 and 1999 have been restated to reflect this change.

Employee and management share participation plans exist as follows:

Swiss Employee Share Ownership Plan

In 1998, a Swiss Employee Share Ownership Plan was introduced for all employees of Swiss subsidiaries. This entitles employees after 1 year of service to acquire 120 shares in Novartis AG every year at a price determined by the Board's compensation committee, which is currently CHF 12.50 per share. Employees are immediately required to buy the shares to which they have become entitled. During the year 862,720 shares (2000: 1,429,520 shares) were distributed under this plan.

Non-US Novartis Stock Option Plan

Under the current plan, options, exercisable after two years and terminating after nine years, are granted annually as part of the remuneration of executive officers and other employees outside of the USA, selected by the Board's compensation committee. Each option entitles them to acquire Novartis AG shares (40 shares per option) at a predetermined strike price. The number of options granted depends on the performance of the individuals and the sector in which they work.

	2001		2000	
	Options (000)	Weighted average exercise price[1] (CHF)	Options (000)	Weighted average exercise price[1] (CHF)
Options outstanding at January 1	**147**	**53**	**89**	**53**
Granted	62	70	61	51
Exercised	(24)	50	(2)	27
Cancelled	(4)	59	(1)	59
Outstanding at December 31	**181**	**59**	**147**	**53**
Exercisable at December 31	**61**	**56**	**49**	**45**
Weighted average fair value of options on 40 shares granted during the year (CHF)		937		900

(1) 40 shares per option; exercise price indicated is per share.

All options were granted at an exercise price which was greater than the market price of the Group's shares at the grant date.

27. Employee share participation plans (Continued)

The following table summarizes information about Novartis share options outstanding at December 31, 2001:

	Options outstanding			Options exercisable	
Range of exercise prices[1]	Number Outstanding	Average remaining contractual life	Weighted average exercise price	Number exercisable	Weighted average exercise price
(CHF)	(000)	(years)	(CHF)	(000)	(CHF)
41–46	26	5.2	43	26	42
51–73	155	7.4	62	35	69
	181	**7.1**	**59**	**61**	**56**

(1) 40 shares per option; exercise price indicated is per share.

US ADS Incentive Plan

The US ADS Incentive Plan was introduced in 2001 and supplements the previous US Management ADS Appreciation Cash Plan. Under the US ADS Incentive Plan, options are granted annually on Novartis ADSs at a pre-determined strike price as part of the remuneration of executive officers and other employees selected by the Board's compensation committee. The number of options granted depends on the performance of the individuals and of the sector in which they work. Options are exercisable after three years and terminate after ten years. Under the previous US Management ADS Appreciation Cash Plan, Novartis employees in the USA were entitled to cash compensation equivalent to the increase in the value of Novartis ADSs compared to the market price of the ADSs on the grant date.

In 2001, 8,526,650 options on ADSs were granted (2000: 4,863,940 ADS Appreciation Rights on Novartis ADSs).

Management Share Programs

In 2001 and 2000 Management Share Programs were established. The grants in relation to these programs are designed to foster long-term participation for eligible employees by aligning their contribution to the long-term performance of the Group and for special contributions. In certain programs grants vest only after three years. During 2001 a total of 499,194 shares (2000: 307,520 shares) were granted to executive officers and other employees.

Leveraged Share Savings Program

In 2001, a new Leveraged Share Savings Program was offered to selected executive officers and other employees, who can make an election to receive all or part of their regular cash bonus in shares. If shares are received instead of cash, the shares are blocked for a five-year period. At the end of the blocking period, Novartis will match the bonus taken in shares on a one-for-one basis. During 2001, 209,240 shares were chosen to be taken under this program instead of a cash bonus.

All of the above mentioned plans are wholly funded by a Novartis employee share participation foundation which is not consolidated.

27. Employee share participation plans (Continued)

Movements in Novartis AG shares held by the Novartis employee share participation foundation were as follows:

	Number of shares	Number of shares	Number of shares
	2001	2000	1999
	(000)	(000)	(000)
January 1	**98,000**	**89,720**	**68,680**
Shares bought in the market	4,175	9,720	22,600
Shares distributed to employees	(863)	(1,440)	(1,560)
December 31	**101,312**	**98,000**	**89,720**

The market value of the Novartis AG shares held by the foundation at December 31, 2001 was CHF 6.1 billion (2000: CHF 7.0 billion).

28. Related parties

The Novartis Group has formed certain foundations with the purposes of advancing employee welfare, employee share participation, research and charitable contributions. The charitable foundations foster health care and social development in rural countries. The foundations are autonomous, and their boards are responsible for administering the foundations in accordance with the foundations' purpose and applicable law.

The employee share participation foundation has not been included in the consolidated financial statements prepared under IAS as Interpretation No. 12 of the IAS Standing Interpretations Committee exempts post-employment and equity compensation plans from its scope. The total assets of this foundation as of December 31, 2001 included 101.3 million shares of Novartis AG with a market value of CHF 6.1 billion. As of December 31, 2000, the assets included 98 million Novartis shares with a market value of CHF 7.0 billion. This foundation is consolidated under US GAAP and is included as a reconciling item in the US GAAP reconciliation.

In 2001, the Group granted short-term loans totaling CHF 1,189 million to the above mentioned foundations and received short-term loans totaling CHF 10 million from them. In 2000, the Group granted short-term loans totaling CHF 936 million to the foundations, received short-term loans totaling CHF 6 million from them and sold 1.4 million Novartis shares to them at market rates. In 1999, the Group granted short-term loans totaling CHF 330 million to the foundations, received short-term loans totaling CHF 192 million from them and sold 9.1 million Novartis shares to them at market prices.

In addition, there are approximately twenty other foundations that were established for charitable purposes that have not been consolidated, as the Group does not receive a benefit therefrom. As of December 31, 2001 these foundations held approximately 6.2 million shares of Novartis (2000: 6.3 million shares), with a cost of approximately CHF 39 million (2000: CHF 40 million).

See notes 5, 26 and 27 to the consolidated financial statements for disclosure of other related party transactions and balances.

29. Commitments and contingencies

Novartis Agribusiness

In connection with the Agribusiness Master Agreement between Novartis AG and AstraZeneca Plc for the spin-off and merger of their respective agrochemical businesses into Syngenta AG, there remain several assets which are not material to the business of Novartis that have not been transferred as of December 31, 2001. This is due to legal requirements that necessarily prolong administrative proceedings required for such transfer. All such administrative proceedings have been initiated and Novartis expects no difficulties for all remaining transfers to be completed during 2002.

Pursuant to the Master Agreement and related service agreements, Novartis and Syngenta, and their local subsidiaries, have agreed to render each other specified services for an interim period. These services include support for human resources; health; safety and environment; insurance; legal and other functional areas. None of the services are material to the business of Novartis and are provided merely as an accommodation to permit an orderly separation of the businesses in a manner that efficiently addresses local concerns.

Chiron Corporation

In addition to its investment in Chiron shares, Novartis has agreed to:

- purchase up to USD 500 million of new Chiron equity, at Chiron's request. To date, Chiron has made no such request.
- guarantee up to USD 703 million of Chiron debt. Utilization of the guarantee in excess of USD 425 million reduces the equity put amount mentioned above.
- guarantee an additional USD 200 million of credit facilities to enable repayment of certain convertible debt of Chiron.

Leasing commitments

Commitments arising from fixed-term operational leases in effect at December 31 are as follows:

	2001
	(CHF millions)
2002	191
2003	132
2004	84
2005	65
2006	54
Thereafter	208
Total	**734**

The leasing expense from fixed term operational leases was CHF 204 million, CHF 205 million, and CHF 211 million for 2001, 2000, and 1999, respectively.

29. Commitments and contingencies (Continued)

Research & development commitments

The Group has entered into other long-term research agreements with various institutions, including CHF 420 million of potential milestones and other contingent payments. As of December 31, 2001 they are as follows:

	2001 (CHF millions)
2001	
2002	482
2003	409
2004	258
2005	161
2006	134
Thereafter	36
Total	**1,480**

Contingencies

Group companies have to observe the laws, government orders and regulations of the country in which they operate. A number of them are currently involved in administrative proceedings arising out of the normal conduct of their business. In the opinion of Group management, however, the outcome of the actions referred to will not materially affect the Group's financial position, result of operations or cash flow.

The Group, along with numerous other prescription drug manufacturers, is a defendant in various actions brought by certain US retail pharmacies, alleging antitrust and pricing violations. The Group believes that these actions are without merit and is defending them vigorously.

A number of Group companies are also the subject of litigation arising out of the normal conduct of their business, as a result of which claims could be made against them which, in whole or in part, might not be covered by insurance. In the opinion of Group management, however, the outcome of the actions referred to will not materially affect the Group's financial position, result of operations or cash flow.

The material components of the Group's potential environmental liability consist of a risk assessment based on investigation of the various sites identified by the Group as at risk for environmental exposure. The Group's future remediation expenses are affected by a number of uncertainties. These uncertainties include, but are not limited to, the method and extent of remediation, the percentage of material attributable to the Group at the remediation sites relative to that attributable to other parties, and the financial capabilities of the other potentially responsible parties. The Group does not expect the resolution of such uncertainties to have a material effect on the consolidated financial statements.

30. Principal currency translation rates

	2001	2000	1999
	(CHF)	(CHF)	(CHF)
Year end rates used for the consolidated balance sheets:			
1 USD	1.68	1.64	1.59
1 EUR	1.48	1.52	1.60
1 GBP	2.43	2.45	2.58
100 JPY	1.28	1.43	1.56
Average rates of the year used for the consolidated income and cash flow statements:			
1 USD	1.69	1.69	1.50
1 EUR	1.51	1.56	1.60
1 GBP	2.43	2.56	2.43
100 JPY	1.39	1.57	1.34

31. Subsequent events

On January 17, 2002, the Animal Health sector announced the closing of the acquisition of two US farm animal vaccine companies, Grand Laboratories Inc., of Larchwood, Iowa and ImmTech Biologics Inc., of Bucyrus, Kansas.

Their combined 2001 revenues were approximately CHF 55 million (USD 33 million) and their combined purchase price is a minimum of CHF 160 million of which CHF 140 million will be settled in Novartis American Depositary Shares (ADS). The final purchase price may increase depending on whether certain future sales and other targets are met.

The acquisitions will be accounted for under the purchase method of accounting, and related goodwill, if any, will be amortized on a straight-line basis over a period not exceeding 20 years.

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001

The following descriptions describe the various types of entities within the Group:

■ **Holding/Finance**: This entity is a holding company and/or performs finance functions for the Group.

◆ **Sales**: This entity performs sales and marketing activities for the Group.

▼ **Production**: This entity performs manufacturing and/or production activities for the Group.

▲ **Research**: The entity performs research and development activities for the Group.

	Equity Interest	Holding/ Finance	Sales	Production	Research
Argentina					
Novartis Argentina S.A., Buenos Aires	●		◆	▼	
Labinca S.A., Buenos Aires	●		◆	▼	
Australia					
Novartis Australia Pty Ltd., Pendle Hill, NSW	●	■			
Novartis Pharmaceuticals Australia Pty Ltd., North Ryde, NSW	●		◆		▲
Novartis Consumer Health Australasia Pty Ltd., Rowville, Victoria	●		◆	▼	
Novartis Animal Health Australasia Pty Ltd., Pendle Hill, NSW	●		◆		▲
Austria					
Novartis Pharma GmbH, Vienna	●		◆		
Novartis Forschungsinstitut GmbH, Vienna	●				▲
Biochemie GmbH, Kundl	●	■	◆	▼	▲
Novartis Animal Health GmbH, Kundl	●		◆		
Bangladesh					
Novartis (Bangladesh) Limited, Dhaka	◗		◆	▼	
Belgium					
N.V. Novartis Management Services S.A., Vilvoorde	●	■			
N.V. Novartis Pharma S.A., Vilvoorde	●		◆		
N.V. Novartis Consumer Health S.A., Bruxelles	●		◆		
N.V. CIBA Vision Benelux S.A., Mechelen	●		◆		
Bermuda					
Triangle International Reinsurance Ltd., Hamilton	●	■			
Novartis Securities Investment Ltd., Hamilton	●	■			
Novartis International Pharmaceutical Ltd., Hamilton	●	■	◆		
Brazil					
Novartis Biociências S.A., São Paulo	●		◆	▼	
Novartis Consumer Health Ltda., Rio de Janeiro	●		◆	▼	
Novartis Saúde Animal Ltda., São Paulo	●		◆	▼	
British Virgin Islands					
Novartis Capital Ltd., Road Town, Tortola	●	■			
Canada					
Novartis Pharmaceuticals Canada Inc., Dorval/Montreal	●		◆		▲
Novartis Consumer Health Canada Inc., Mississauga, Ontario	●		◆		
CIBA Vision Canada Inc., Mississauga, Ontario	●		◆	▼	

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
Chile					
Novartis Chile S.A., Santiago de Chile	●		◆		
China					
Beijing Novartis Pharma Ltd., Beijing	◗		◆	▼	
Novartis Pharmaceuticals (HK) Limited, Hong Kong	●		◆		
Shanghai Novartis Trading Ltd., Shanghai	●		◆		
Shanghai Novartis Nutrition Ltd., Shanghai	◗		◆	▼	
Colombia					
Novartis de Colombia S.A., Santafé de Bogotá	●		◆	▼	
Costa Rica					
Novartis Consumer Health, S.A., Guadalupe de Cartago	●		◆	▼	
Czech Republic					
Novartis Czech Republic s.r.o., Prague	●		◆		
Denmark					
Novartis Danmark A/S, Copenhagen	●	■			
Novartis Healthcare A/S, Copenhagen	●		◆		
Ecuador					
Novartis Ecuador S.A., Quito	●		◆		
Egypt					
Novartis Pharma S.A.E., Cairo	●			▼	
Novartis Egypt (Healthcare) S.A.E., Cairo	●		◆		
Finland					
Novartis Finland Oy, Espoo	●		◆		
France					
Novartis Groupe France S.A., Rueil-Malmaison	●	■			
Novartis France S.A., Rueil-Malmaison	●	■			
Novartis Pharma S.A., Rueil-Malmaison	●		◆	▼	▲
Novartis Ophthalmics S.A., Rueil-Malmaison	●		◆		
Laboratoires CIBA Vision Faure S.A., Annonay	●			▼	
GNR-pharma S.A., Levallois	●		◆		
Novartis Santé Familiale S.A., Revel	●		◆	▼	
Nutrition et Santé S.A., Revel	●	■	◆	▼	▲
Novartis Nutrition S.A., Revel	●		◆	▼	
CIBA Vision S.A., Blagnac	●		◆		
Novartis Santé Animale S.A., Rueil-Malmaison	●		◆	▼	
Germany					
Novartis Deutschland GmbH, Wehr	●	■			
Novartis Pharma GmbH, Nuremberg	●		◆	▼	▲
Azupharma GmbH & Co., Gerlingen near Stuttgart	●		◆	▼	

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
BC Biochemie GmbH, Frankfurt am Main	●		◆	▼	
BASF Generics GmbH, Ismaning	●		◆	▼	
Novartis Consumer Health GmbH, Munich	●		◆	▼	▲
Novartis Nutrition GmbH, Munich	●		◆	▼	▲
CIBA Vision Vertriebs GmbH, Aschaffenburg	●		◆		
CIBA Vision GmbH, Aschaffenburg	●		◆	▼	▲
Great Britain					
Novartis UK Ltd., Farnborough	●	■			
Novartis Pharmaceuticals UK Ltd., Frimley/Camberley	●		◆	▼	▲
Novartis Grimsby Ltd., Farnborough	●			▼	
Lagap Pharmaceuticals Ltd., Bordon	●		◆		
Novartis Consumer Health UK Ltd., Horsham	●		◆	▼	
Novartis Nutrition UK Ltd., King's Langley	●			▼	▲
CIBA Vision (UK) Ltd., Southampton	●		◆		
Wesley Jessen.PBH Ltd., Farnborough	●		◆	▼	
Novartis Animal Health UK Ltd., Litlington/Royston	●		◆		▲
Vericore Ltd., Litlington/Royston	●		◆	▼	
Greece					
Novartis (Hellas) S.A.C.I., Athens	●		◆		
Hungary					
Novartis Hungary Healthcare Limited Liability Company, Budapest	●		◆		
India					
Novartis India Limited, Mumbai	◗		◆	▼	
Novartis Enterprises Private Limited, Mumbai	●		◆	▼	
Indonesia					
PT Novartis Biochemie, Jakarta	◗		◆	▼	
PT CIBA Vision Batam, Batam	●			▼	
Ireland					
Novartis Ireland Limited, Dublin	●		◆		
Novartis Ringaskiddy Limited, Ringaskiddy, County Cork	●			▼	
Italy					
Novartis Farma S.p.A., Origgio	●	■	◆	▼	▲
Biochemie S.p.A., Rovereto	●			▼	
Novartis Consumer Health S.p.A., Origgio	●		◆		
CIBA Vision S.r.l., Marcon	●		◆		
Japan					
Novartis Pharma K.K., Tokyo	●		◆		▲
Ciba-Geigy Japan Limited, Tokyo	●			▼	
CIBA Vision K.K., Tokyo	●		◆		
Novartis Animal Health K.K., Tokyo	●		◆		

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
Malaysia					
Novartis Corporation (Malaysia) Sdn. Bhd., Kuala Lumpur	◗		◆		
Mexico					
Novartis de México, S.A. de C.V., Mexico City	●	■			
Novartis Farmacéutica, S.A. de C.V., Mexico City	●		◆	▼	
Novartis Nutrition, S.A. de C.V., Mexico City	●		◆		
Productos Gerber, S.A. de C.V., Mexico City	●		◆	▼	
Netherlands					
Novartis Netherlands B.V., Amsterdam	●	■			
Novartis Pharma B.V., Arnhem	●		◆		
Multipharma B.V., Weesp	●		◆	▼	
Novartis Consumer Health B.V., Breda	●		◆	▼	
Netherlands Antilles					
Novartis Investment N.V., Curação	●	■			
Biochemie West Indies N.V., Curação	●	■	◆		
New Zealand					
Novartis New Zealand Ltd., Auckland	●		◆		
Norway					
Novartis Norge AS, Oslo	●		◆		
Pakistan					
Novartis Pharma (Pakistan) Limited, Karachi	●		◆	▼	
Panama					
Novartis Pharma (Logistics), Inc., Panama	●		◆		
Peru					
Novartis Biosciences Perú S.A., Lima	●		◆		
Philippines					
Novartis Healthcare Philippines, Inc., Makati/Manila	●		◆		
Novartis Consumer Health Philippines, Inc., Pasig/Manila	●		◆	▼	
Poland					
Novartis Poland Sp. z o.o., Warsaw	●		◆		
Alima-Gerber S.A., Warsaw	●		◆	▼	
Portugal					
Novartis Portugal SGPS Lda., Sintra	●	■			
Novartis Farma—Produtos Farmacêuticos S.A., Sintra	●		◆		
Novartis Consumer Health—Produtos Farmacêuticos e Nutrição Lda., Lisbon	●		◆		
Puerto Rico					
Gerber Products Company of Puerto Rico, Inc., Carolina	●		◆	▼	
CIBA Vision Puerto Rico, Inc., Cidra	●			▼	

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
South Africa					
Novartis South Africa (Pty) Ltd., Spartan/Johannesburg	●		◆	▼	
South Korea					
Novartis Korea Ltd., Seoul	●		◆	▼	
Spain					
Novartis Farmacéutica, S.A., Barcelona	●	■	◆	▼	
Biochemie, S.A., Les Franqueses del Vallés/Barcelona	●		◆	▼	▲
Novartis Consumer Health, S.A., Barcelona	●		◆	▼	
Sweden					
Novartis Sverige Participations AB, Täby/Stockholm	●	■			
Novartis Sverige AB, Täby/Stockholm	●		◆		
CIBA Vision Nordic AB, Askim/Göteborg	●		◆		
Switzerland					
Novartis International AG, Basel	●	■			
Novartis Pharma AG, Basel	●	■	◆	▼	▲
Novartis Holding AG, Basel	●	■			
Novartis Securities AG, Basel	●	■			
Novartis Research Foundation, Basel	●				▲
Novartis Foundation for Management Development, Zug	●	■			
Novartis Ophthalmics AG, Hettlingen	●	■	◆	▼	▲
Novartis Pharma Services AG, Basel	●		◆		
Novartis Pharma Schweizerhalle AG, Schweizerhalle	●			▼	
Novartis Pharma Stein AG, Stein	●			▼	▲
Novartis Pharma Schweiz AG, Bern	●		◆		
Novartis Consumer Health S.A., Nyon	●	■	◆	▼	▲
Novartis Consumer Health International S.A., Nyon	●		◆		
Novartis Consumer Health Schweiz AG, Bern	●		◆		
Novartis Nutrition AG, Bern	●	■			
Wander AG, Neuenegg	●			▼	
CIBA Vision AG, Embrach	●	■	◆		
Novartis Animal Health AG, Basel	●	■	◆	▼	▲
Novartis Centre de Recherche Santé Animale S.A., St.Aubin	●				▲
Taiwan					
Novartis (Taiwan) Co., Ltd., Taipei	●		◆	▼	
Thailand					
Novartis (Thailand) Limited, Bangkok	●		◆		
Novartis Nutrition (Thailand) Limited, Bangkok	◗		◆	▼	
Turkey					
Novartis Saglik, Gida ve Tarim Ürünleri Sanayi ve Ticaret A.S., Istanbul	●		◆	▼	

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
USA					
Novartis Corporation, Summit, NJ	●	■			
Novartis Finance Corporation, New York, NY	●	■			
Novartis Pharmaceuticals Corporation, East Hanover, NJ	●		◆	▼	▲
Novartis Ophthalmics, Inc., Duluth, GA	●		◆	▼	
Novartis Institute for Functional Genomics, Inc., San Diego, CA	●				▲
Genetic Therapy, Inc., Gaithersburg, MD	●				▲
Chiron Corporation, Emeryville, CA	○	■	◆	▼	▲
Geneva Pharmaceuticals, Inc., Plainsboro, NJ	●		◆	▼	▲
Biochemie US, Inc., Plainsboro, NJ	●		◆		
Novartis Consumer Health, Inc., Summit, NJ	●		◆	▼	▲
Novartis Nutrition Corporation, Minneapolis, MN	●		◆	▼	▲
Gerber Products Company, Fremont, MI	●	■	◆	▼	▲
Gerber Life Insurance Company, White Plains, NY	●		◆		
CIBA Vision Corporation, Duluth, GA	●	■	◆	▼	▲
Wesley Jessen Corporation, Des Plaines, IL	●	■	◆	▼	▲
Novartis Animal Health US, Inc., Greensboro, NC	●		◆	▼	▲
Venezuela					
Novartis de Venezuela, S.A., Caracas	●		◆		
Novartis Nutrition de Venezuela, S.A., Caracas	●		◆	▼	

In addition, the Group is represented by subsidiaries, associated companies or joint ventures in the following countries:

Algeria, Dominican Republic, Guatemala, Morocco, Russian Federation, Singapore, Uruguay and Vietnam.

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP)

The Group's consolidated financial statements have been prepared in accordance with IAS, which as applied by the Group, differs in certain significant respects from US GAAP. The effects of the application of US GAAP to net income and equity are set out in the tables below:

	Notes	2001 ($ millions)[1]	2001 (CHF millions)	2000 (CHF millions)	1999 (CHF millions)
Net income reported under IAS		**4,181**	**7,024**	**7,210**	**6,659**
US GAAP adjustments:					
Purchase accounting: Ciba-Geigy	a	(191)	(321)	(426)	(457)
Purchase accounting: other acquisitions	b	(166)	(279)	(232)	(271)
Restructuring costs	c			(72)	(931)
Available-for-sale securities and derivative financial instruments	d	(304)	(511)	787	107
Pensions and other post-employment benefits	e	(185)	(310)	43	86
Share-based compensation	f	(23)	(38)	(168)	(41)
Consolidation of share-based compensation foundations	g	(22)	(37)	(21)	(5)
Deferred taxes	h	(18)	(31)	(23)	(26)
In-process research and development	i	(557)	(936)	(143)	(2)
Other	j	16	28	33	11
Deferred tax effect on US GAAP adjustments		68	114	(75)	289
Net income reported under US GAAP		**2,799**	**4,703**	**6,913**	**5,419**
Basic earnings per share under US GAAP		**1.13**	**1.90**	**2.74**	**2.10**
Diluted earnings per share under US GAAP		**1.13**	**1.90**	**2.74**	**2.10**

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

	Notes	December 31, 2001 ($ millions)[1]	December 31, 2001 (CHF millions)	December 31, 2000 (CHF millions)
Equity reported under IAS		**25,146**	**42,245**	**36,862**
US GAAP adjustments:				
Purchase accounting: Ciba-Geigy	a	2,873	4,826	5,147
Purchase accounting: other acquisitions	b	3,158	5,305	5,467
Available-for-sale securities and derivative financial instruments	d			2,111
Pensions and other post-employment benefits	e	852	1,431	1,730
Share-based compensation	f	(35)	(58)	(66)
Consolidation of share-based compensation foundations	g	(559)	(939)	(753)
Deferred taxes	h	(371)	(621)	(590)
In-process research and development	i	(683)	(1,148)	(173)
Other	j	61	102	92
Deferred tax effect on US GAAP adjustments		(236)	(396)	(1,025)
Equity reported under US GAAP		**30,206**	**50,747**	**48,802**

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

Components of equity in accordance with US GAAP

	December 31, 2001 ($ millions)[1]	December 31, 2001 (CHF millions)	December 31, 2000 (CHF millions)
Share capital	859	1,443	1,443
Treasury shares, at nominal value	(131)	(220)	(189)
Share premium	796	1,338	(2,493)
Retained earnings	28,227	47,422	48,661
Accumulated other comprehensive income:			
Currency translation adjustment	28	46	321
Unrealized market value adjustment on available-for-sale securities (net of taxes of CHF 115 million and CHF 213 million, respectively)	439	738	1,059
Unrealized market value adjustment on cash flow hedges net of taxes of CHF 24 million	(12)	(20)	
Total	**30,206**	**50,747**	**48,802**

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

Changes in US GAAP equity

	($ millions)[1]	(CHF millions)
January 1, 1999	**28,466**	**47,823**
Net income for the year under US GAAP	3,226	5,419
Dividends paid	(1,152)	(1,935)
Net unrealized market value adjustment	(213)	(358)
Increase in share premium related to stock-based compensation	43	73
Foreign currency translation adjustment	1,535	2,579
Acquisition of treasury shares	(1,801)	(3,026)
December 31, 1999	**30,104**	**50,575**
Net income for the year under US GAAP	4,115	6,913
Dividends paid	(1,229)	(2,064)
Net unrealized market value adjustment	510	857
Increase in share premium related to stock-based compensation	43	73
Foreign currency translation adjustment	(312)	(525)
Acquisition of treasury shares	(1,046)	(1,758)
Effect of Agribusiness spin-off	(3,136)	(5,269)
December 31, 2000	**29,049**	**48,802**
Change in accounting policy on cash flow hedges (CHF 138 million before taxes)	62	105
Net income for the year under US GAAP	2,799	4,703
Dividends paid	(1,306)	(2,194)
Net unrealized market value adjustment	(265)	(446)
Increase in share premium related to share-based compensation	27	46
Foreign currency translation adjustment	(164)	(275)
Acquisition of treasury shares	(2,384)	(4,005)
Issue of call and put options on Novartis shares	2,388	4,011
December 31, 2001	**30,206**	**50,747**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

Discontinued Operations

Under IAS 35, the disposal of the Agribusiness sector was considered a discontinued operation as of December 1, 1999, when the Board of Novartis approved the divestment. However under US GAAP, the disposal did not qualify as a discontinued operation until the shareholders of Novartis approved the required transactions on October 11, 2000.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The income from continuing and discontinued Agribusiness operations under US GAAP as of December 31, 2001, 2000, and 1999, respectively is as follows:

	2001[1]	2001	2000	1999
	($ millions)	(CHF millions)	(CHF millions)	(CHF millions)
Income from continuing operations under US GAAP	2,799	4,703	6,346	5,230
Income from discontinued operations under US GAAP (net of taxes of CHF 0 million, CHF 314 million, and CHF 146 respectively)			567	189
Net income reported under US GAAP	**2,799**	**4,703**	**6,913**	**5,419**

	2001[1]	2001	2000	1999
	($)	(CHF)	(CHF)	(CHF)
Earnings per share				
Basic:				
Income from continuing operations under US GAAP	1.13	1.90	2.52	2.02
Income from discontinued operations under US GAAP			0.22	0.08
Basic earnings per share under US GAAP	**1.13**	**1.90**	**2.74**	**2.10**
Diluted:				
Income from continuing operations under US GAAP	1.13	1.90	2.52	2.02
Income from discontinued operations under US GAAP			0.22	0.08
Diluted earnings per share under US GAAP	**1.13**	**1.90**	**2.74**	**2.10**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

(a) Purchase accounting: Ciba-Geigy

The accounting treatment for the 1996 merger of Sandoz and Ciba-Geigy under IAS is different from the accounting treatment under US GAAP. For IAS purposes the merger was accounted for as an uniting of interests, however, for US GAAP the merger does not meet all of the required conditions of Accounting Principles Board Opinion No. 16 for a pooling of interests and therefore is accounted for as a purchase under US GAAP. Under US GAAP, Sandoz would be deemed to be the acquirer with the assets and liabilities of Ciba-Geigy being recorded at their estimated fair values and the results of Ciba-Geigy being included from December 20, 1996. Under US GAAP, the cost of Ciba-Geigy to Sandoz was approximately CHF 38.1 billion.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The components of the equity and income statement adjustments related to the US GAAP purchase accounting adjustment for 2001, 2000, and 1999 are as follows:

	2001 Components to reconcile		2000 Components to reconcile		1999 Components to reconcile	
	Net income (CHF millions)	Equity (CHF millions)	Net income (CHF millions)	Equity (CHF millions)	Net income (CHF millions)	Equity (CHF millions)
Intangible assets related to marketed products	(429)	6,437	(528)	6,865	(548)	9,323
Tangible fixed assets	69	(1,029)	79	(1,098)	81	(1,375)
Inventory		711	(19)	711	(43)	980
Other identifiable intangibles	(32)	157	(60)	188	(66)	460
Investments	(34)	169	(34)	202	(34)	236
Deferred taxes	105	(1,619)	136	(1,721)	153	(2,405)
Total adjustment	**(321)**	**4,826**	**(426)**	**5,147**	**(457)**	**7,219**

The intangible assets related to marketed products and other identifiable intangibles are being amortized over 20 and 10 years, respectively.

As a result of the spin-off of Novartis Agribusiness in November 2000, CHF 1,646 million of the equity adjustment included in the US GAAP net assets, was spun-off to shareholders.

(b) Purchase accounting: other acquisitions

In accordance with IAS 22 (revised 1993), the difference between the purchase price and the aggregate fair value of tangible and intangible assets and liabilities acquired in a business combination is capitalized as goodwill and amortized over its useful life, not to exceed 20 years. Under US GAAP, the difference between the purchase price and fair value of net assets acquired as part of a business combination is capitalized as goodwill and amortized through the income statement over its estimated useful life, which may not exceed 40 years. For the purpose of the reconciliation to US GAAP, goodwill is generally being amortized through the income statement over an estimated useful life of 20 years.

Prior to January 1, 1995, the Group wrote off all goodwill directly to equity, in accordance with IAS existing at that time. The adoption of IAS 22 (revised 1993) did not require prior period restatement. The material component of goodwill recorded directly to equity, under IAS prior to January 1, 1995, related primarily to the acquisition of Gerber Products in 1994. The net book value of goodwill under US GAAP attributable to Gerber Products was CHF 4,815 million and CHF 4,845 million as of December 31, 2001 and 2000, respectively and is being amortized over 40 years.

(c) Restructuring costs

Under IAS, restructuring charges are accrued against operating income in the period management commits itself to a plan, it is probable a liability has been incurred and the amount can be reasonably estimated. Up to January 1, 2000 US GAAP was more prescriptive than IAS; for example, in order to qualify as restructuring costs under US GAAP, it was necessary that employees were informed regarding

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

the key provisions of the restructuring plan prior to the end of the reporting period. Also, there was a rebuttable presumption under US GAAP that an exit plan would be completed and the exit costs incurred within one year from the commitment date. Therefore, certain costs permitted to be accrued under IAS up to January 1, 2000 were not allowable under US GAAP resulting in an additional US GAAP expense in 2000 and 1999 of CHF 72 million and CHF 931 million, respectively. There was no measurement difference in 2001.

The following schedule reconciles restructuring accruals under IAS to amounts determined under US GAAP.

	2001	2000
	(CHF millions)	(CHF millions)
Total accruals in accordance with IAS	236	397
Reclassification of restructuring accruals to tangible fixed assets	(52)	(53)
Restructuring accruals in accordance with US GAAP	**184**	**344**

Restructuring accruals according to US GAAP are comprised of the following:

	2001	2000
	(CHF millions)	(CHF millions)
Employee termination costs	59	140
Other third party costs	125	204
Restructuring accruals in accordance with US GAAP	**184**	**344**

(d) Available-for-sale securities and derivative financial instruments

Prior to the adoption of IAS 39 from January 1, 2001 in the IAS consolidated financial statements, investments were stated at the lower of cost or market value on an individual basis. Any losses resulting from the application of the lower of cost or market valuation were charged to the income statement. US GAAP requires for all years presented that investments in debt and certain equity securities are classified as either trading, available-for-sale, or held-to-maturity, depending on management's intent and ability with respect to holding such investments. Investments classified as available-for-sale are carried at fair value, with any unrealized gain or loss recorded as a separate component of equity. The Group's application of IAS 39 from January 1, 2001 is now consistent with US GAAP although under US GAAP the policy of recording in a separate component of equity unrealized gains or losses on available-for-sale marketable securities has been applied for a number of years. This results in a different amount of unrealized gains or losses being recorded in the separate component of equity under US GAAP compared to IAS and an additional expense under US GAAP on disposal of available-for-sale securities during 2001.

Under US GAAP for all years presented, the Group values all of its derivative financial instruments, except those related to cash flow hedges, that do not qualify for hedge accounting to fair value on an individual basis through the income statement. Concerning cash flow hedges, SFAS No. 133 "Accounting for Derivative Instruments and Hedging Activities" adopted from January 1, 2001 requires all derivative instruments including cash flow hedges be recorded on the balance sheet at their fair value. Changes in the

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

fair value of derivatives are recorded each period in current earnings or other comprehensive income. This resulted in the Group recording a net of tax cumulative-effect-type gain of CHF 105 million in accumulated other comprehensive income to recognize at fair value all derivative instruments that are designated as cash flow hedging instruments.

Prior to the adoption of IAS 39 on January 1, 2001 under IAS, the Group used the concept of portfolio valuation and only recorded net losses on portfolios of similar derivative financial instruments through the income statement, except for items that qualified for hedge accounting. Unrealized gains were not recorded. This also results in a difference between the IAS and US GAAP income statements due to recognition of gains or losses in different periods.

The above differences result in an additional US GAAP expense of CHF 511 million in 2001 (2000: CHF 787 million income; 1999: CHF 107 million income).

At December 31, 2001 the balance sheet values of all financial instruments under IAS and US GAAP are the same. At December 31, 2000 net unrealized gains of CHF 2.1 billion had not been recorded in the IAS consolidated financial statements, under the pre-IAS 39 accounting policies.

(e) Pensions and other post-employment benefits

Under IAS, pension costs and similar obligations are accounted for in accordance with IAS 19, "Employee Benefits". For purposes of US GAAP, pension costs for defined benefit plans are accounted for in accordance with SFAS No. 87 "Employers' Accounting for Pensions" and the disclosure is presented in accordance with SFAS No. 132 "Employers' Disclosures about Pensions and Other Post-retirement Benefits". The version of IAS 19 in force up to December 31, 1998 required that the discount rate used in the calculation of benefit plan obligations is of an average long-term nature, whereas US GAAP requires that the discount rate is based on a rate at which the obligations could be currently settled.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The following is a reconciliation of the balance sheet and income statement amounts recognized for IAS and US GAAP for both pension and post-employment benefit plans:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Pension benefits:			
Prepaid asset recognized for IAS	3,740	3,218	2,564
Difference in unrecognized amounts	1,637	1,874	1,909
Prepaid asset recognized for US GAAP	**5,377**	**5,092**	**4,473**
Net periodic income recognized for IAS	345	348	213
Amortization of transition asset		88	240
Difference in amortization of actuarial amounts	(237)	(78)	(161)
Net periodic pension benefit income recognized for US GAAP	**108**	**358**	**292**
Other post-employment benefits:			
Liability recognized for IAS	(698)	(676)	(630)
Difference in unrecognized amounts	(206)	(144)	(173)
Liability recognized for US GAAP	**(904)**	**(820)**	**(803)**
Net periodic benefit recognized for IAS	(72)	(77)	(62)
Amortization of actuarial amounts	(73)	33	7
Net periodic post-retirement benefit costs recognized for US GAAP	**(145)**	**(44)**	**(55)**
Total US GAAP income statement difference on pensions and other post-employment benefits	**(310)**	**43**	**86**

(f) Share-based compensation

The Group does not account for share-based compensation, as it is not required under IAS. Under US GAAP, the Group applies Accounting Principles Board Opinion No. 25 "Accounting for Stock Issued to Employees" and related interpretations in accounting for its plans. As described in Note 27, the Group has several plans that are subject to measurement under APB No. 25. These include the Non-US Share Option Plan, the Swiss Employee Share Ownership Plan, the US Management ADS Appreciation Cash Plan, the US ADS Incentive Plan, Leveraged Share Savings Program and the other Management Share Programs.

The *Non-US Share Option Plan* from 2001 is considered to be a fixed plan under APB No. 25 as the number of shares and all other parameters are known on the grant date which is therefore the measurement date. In prior years this was considered to be a variable plan, and until all parameters were fixed, the compensation expense was recorded at the balance sheet date by estimating the ultimate number of shares to be issued multiplied by the spread between the share price on the balance sheet date and the strike price. There was no compensation expense in 2001 (2000: CHF 11 million) since the grant date and measurement date are now the same and the strike price at that date was greater than the market price.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The *Swiss Employee Share Ownership Plan* is considered to be compensatory based on the amount of the discount allowed for employee share purchases. Compensation expense is recorded at the grant date and is calculated as the spread between the share price and the strike price on that date. During 2001, the Group sold 862,720 shares (2000: 1,429,520 shares) to employees for CHF 11 million (2000: CHF 18 million and 1999: CHF 19 million). Compensation expense for 2001 recognized under the Ownership plan was CHF 46 million (2000: CHF 72 million and 1999: CHF 73 million). The discount to the Group's share price was recorded in share premium. The percentage discount to the Group's share price under the ownership plan was 88% in 2001 (2000: 83%; 1999: 79%).

The *US Management ADS Appreciation Cash Plan* is considered to be variable because the final benefit to employees depends on the Group's share price at the exercise date. Compensation expense is recorded at each balance sheet date by estimating the number of rights outstanding multiplied by the spread between the share price on the balance sheet date and the strike price. Reduction in compensation expense and the release of the accrual under the Appreciation plan was CHF 37 million and CHF 32 million for 2001 and 1999, respectively. Compensation expense and the increase of the accrual under the Appreciation plan were CHF 77 million for 2000. This plan was supplemented in 2001 by the US ADS Incentive Plan.

The *Leveraged Share Savings Program* was first offered to selected executive officers and other employees in 2001. Employees can elect to receive all or part of their regular cash bonus in shares. The shares are blocked for a five year period at which time the bonus taken in shares are matched on a one-for-one basis. Compensation expense recognized under this plan was CHF 17 million for 2001.

The other *Management Share Programs* are considered to be compensatory based on the strike price for the underlying instruments, which is zero at the date of grant. Compensation expense is recorded at the grant date and is calculated as the number of instruments granted, multiplied by the share price on that date. Compensation expense recognized under these plans was CHF 12 million for the year ended December 31, 2001 (2000: CHF 8 million).

The total US GAAP expense of the above items is as follows:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Option Plan		11	
Ownership Plan	46	72	73
US ADS incentive and ADS Appreciation Cash plans	(37)	77	(32)
Leveraged Share Savings plan	17		
Other Management Share programs	12	8	
Total US GAAP additional compensation expense	**38**	**168**	**41**

(g) Consolidation of share-based compensation foundations

The Group has an employee share participation foundation that settles the obligations of the Group's share-based compensation plans that is not required to be consolidated for IAS. However, this foundation is consolidated under US GAAP.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The impact of consolidating this foundation is to reduce net income by CHF 37 million, CHF 21 million and CHF 5 million in 2001, 2000 and 1999, respectively. US GAAP equity at December 31, 2001 and 2000 decreases by CHF 939 million and CHF 753 million, respectively.

(h) Deferred taxes

Under IAS 12 (revised) and US GAAP, unrealized profits resulting from intercompany transactions are eliminated from the carrying amount of assets, such as inventory. In accordance with IAS 12 (revised) the Group calculates the tax effect with reference to the local tax rate of the company that holds the inventory (the buyer) at period-end. However, US GAAP requires the tax effect to be calculated with reference to the local tax rate in the seller or manufacturer's jurisdiction.

(i) In-process research and development (IPR&D)

IAS does not consider that IPR&D is an intangible asset that can be separated from goodwill. Under US GAAP it is considered to be a separate asset that needs to be written-off immediately following the acquisition as the feasibility of the acquired research and development has not been fully tested and the technology has no alternative future use.

During 2001 IPR&D has been identified for US GAAP purposes in connection with acquisitions, principally the acquisition of 21.3% of the voting shares of Roche and the acquisition of the pitavastatin marketing rights.

A fair value determination of Roche was used to determine the CHF 356 million of IPR&D which has been expensed immediately. The independent appraisers used an excess earnings model and relied upon publicly available information from equity analyst reports. An excess earnings model captures the future cash flows attributable to the asset.

Under US GAAP marketing rights, such as those acquired for pitavastatin where the underlying product has not received regulatory approval, are classified as IPR&D and require expensing immediately. This resulted in an additional US GAAP expense of CHF 506 million.

During 2000 IPR&D was identified for US GAAP purposes in connection with acquisitions, principally Wesley Jessen.

The technology acquired with Wesley Jessen consisted of two projects and five technologies to be used in research and development. The successful completion of the acquired research and development projects is subject to achieving technological feasibility for each technology acquired. Further work is required to achieve this feasibility which is dependent on completing certain tasks for the projects to be used in research and development. Management anticipates that the tasks will be completed between 2002 and 2003 and commercialization of the projects between 2002 and 2005.

The income approach was used to determine the value of the ongoing research and development projects and technologies that were acquired in the purchase. Under this approach the value of the technology was based upon the present value of future cash flows over 15 to 18 years using a risk-adjusted discount rate of 15%. Management has reviewed the approaches used to value these technologies and agreed that they appropriately reflected the value of the technologies to the ongoing research and development efforts.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

IPR&D recognized on other acquisitions amounted to CHF 74 million in 2001. The total IPR&D expense for 2001 was CHF 936 million (2000: CHF 143 million; 1999: CHF 2 million).

(j) Other

There are also differences between IAS and US GAAP in relation to (1) capitalized interest and capitalized software, (2) accretion on convertible debentures, and (3) LIFO inventory. None of these differences are individually significant and they are therefore shown as a combined total.

(k) Additional US GAAP disclosures

1) Financial assets and liabilities

Apart from the following exceptions, the US GAAP carrying value of financial assets and liabilities is equal to the IAS carrying values.

2) Cash, cash equivalents and time deposits

	2001	2000
	(CHF millions)	(CHF millions)
Carrying value of cash and cash equivalents under IAS	11,147	8,803
Carrying values of time deposits under IAS (Note 10)	2,689	2,238
Change due to consolidation of share-based compensation foundation under US GAAP	(1,137)	(935)
Total under US GAAP	**12,699**	**10,106**

3) Marketable securities

	2001	2000
	(CHF millions)	(CHF millions)
Carrying values of marketable securities under IAS (Note 10)	8,008	9,482
Carrying values of other investments under IAS	1,755	982
Unrealized gains not recorded under IAS (Notes 10 and 13)		2,113
Marketable securities in share-based compensation foundation consolidated under US GAAP	196	196
Total under US GAAP	**9,959**	**12,773**

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

3) Marketable securities (Continued)

The components of available-for-sale marketable securities under US GAAP at December 31, 2001 and 2000 are the following:

	Cost	Gross unrealized gains	Gross unrealized losses	Carrying value and estimated fair value
	(CHF millions)	(CHF millions)	(CHF millions)	(CHF millions)
As of December 31, 2001				
Equity securities	4,084	941	(458)	4,567
Debt securities	5,430	70	(108)	5,392
Total	**9,514**	**1,011**	**(566)**	**9,959**
As of December 31, 2000				
Equity securities	4,297	2,068	(569)	5,796
Debt securities	6,950	185	(158)	6,977
Total	**11,247**	**2,253**	**(727)**	**12,773**

During 2000, the Group disposed of the majority of its holding of bonds designated as held-to-maturity in order to recognize the gains related to these securities. The remaining bonds in this category were reclassified to the available-for-sale category of marketable securities. The majority of these transferred securities were then sold during the year. CHF 4,829 million and CHF 3,711 million of held-to-maturity bonds, at amortized cost, were sold and transferred to available-for-sale securities, respectively. CHF 466 million in gains were recognized upon the sale of the related securities. Unrealized losses of CHF 64 million were transferred to available-for-sale securities.

Prior to the introduction of IAS 39 from January 1, 2001, under IAS, unrealized holding gains on available-for-sale securities were not recognized in the income statement. Gross unrealized holding losses on available-for-sale securities were recorded in the other financial expense component of financial income, net.

Under US GAAP for all years presented, unrealized holding gains and losses on available-for-sale securities are recorded as a component of other comprehensive income.

Proceeds from sales of available-for-sale securities were CHF 9,482 million and CHF 21,007 million in 2001 and 2000, respectively. Gross realized gains were CHF 795 million and CHF 607 million on those sales in 2001 and 2000, respectively. Gross realized losses were CHF 170 million and CHF 291 million on those sales in 2001 and 2000, respectively. The cost used to determine the gain or loss on these sales was calculated using the weighted average method.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

3) Marketable securities (Continued)

The maturities of the available-for-sale debt securities included above at December 31, 2001 are as follows:

	2001
	(CHF millions)
Within one year	215
Over one year through five years	2,132
Over five years through ten years	1,924
Over ten years	1,121
Total	**5,392**

4) Derivative financial instruments

Prior to the adoption of IAS 39 from January 1, 2001, under IAS, the Group used the concept of portfolio valuation for derivative financial instruments. For each portfolio of similar instruments the net unrealized holding gain or loss was determined by netting unrealized holding gains and losses on each instrument in the portfolio. The Group's application of IAS 39 from January 1, 2001 is now consistent with US GAAP. Under US GAAP for all years presented, the Group marks all of its derivative financial instruments except those related to cash flow hedges that do not qualify for hedge accounting, to fair value on an individual basis through the income statement and thus their carrying value is equal to their fair value. This produced the following differences between IAS and US GAAP for periods prior to the adoption of IAS 39 on January 1, 2001:

Realized and unrealized gains and losses on equity options designated as a hedge of available-for-sale securities were deferred in other comprehensive income until the underlying security was disposed of, at which time they were included with the related capital gain or loss.

When a hedging instrument expired or was sold, or when a hedge no longer met the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remained in equity and was recognized when the committed or forecasted transaction was ultimately recognized in the income statement or when the underlying available-for-sale security was disposed of. However, if a committed or forecasted transaction was no longer expected to occur, the cumulative gain or loss that was reported in equity was immediately transferred to the income statement.

From January 1, 2001, the Group adopted SFAS 133 "Accounting for Derivative Instruments and Hedging Activities" which as applied by the Group is consistent with IAS 39 as regards accounting for cash flow hedges.

Total losses recognized in accordance with US GAAP on options settled in Novartis shares that require a net cash settlement were CHF 387 million for the year ended December 31, 2001 (2000: CHF 278 million of gains).

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

5) Non-derivative financial instruments

The US GAAP carrying values are equivalent to the IAS carrying values for all non-derivative financial assets and liabilities, except for marketable securities at December 31, 2000 as described above.

Non-derivative financial assets consist of cash and cash equivalents, time deposits, and marketable securities. Non-derivative liabilities consist of commercial paper, bank or other short-term financial debts, and long-term debt.

The carrying amount of cash and cash equivalents, time deposits, commercial paper, and bank and other short-term financial debts approximates their estimated fair values due to the short-term nature of these instruments. The fair values of marketable securities are estimated based on listed market prices or broker or dealer price quotes. The fair value of long-term debt is estimated based on the current quoted market rates available for debt with similar terms and maturities.

The estimated fair values of the long and short-term financial debt are provided in notes 18 and 21 to the IAS consolidated financial statements.

6) Earnings per share

As discussed in item (g) above, in the past, the Group established a Novartis employee share participation foundation to assist the Group in meeting its obligations under various employee benefit plans and programs. This foundation supports existing, previously approved employee benefit plans.

For US GAAP purposes, the Group consolidates the Novartis employee share participation foundation. The cost of Novartis AG shares held by the foundation is shown as a reduction of shareholders' equity in the Group's balance sheet. Any dividend transactions between the Group and the foundation are eliminated, and the difference between the fair value of the shares on the date of contribution to the foundation and the fair values of the shares at December 31, is included in consolidated retained earnings. Shares held in the foundation are not considered outstanding in the computation of US GAAP earnings per share.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

6) Earnings per share (Continued)

The consolidation of this entity has the following impact on basic and diluted earnings per share:

	2001	2000	1999
Net income attributable to shareholders under US GAAP (CHF millions)	**4,703**	**6,913**	**5,419**
Weighted average number of shares in issue under IAS	2,571,673,365	2,613,547,597	2,653,820,040
Weighted average treasury shares due to consolidation of the employee share participation foundation under US GAAP	(100,569,059)	(93,783,600)	(79,207,240)
Weighted average number of shares in issue under US GAAP	**2,471,104,306**	**2,519,763,997**	**2,574,612,800**
Basic earnings per share under US GAAP (expressed in CHF)	**1.90**	**2.74**	**2.10**

	2001	2000	1999
Net income attributable to shareholders under US GAAP (CHF millions)	**4,703**	**6,913**	**5,419**
Elimination of interest expense on convertible debt (net of tax effect)	20	20	18
Net income used to determine diluted earnings per share	**4,723**	**6,933**	**5,437**
Weighted average number of shares in issue under IAS	2,571,673,365	2,613,547,597	2,653,820,040
Adjustment for assumed conversion of convertible debt	9,478,158	8,838,879	8,614,154
Call options on Novartis shares	4,574,401		
Adjustment for other dilutive share options	1,010,963	982,560	559,080
Weighted average number of treasury shares due to consolidation of the employee share participation foundation under US GAAP	(100,569,059)	(93,783,600)	(79,207,240)
Weighted average number of shares for diluted earnings per share under US GAAP	**2,486,167,828**	**2,529,585,436**	**2,583,786,034**
Diluted earnings per share under US GAAP (expressed in CHF)	**1.90**	**2.74**	**2.10**

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

7) Pro forma earnings per share

Statement of Financial Accounting Standards No. 123 "Accounting for Stock-Based Compensation" established accounting and disclosure requirements using a fair-value based method of accounting for share-based employee compensation. Had the Group accounted for share options in accordance with SFAS 123, net income and earnings per share would have been the pro forma amounts indicated below:

	2001	2000	1999
Net income under US GAAP (CHF in millions):			
As reported	4,703	6,913	5,419
Pro forma	4,664	6,884	5,396
Earnings per share (CHF):			
As reported:			
Basic	1.90	2.74	2.10
Diluted	1.90	2.74	2.10
Pro forma:			
Basic	1.89	2.73	2.10
Diluted	1.88	2.73	2.10

The weighted average assumptions used in determining fair value of option grants were as follows:

	2001	2000	1999
Dividend yield	1.2%	1.3%	1.6%
Expected volatility	24.0%	24.0%	23.0%
Risk-free interest rate	4.0%	4.0%	3.8%
Expected life	9 yrs	10 yrs	10 yrs

These pro forma effects may not be representative of future amounts since the estimated fair value of share options on the date of grant is amortized to expense over the vesting period and additional options may be granted in future years.

8) Deferred tax

The deferred tax asset less valuation allowance at December 31, 2001 and 2000 comprises CHF 2,206 million and CHF 2,221 million of current assets and CHF 1,029 million and CHF 1,044 million of non-current assets, respectively. The deferred tax liability at December 31, 2001 and 2000 comprises CHF 823 million and CHF 786 million of current liabilities and CHF 3,062 million and CHF 2,702 million of non-current liabilities, respectively.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

9) Employee benefit plans

The disclosures required by US GAAP are different from those provided under IAS. The following provides a reconciliation of benefit obligations, plan assets and funded status of the plans.

	Pension benefits			Other post-employment benefits		
	2001	2000	1999	2001	2000	1999
			(CHF millions)			
Plan assets at fair value:						
January 1	**25,426**	**25,454**	**24,456**			
Actual return on plan assets	(737)	2,949	1,429			
Foreign currency translation	49	(18)	655			
Employer contribution	109	73	98			
Employee contributions	33	39	36			
Plan amendments	(361)					
Settlement—Novartis Agribusiness		(1,851)				
Benefit payments	(1,158)	(1,220)	(1,220)			
Plan assets at December 31	**23,361**	**25,426**	**25,454**			
Benefit obligation:						
January 1	**17,662**	**21,304**	**21,926**	**660**	**655**	**614**
Service cost	359	467	543	15	11	13
Interest cost	825	857	784	52	48	42
Actuarial (gain) loss	1,379	(1,759)	(1,264)	169	(21)	(45)
Plan amendments	(437)		3	(2)	(1)	(11)
Settlement—Novartis Agribusiness		(1,909)				
Foreign currency translation	(14)	(78)	532	15	17	95
Benefit payments	(1,158)	(1,220)	(1,220)	(63)	(49)	(53)
December 31	**18,616**	**17,662**	**21,304**	**846**	**660**	**655**
Funded status	**4,745**	**7,764**	**4,150**	**(846)**	**(660)**	**(655)**
Unrecognized transition (asset)			(88)			
Unrecognized actuarial (gain) loss	632	(2,672)	411	(58)	(160)	(148)
December 31—Prepaid (accrued) benefit costs	**5,377**	**5,092**	**4,473**	**(904)**	**(820)**	**(803)**
Prepaid benefit costs	6,469	5,783	5,362			
Accrued benefit liability	(1,092)	(691)	(889)	(904)	(820)	(803)
December 31—Net amount recognized in the balance sheet	**5,377**	**5,092**	**4,473**	**(904)**	**(820)**	**(803)**
Benefit cost:						
Service cost	359	467	543	15	11	13
Interest cost	825	857	784	52	48	42
Expected return on plan assets	(1,517)	(1,583)	(1,505)			
Employee contributions	(33)	(39)	(36)			
Amortization of transition (asset)		(88)	(239)			
Amortization of actuarial (gain) loss	258	28	161	78	(15)	
Net periodic benefit (income) cost	**(108)**	**(358)**	**(292)**	**145**	**44**	**55**

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

9) Employee benefit plans (Continued)

	Pension benefits			Other post-employment benefits		
	2001	2000	1999	2001	2000	1999
	%	%	%	%	%	%
Weighted-average assumptions as at December 31:						
Discount rate	4.6	4.5	4.1	7.5	7.7	7.7
Rate of payroll indexation	2.8	2.8	2.8			
Expected return on plan assets	6.1	6.2	6.1			

In 2001 the Group recorded CHF 108 million of settlement gains associated with Group restructurings. In 2000 a net gain of CHF 52 million was recorded directly in shareholders' equity based on the settlement of its defined benefit pension plans attributable to Novartis Agribusiness.

The assumed health care cost trend rate at December 31, 2001 was 9.0% for those under age 65 and 9.0% for those over age 65, decreasing to 4.75% in 2006 and thereafter for both groups. The assumed health care cost trend rate at December 31, 2000 was 6.0% for those under age 65 and 6.0% for those over age 65, decreasing to 4.75% in 2006 and thereafter for both groups.

A one-percentage-point change in the assumed health care cost trend rates compared to those used for 2001 would have the following effects:

	1% point increase	1% point decrease
	(CHF millions)	(CHF millions)
Effects on total of service and interest cost components	10	(8)
Effect on post-employment benefit obligations	98	(85)

10) Comprehensive income

SFAS No. 130 "Reporting Comprehensive Income" established standards for the reporting and display of comprehensive income and its components. Comprehensive income includes net income and all changes in equity during a period that arise from non-owner sources, such as foreign currency items and

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

10) Comprehensive income (Continued)

unrealized gains and losses on securities available-for-sale. The additional disclosures required under US GAAP are as follows:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Net income under US GAAP	**4,703**	**6,913**	**5,419**
Other comprehensive income:			
Foreign currency translation adjustment	(275)	(525)	2,579
Unrealized market value adjustment on available-for-sale securities (net of taxes of CHF 169 million, CHF 227 million and CHF 34 million, respectively)	(1,010)	1,137	287
Reclassification adjustment:			
Net realized gains on sales of securities (net of taxes of CHF (61) million, CHF 36 million and CHF 72 million, respectively)	564	(280)	(645)
Comprehensive income under US GAAP	**3,982**	**7,245**	**7,640**

11) Foreign currency translation

The Group has accounted for operations in highly inflationary economies in accordance with IAS 21 (revised) and IAS 29. The accounting under IAS 21 (revised) and IAS 29 complies with Item 18 of Form 20-F and is different from that required by US GAAP.

12) Effect of New Accounting Pronouncements: *International Accounting Standards*

The Group considers that there are no issued but not yet implemented IAS standards that will have a material effect on the Group's consolidated financial statements.

13) Effect of New Accounting Pronouncements: *US GAAP*

Statement of Financial Accounting Standards SFAS No. 141 on "Business Combinations"; SFAS 142 on "Goodwill and other Intangible Assets"; SFAS 143 on "Accounting for Asset Retirement Obligations" and SFAS 144 on the "Accounting for Impairment or Disposal of Long-Lived Assets" will be effective for periods beginning on or after January 1, 2002. The Group has not determined what, if any, effect these new standards will have on its consolidated financial statements.

Report of Independent Accountants on Financial Statement Schedule

To the Shareholders and Board of Directors
of the Novartis Group, Basel

Our audits of the consolidated financial statements referred to in our report dated January 31, 2002, appearing on page F-2 of this Form 20-F, also included an audit of the financial statement schedule listed in Item 19 of this Form 20-F. In our opinion, this financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PricewaterhouseCoopers AG

S. A. J. Bachmann J. P. Herron

Basel, January 31, 2002

Novartis Group

Schedule II—Valuation and qualifying accounts

(for the years ended December 31, 2001, 2000 and 1999)

	Balance at beginning of period	Additions	Deductions[1]	Balance at end of period
		(CHF millions)		
Descriptions:				
Year ended December 31, 2001:				
Provision for doubtful receivables	(248)	(146)	98	(296)
Provision for inventories	(386)	(606)	341	(651)
Allowance for deferred taxes	(237)	(31)	171	(97)
	(871)	**(783)**	**610**	**(1,044)**
Year ended December 31, 2000:				
Provision for doubtful receivables	(625)	(337)	714	(248)
Provision for inventories	(487)	(317)	418	(386)
Allowance for deferred taxes	(365)	(112)	240	(237)
	(1,477)	**(766)**	**1,372**	**(871)**
Year ended December 31, 1999:				
Provision for doubtful receivables	(455)	(308)	138	(625)
Provision for inventories	(390)	(434)	337	(487)
Allowance for deferred taxes	(214)	(179)	28	(365)
	(1,059)	**(921)**	**503**	**(1,477)**

(1) Represents amounts used for the purposes for which the accounts were created and reversal of amounts no longer required.