As filed with the Securities and Exchange Commission on May 9, 2000

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

**Washington D.C. 20549**

# FORM 20-F/A

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

**Commission file number 1- ●**

# 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)

**Schwarzwaldallee 215**
**CH-4058 Basel**
**Switzerland**
(Address of principal executive offices)

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

| Title of class | Name of each exchange on which registered |
|---|---|
| American Depositary Shares each representing 1/40 Ordinary Share, nominal value CHF 20 per Ordinary Share and Ordinary Shares* | New York Stock Exchange, Inc. |

* Application to be made for listing, not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

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:

**72,130,117 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 X No ____ Not Applicable ____**

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

**Item 17 ____ Item 18 X**

## INTRODUCTION

Novartis AG and its consolidated subsidiaries ("Novartis" or the "Group") publishes its consolidated financial statements expressed in Swiss francs ("CHF"). The consolidated financial statements of Novartis included in Item 18 of this Registration Statement on Form 20-F ("Registration Statement") include financial statements for the year ended December 31, 1999. In this Registration Statement, references to "CHF" are to Swiss francs; references to "U.S. dollars" or "$" are to the lawful currency of the U.S.; and references to "m" are to million. Solely for the convenience of the reader, this Registration Statement contains translations of certain Swiss franc amounts into U.S. dollar amounts at specified rates. These translations should not be construed as representations that the Swiss franc amounts actually represent such U.S. dollar amounts or could be converted into U.S. dollars at the rate indicated or at any other rate. Unless otherwise indicated, the translations from Swiss francs into U.S. dollars have been made at the noon buying rate in New York City for cable transfers in Swiss francs as certified for customs purposes by the Federal Reserve Bank of New York (the "Noon Buying Rate") in effect on December 31, 1999, which was $1.00 = CHF 1.59.

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In this Registration Statement, references to the "Company" are to Novartis AG; references to "Novartis" or the "Group" are to the Company and its consolidated subsidiaries; 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.

The principal executive offices of the Company are currently located at Schwarzwaldallee 215, CH-4058 Basel, Switzerland and its telephone number is 011-41-61-324 8000.

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The Company furnishes to holders of its 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 U.S. ("U.S. GAAP"). See "Item 18. Financial Statements—Note 31" for a description of the significant differences between IAS and U.S. GAAP. The financial statements included in the annual reports are examined and reported upon by the Company's independent auditors. The Company also furnishes holders of its Shares with half-year interim reports which include unaudited interim consolidated financial information prepared in conformity with IAS.

This Registration Statement 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 the Company's business and the sectors in which it and its subsidiaries and interests operate. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believes", "expects", "may", "are expected to", "will", "will continue", "should", "would be", "seeks" or "anticipates" 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 the Company's investment and research and development programs and anticipated expenditures in connection therewith, descriptions of new products expected to be introduced by the Company and anticipated customer demand for such products. Such statements reflect the current views of the Company with respect to future events and are subject to certain risks, uncertainties and assumptions. Many factors could cause the actual results, performance or achievements of the Company 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 1. Description of Business", and "Item 9. Management's Discussion and Analysis of Financial Condition and Results of Operations". 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 Registration Statement as anticipated, believed, estimated or expected. The Company does not intend, and does not assume any obligation, to update any industry information or forward-looking statements set out in this Registration Statement.

## Part I

### Item 1. Description of Business

#### General

Novartis is a world leader both in sales and in innovation in its continued core businesses: pharmaceuticals, generics, eyecare products and medicines ("CIBA Vision"), consumer health and animal health. Novartis aims to hold a leadership position in all of these businesses. Novartis also is a world leader in agribusiness, the operations of which will be spun off to Syngenta AG in 2000. See "—Spin-off of Agribusiness".

Novartis is 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 the Group's focus on research and development.

Headquartered in Basel, Switzerland, Novartis employs approximately 82,000 people worldwide, operates in over 140 countries and is listed on the Swiss Exchange (the "SWX"). The Company's registered office is located at Schwarzwaldallee 215, CH-4058 Basel and its telephone number is 011-41-61-324-8000.

#### Background

The Company was created by 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. The predecessor companies of the Company merged to realize sales, cost and cross-sector synergies, and to create a combined entity with the resources and ability to compete in the long term in an increasingly competitive global environment.

#### Spin-off of Agribusiness

The Boards of the Company and AstraZeneca announced on December 2, 1999, that they each agreed to spin off and merge Novartis' Crop Protection and Seeds businesses and Zeneca Agrochemicals to create the world's first dedicated agribusiness company with pro forma combined sales in 1998 of approximately $7.9 billion. The new company will be named Syngenta AG ("Syngenta"), headquartered in Basel, Switzerland, and is expected to be listed on the Swiss, London, New York and Stockholm Stock Exchanges. The Company's shareholders will receive 61% and AstraZeneca's shareholders will receive 39% of the shares of Syngenta. Shareholders of the Company will be eligible to receive one share of Syngenta for each Share of the Company they hold, whereas AstraZeneca's shareholders will be eligible to receive one share of Syngenta for approximately every 40.83 shares of AstraZeneca held. For each share of Syngenta, the Novartis shareholder will have to pay in the nominal value of CHF 10, which is the cost of subscribing for shares in a Swiss spin-off entity which will be merged into Syngenta. The Company and AstraZeneca have entered into a binding agreement to create Syngenta. The transaction is conditional, *inter alia*, on the shareholder approvals of the Company and AstraZeneca and receipt of relevant regulatory clearances. Completion, and the listings of Syngenta, are expected to take place in the second half of 2000. The Agribusiness sector of Novartis, which comprises Crop Protection and Seeds, is accordingly shown as a discontinuing activity.

#### Product Sectors and Geographic Markets

Novartis currently operates in five principal industry sectors: pharmaceuticals, generics, eyecare products and medicines ("CIBA Vision"), consumer health and animal health. The operations in a sixth industry sector, agribusiness, will be spun-off and merged with Zeneca Agrochemicals in the creation of Syngenta. All references to Group figures, including employees and sales, include the agribusiness sector. The segmental analysis has been reclassified for all years to reflect these six sectors. The following tables

set forth the Group's sales and operating income by business sector for the fiscal years ended December 31, 1999, 1998 and 1997.

| | *Year ended December 31* | | |
|---|---|---|---|
| | *1999* | *1998* | *1997* |
| | *(CHF millions)* | *(CHF millions)* | *(CHF millions)* |
| **Sales to third parties** | | | |
| Pharmaceuticals | 15,595 | 14,501 | 14,112 |
| Generics | 1,823 | 1,529 | 1,452 |
| CIBA Vision | 1,632 | 1,505 | 1,423 |
| Consumer Health—ongoing | 5,250 | 4,752 | 4,739 |
| Divested Consumer Health activities | 182 | 1,036 | 1,127 |
| Animal Health | 927 | 901 | 893 |
| **Sales of continuing activities** | **25,409** | **24,224** | **23,746** |
| Sales from discontinuing Agribusiness activities[1] | 7,056 | 7,478 | 7,434 |
| **Group sales** | **32,465** | **31,702** | **31,180** |
| **Operating income** | | | |
| Pharmaceuticals | 4,830 | 4,502 | 4,246 |
| Generics | 347 | 278 | 239 |
| CIBA Vision | 250 | 225 | 231 |
| Consumer Health—ongoing | 653 | 647 | 466 |
| Divested Consumer Health activities | 375 | 80 | 74 |
| Animal Health | 216 | 211 | 196 |
| Corporate and Other | (65) | (121) | (104) |
| **Operating income from continuing activities** | **6,606** | **5,822** | **5,348** |
| Operating income from discontinuing Agribusiness activities[1] | 737 | 1,098 | 1,340 |
| **Group operating income** | **7,343** | **6,920** | **6,688** |

(1) Agribusinesses: Crop Protection and Seeds businesses

The table below sets forth a regional breakdown of certain data for the years ended December 31, 1999, 1998 and 1997.

| | *Americas* | | | *Europe* | | | *Rest of the World* | | |
|---|---|---|---|---|---|---|---|---|---|
| | *1999* | *1998* | *1997* | *1999* | *1998* | *1997* | *1999* | *1998* | *1997* |
| Sales (CHF m) | 15,328 | 15,292 | 14,572 | 11,620 | 11,789 | 11,665 | 5,517 | 4,621 | 4,943 |
| Operating Income (CHF m) | 2,170 | 2,742 | 2,223 | 4,549 | 3,658 | 3,932 | 624 | 520 | 533 |
| Number of Employees (at December 31) | 29,077 | 27,832 | 30,641 | 38,125 | 40,105 | 41,463 | 14,652 | 14,512 | 15,135 |
| Investment in Tangible Fixed Assets (CHF m) | 510 | 498 | 440 | 754 | 1,010 | 1,017 | 107 | 69 | 111 |
| Depreciation of Tangible Fixed Assets (CHF m) | (351) | (321) | (330) | (790) | (770) | (721) | (120) | (70) | (89) |
| Net Operating Assets (CHF m) | 7,780 | 6,266 | 6,130 | 14,936 | 12,765 | 11,830 | 2,043 | 1,795 | 1,568 |

**PHARMACEUTICALS**

Novartis Pharmaceuticals is a world leader in the discovery, development, manufacture and marketing of prescription medicines. The goal of Novartis Pharmaceuticals 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 a dedicated, global organization, operating in more than 140 countries through approximately 60 affiliates. In 1999, Novartis Pharmaceuticals employed 35,721 people and had CHF 15,595 million in sales, which represented 48% of the Group's sales.

Novartis Pharmaceuticals' product portfolio includes a wide range of products in seven major disease areas: (i) cardiovascular/metabolism/endocrinology; (ii) central nervous system; (iii) dermatology; (iv) oncology/hematology; (v) respiratory; (vi) rheumatology/bone/hormone replacement therapy ("HRT"); and (vii) transplantation/immunology.

The current product portfolio includes 25 key marketed products, of which 10 are recently launched products. In addition, the portfolio includes a further 47 projects in development. See "—Research and Development".

**Key Marketed Products**

The table below sets forth certain summary information relating to Novartis Pharmaceuticals' key marketed products. The Neoral®/Sandimmun® brand accounts for more than 10% of Novartis Pharmaceuticals' sales.

| *Therapeutic Area* | *(Recent launches are highlighted)* *Products* | *Class* | *Treatment Area* |
|---|---|---|---|
| Cardiovascular/ Metabolism/ Endocrinology | Diovan® (valsartan) | $AT_1$-receptor blocker | Hypertension |
| | Co-Diovan® (valsartan+HCTZ) | $AT_1$-receptor blocker | Hypertension |
| | Cibacen®/Lotensin® (benazepril) | ACE-inhibitor | Hypertension |
| | Lotrel® (benazepril-amlodipine) | ACE-inhibitor+CCB | Hypertension |
| | Lescol® (fluvastatin) | HMG-CoA reductase inhibitor | Elevated lipids |
| Central Nervous System | Comtan® (entacapone) | COMT-inhibitor | Parkinson's disease |
| | Exelon® (rivastigmine) | AchE-inhibitor | Alzheimer's disease |
| | Exelon® solution | AchE-inhibitor | Alzheimer's disease |
| | Leponex®/Clozaril® (clozapine) | Dopamine antagonist/ agonist | Schizophrenia |
| | Tegretol® (carbamazepine) | Iminostilbene | Epilepsy, acute and bipolar affective disorders |
| | Trileptal® (oxcarbazepine) | Iminostilbene | Epilepsy |
| Dermatology | Apligraf® | Graft skin human skin equivalent | Venous leg ulcers |
| | Lamisil® (terbinafine) | Ergosterol inhibitor | Fungal infections of the skin, nails and scalp |

*(Recent launches are highlighted)*

| *Therapeutic Area* | *Products* | *Class* | *Treatment Area* |
|---|---|---|---|
| Oncology/ Hematology | Sandostatin® LAR (octreotide) | Growth hormone inhibitor, Gastroenteropancreatic tumor inhibitor | Acromegaly, Gastroenteropancreatic tumors |
| | Aredia® (pamidronate) | Anti-osteolytic | Bone metastases, multiple myeloma |
| | Femara® (letrozole) | Aromatase inhibitor | Advanced breast cancer |
| | Sandostatin® (octreotide) | Synthetic somatostatin | Gastroenteropancreatic endocrine tumors |
| Respiratory | Foradil® (formoterol) | ß agonist | Asthma, bronchitis |
| Rheumatology/ Bone/HRT | Miacalcic® (salmon calcitonin) | Mineral metabolism regulator | Osteoporosis |
| | Voltaren® Group (diclofenac) | Nonsteroidal anti-inflammatory drug | Inflammation |
| | Estalis® (estradiol) | Hormone replacement therapy | Estrogen deficiency following menopause |
| | Estraderm® MX (estradiol) | Hormone replacement therapy | Estrogen deficiency following menopause |
| Transplantation/ Immunology | Simulect® (basiliximab) | Immunosuppressant | Acute organ rejection in kidney transplantation |
| | Neoral® (cyclosporin for microemulsion) and Sandimmun® (cyclosporin) | Immunosuppressant | Prevention of graft rejection following organ and bone marrow transplantation |
| | Sandoglobulin® (human immunoglobulin) | Immune globulins | Immunodeficiencies |
| | Coartem® | | Malaria |

**Compounds in Development**

The following table sets forth certain summary information relating to Novartis Pharmaceuticals' most prominent compounds in development.

| *Therapeutic Area* | *Compound* | *Target Indication* | *Phase[(1)]/Category[(2)]* |
|---|---|---|---|
| Cardiovascular/ Metabolism/ Endocrinology | Sandostatin® LAR | Diabetic retinopathy and other indications | III (sNDA) |
| | Lescol® XL | Hyperlipidemia | III (sNDA) |
| | Starlix® | Type II diabetes | III (NDA) |
| | DPP728 | Type II diabetes | II (NDA) |
| | Diovan® | Congestive heart failure, pre-/ post-myocardial infarction | III (sNDA) |
| | Zelmac® | Irritable bowel syndrome | III (NDA) |
| | Zelmac® | Gastroesophageal reflux disease and functional dyspepsia | II (sNDA) |
| Central Nervous System | Ritalin® QD | Attention deficit hyperactivity disorder | III (sNDA) |
| | Exelon® TDS | Alzheimer's disease | II (sNDA) |
| | Zomaril® | Schizophrenia | III (NDA) |
| | Rufinamide | Epilepsy | III (NDA) |
| | NKP608 | Depression/social phobia | II (NDA) |
| Dermatology | Elidel® cream | Inflammatory skin disease | III (NDA) |
| | Lamisil® | Tinea capitis, systemic mycosis | III (sNDA) |
| | Apligraf® | Wound healing, diabetic foot ulcers, burns | III (sNDA) |
| Oncology/ Hematology | PKC 412 | Cancer | II (NDA) |
| | Zometa® | Bone metastases—prevention/treatment | III (sNDA) |
| | Zometa® | Tumor-induced hypercalcemia | III (NDA) |
| | OncoLAR® | Breast cancer | III (NDA) |
| | Amdray® | Ovarian cancer | III (NDA) |
| | Femara® | Breast cancer (adjunctive therapy and first line) | III (sNDA) |
| | STI 571 | Chronic myeloid leukemia (CML)/Acute lymphatic leukemia | II (NDA) |
| Respiratory | E25 | Allergic rhinitis, asthma | III (NDA) |
| | Foradil® | Chronic obstructive pulmonary disease, pediatric asthma | III (sNDA) |
| | Foradil® | Multiple dose dry powder inhaler | II (sNDA) |
| Rheumatology/ Bone/HRT | Estragest® TTS | Osteoporosis | III (NDA) |
| | COX189 | Rheumatoid arthritis, osteoarthritis, pain | II (NDA) |
| Transplantation/ Immunology | PMX 622 | Sepsis | II (NDA) |
| | Certican® | Transplantation | III (NDA) |
| | ERL080 | Transplantation | III (NDA) |
| | Neoral® TDM Kit | Transplantation | II (sNDA) |

(1) For a description of Novartis Pharmaceuticals' clinical development program, see "—Research and Development".

(2) The category classification refers to the type of filing application for the U.S. Food & Drug Administration. For a discussion of "NDA" and "sNDA", see "—Regulation".

The following is a summary description of each of Novartis Pharmaceuticals' seven key therapeutic areas. Unless otherwise indicated, the key marketed products described below are marketed worldwide.

*Cardiovascular/Metabolism/Endocrinology*

Novartis Pharmaceuticals markets a wide range of products for the treatment of cardiovascular disease, including products for the treatment of hypertension, hyperlipidemia, angina pectoris and heart failure. Ongoing research is focused on the development of innovative new agents to treat metabolic disorders, such as type II diabetes and obesity, which are associated with serious cardiovascular sequelae including peripheral vascular disease, diabetic retinopathy, nephropathy, stroke and myocardial infarction. Research and development is aimed at extending the product portfolio in the areas of hypertension, hyperlipidemia, heart failure and coronary artery disease.

**Recently launched 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.

**Key marketed products**

- Cibacen®/Lotensin® (benazepril) is an ACE-inhibitor indicated for the first-line treatment of hypertension and as adjunct therapy in heart failure.
- Lotrel® (benazepril-amlodipine) is a fixed combination of the ACE-inhibitor benazepril and a leading calcium antagonist (amlodipine).
- Lescol® (fluvastatin) is a lipid-lowering drug (statin) indicated for the treatment of hyperlipidemia. In addition, Lescol® has been approved in the U.S. 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.

**Compounds in development**

- 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 is a major disease area affecting a considerable number of adults worldwide, many of whom are presently undiagnosed. Novartis Pharmaceuticals in-licensed the compound from Ajinomoto and owns marketing rights for the drug worldwide, except 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 compound is currently in registration in the U.S. and the EU. The drug aims to restore the early phase of insulin release which helps control blood glucose levels at mealtime.
- Zelmac® (tegaserod) is a 5-$HT_4$ partial agonist developed to address the need for a safe and effective treatment of irritable bowel syndrome, relieving such symptoms as abdominal pain, altered bowel movements, excess mucous production and bloating. The compound is currently in the registration phase in the U.S. and the EU. The FDA recently granted priority review for Zelmac®.

*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, Alzheimer's disease, multiple sclerosis, and trauma following stroke), learning disorders and chronic pain.

**Recently launched products**

- Comtan® (entacapone) further strengthens the sector's position in Parkinson's disease. Comtan® enhances the action of levodopa, the standard therapy for Parkinson's disease. The compound is in-licensed from Orion Pharma.
- Exelon® (rivastigmine) is a new therapy for the treatment of patients with mild to moderate Alzheimer's disease. Exelon® is also in-licensed and has been approved in more than 30 markets to date, including the 15 member-states of the EU and the U.S.
- 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.

**Key marketed products**

- Tegretol® (carbamazepine) was launched in 1963 for the treatment of anti-epileptic seizures and remains a principal product in the market for the treatment of the disease.
- Leponex®/Clozaril® (clozapine) is a neuroleptic agent used in treatment-resistant schizophrenia.

**Compounds in development**

- Rufinamide is a sodium channel inhibitor for the treatment of epilepsy. The compound, which is in Phase III clinical trials, is being developed as monotherapy and adjunct therapy for use in adults and children for a broad range of seizure types.
- Zomaril® (iloperidone) is a mixed serotonin/dopamine antagonist for the treatment of schizophrenia and other related psychotic disorders. Zomaril® is currently in Phase III clinical trials.
- NKP608 is a selective antagonist of substance P at the NK-1 receptor for the treatment of depression and social phobia. NKP608 is in Phase II clinical trials.

***Dermatology***

Novartis Pharmaceuticals' 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 dermatitis, psoriasis and acne. There is considerable demand for new treatments in these areas where current therapies are handicapped by limited efficacy or unacceptable side-effects.

**Recently launched products**

- Apligraf® is the first tissue-engineered, full-thickness living human skin equivalent. Apligraf® offers improved wound healing to patients with difficult-to-heal wounds resulting from venous leg ulcers. Apligraf® is in-licensed from Organogenesis in the U.S.

**Key marketed products**

- 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.

**Compounds in development**

- Elidel® Cream (ASM981) is a cytokine inhibitor in development for the treatment of atopic dermatitis. The compound, which is in Phase III clinical trials, is a member of a new class of agents—the ascomycin macrolactams—which appear to be suitable for both short- and long-term treatments.

*Oncology/Hematology*

The oncology/hematology area is an important specialty segment for Novartis Pharmaceuticals, which markets 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 and colorectal), 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, leukemia, lymphoma and sarcoma.

**Recently launched products**

- 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 profuse, watery diarrhea associated with vasoactive intestinal polypeptide secreting tumors.

**Key marketed products**

- Sandostatin® (octreotide) is a synthetic octapeptide derivative of the hormone somatostatin indicated for the treatment of pancreatic and gastrointestinal endocrine tumors, acromegaly, AIDS-related diarrhea, and following pancreatic surgery.
- Aredia® (pamidronate) is a therapy for cancer-related bone complications, including tumor-induced hypercalcemia, multiple myeloma, and bone metastases.
- Femara® (letrozole) is an oral aromatase inhibitor for the treatment of advanced breast cancer in women with natural or artificially induced post-menopausal status when anti-estrogen therapy fails.

**Compounds in development**

- Zometa® (zoledronate) is a bisphosphonate being developed for the treatment of cancer patients at risk of developing tumor induced hypercalcemia ("TIH") and for bone metastases. The compound, which is in the registration phase for TIH and in Phase III clinical trials for bone metastases treatment and prevention, is being developed as an advance on Aredia®. The FDA recently granted priority review for Zometa®.
- STI571 is a signal transduction inhibitor being developed to treat several forms and phases of leukemia. STI571 is currently in Phase II clinical trials for Chronic Myeloid Leukemia. In addition, the potential of STI571 will be studied in solid tumors as a basis for widening the range of indications to include other types of cancer.
- Amdray® (valspodar) is a p-glycoprotein pump inhibitor being developed for the treatment of ovarian cancer in combination with current chemotherapy regimens. Amdray® is in Phase III clinical trials and targets multi-drug resistance in chemotherapy regimens.

*Respiratory*

Based on its long-standing business in the respiratory market, Novartis Pharmaceuticals is committed to expanding its 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 bronchodilator indicated for the treatment of asthma and is due to be launched in the U.S. in 2001. The product was launched in its original form in 1994 outside the U.S. 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, Novartis Pharmaceuticals is working

to strengthen its 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.

**Compounds in development**

- Ongoing research and product development is aimed at extending the clinical utility of Foradil® by registering the product for use as rescue medication during an asthma attack in children and for use in patients with chronic obstructive pulmonary disease ("COPD"). In addition, Novartis Pharmaceuticals has entered into a collaborative agreement with SkyePharma to jointly develop a new multi-dose dry powder presentation of Foradil® using SkyePharma's patented multi-dose dry powder inhaler device. Foradil® is currently in Phase III clinical trials for the indication of COPD.
- E-25 (olizumab) is an anti-IgE monoclonal antibody used to treat allergic disease, irrespective of allergen, by normalizing serum IgE. The drug is being developed in partnership with Genentech and Tanox and is currently in Phase III clinical trials. E-25 is being developed for the treatment of allergic asthma and allergic rhinitis.

***Rheumatology/Bone/HRT***

Novartis Pharmaceuticals is a market leader in the rheumatology/bone/HRT area, with products for the treatment of potential arthritis, osteoporosis and early menopausal symptoms, such as hot flashes, and preventing the long-term complications of the condition, which include cardiovascular disease and osteoporosis. 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.

**Recently licensed products**

- Estalis® (estradiol/norethisterone acetate transdermal system) is for the treatment of menopausal symptoms, including disturbed sleep, memory loss, skin atrophy and brittle bones. The compound is in-licensed from Aventis.

**Key marketed products**

- 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, acute attacks of gout and migraines. The brand has been extended as an over-the-counter preparation, Voltaren® Emulgel®, a topical form of diclofenac for post-traumatic inflammation of tendons, ligaments, muscles and joints, and for localized forms of soft-tissue and degenerative rheumatism.
- Miacalcic® (synthetic salmon calcitonin) is available as an injectable form and nasal spray for the prevention of progressive loss of bone mass, mainly in post-menopausal women and in elderly patients, Paget's disease and hypercalcemia.
- Estraderm® MX (17B-estradiol) is a treatment for estrogen deficiency and subsequent bone loss due to menopause, whether natural or surgically induced.

**Compounds in development**

- COX189 is an NSAID that selectively inhibits the COX-2 enzyme. The compound is in Phase II clinical trials. Target indications include osteoarthritis, rheumatoid arthritis and pain indications.

***Transplantation/Immunology***

Novartis Pharmaceuticals is a leader in the field of transplantation medicine, producing widely used products that 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, B-cell inhibition, ischemia/reperfusion injury to reduce delayed graft function, inhaled therapies for lung transplantation and pancreatic islet transplantation.

**Recently launched products**

- 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.

**Key marketed products**

- Sandimmun® (cyclosporin) was introduced in 1982 to improve the survival rates among patients with solid organ (kidney, heart, lung and liver) transplants and bone marrow transplantation.
- 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.

**Compounds in development**

- Certican® (RAD) 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® and Simulect® to prevent rejection episodes in patients with kidney, lung, heart and liver transplants. Certican® is being developed in a tablet formulation.

**Principal Markets**

The world market for pharmaceuticals is concentrated in the major markets of the U.S., Europe and Japan. The following table sets forth certain data relating to Novartis Pharmaceuticals' principal markets.

| *Novartis Pharmaceuticals* | *Sales 1999 (CHF millions)* | *Sales 1999 (%)* |
|---|---|---|
| U.S. | 5,503 | 35.3 |
| Americas (except the U.S.) | 1,532 | 9.8 |
| Europe | 5,434 | 34.8 |
| Rest of the World | 3,126 | 20.1 |
| **Total** | **15,595** | **100.0** |

**Production**

The key goals in the manufacture and supply chain management program are to ensure the uninterrupted and cost-effective supply of products that meet all product specifications. In order to achieve this objective, Novartis Pharmaceuticals manufactures its prescription medicines at 27 bulk chemical and secondary production facilities, including its principal production facilities located in Stein and Basel, Switzerland; Ringaskiddy, Ireland; and Suffern, New York. Bulk chemical production involves the manufacture of therapeutically active compounds, mainly by chemical synthesis, or by a biological process, such as fermentation.

Raw materials for the manufacturing process are purchased from a number of third party suppliers. Where possible, it is a policy of Novartis Pharmaceuticals to maintain multiple supply sources, such that the sector is not dependent on a single, or limited number of suppliers for essential raw materials. Moreover, Novartis Pharmaceuticals monitors developments that could have an adverse effect on the supply of essential materials. While Novartis Pharmaceuticals has 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.

**Marketing and Distribution**

Novartis Pharmaceuticals has invested significant resources in its sales and marketing organization to achieve a competitive presence in all of the main pharmaceutical markets worldwide. In particular, the sector has a strong presence in the U.S. and the EU.

Products are sold to wholesale and retail drug distributors, hospitals, clinics, government agencies and managed care providers. In each market, Novartis Pharmaceuticals deploys sales representatives and supporting medical staff to market the sector's products and to provide medical information to prescribers and healthcare purchasers. At December 31, 1999 there were 3,606 representatives in the U.S. field force, and 12,908 representatives worldwide. The sales and marketing reach of the sector is further extended through various agreements with local licensees, associates and distributors.

**Competition**

Novartis Pharmaceuticals competes in most major markets with other global pharmaceutical companies, including Abbott Laboratories, American Home Products, AstraZeneca, Aventis, Bayer, Bristol-Myers Squibb, Eli Lilly, GlaxoWellcome, Johnson & Johnson, Merck, Pfizer, Pharmacia & Upjohn, Roche, Schering-Plough, SmithKline Beecham and Warner-Lambert. 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 power, and research and development investment. Novartis Pharmaceuticals believes that no single competitor offers a comparable product offering for the same full range of therapeutic areas and indications as it does.

In addition to competition from ethical pharmaceutical companies, that is, companies selling patented pharmaceuticals under trademarked brand names, Novartis Pharmaceuticals faces an increasing challenge from companies selling generic forms of Novartis brands, following the expiry of patent protection on its key products. In response to generic challenges, Novartis Pharmaceuticals vigorously defends its intellectual property rights to sustain marketing exclusivity for as long as possible. Where appropriate, Novartis Pharmaceuticals extends the product range with patent-protected value-added line extensions and focuses its 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**

Novartis Pharmaceuticals is among the leaders in the pharmaceuticals industry in terms of research and development investment. In 1999, the sector invested approximately CHF 2,848 million in research and development, which represents 18.3% of total pharmaceuticals sales. Novartis invested CHF 2,609 million and CHF 2,629 million on research and development in 1998 and 1997. There are currently 47 projects in clinical development, with 24 in Phase I and Phase II and 23 in Phase III, three of which in the registration phase.

***Clinical development program***

Development of a new drug is a lengthy process, 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. In typical 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***

Within research and development, initiatives are being implemented aimed at improving efficiency in the process of selecting candidate drugs for development. For example, Novartis Pharmaceuticals has undertaken to improve internal processes and operations by focusing senior management expertise on development projects at an early stage to aid in the selection of the best compounds. Under another initiative, special teams are formed to work on developing late stage products more quickly. The goal is to improve the likelihood of therapeutic and commercial success, thereby reducing development costs and decreasing time to market. Overall, these initiatives have the potential to reduce the time between initial research and the introduction of the drug to market.

***Alliances and acquisitions***

Novartis Pharmaceuticals believes that alliances and acquisitions are an important vehicle to acquire technologies and to rapidly extend the expertise within the organization in identified key areas. Novartis Pharmaceuticals has numerous strategic relationships to build and extend its expertise in its core therapeutic areas. These collaborations are exploratory and opportunistic in character, allowing Novartis Pharmaceuticals to maintain relationships with smaller enterprises and academic institutions that are in the forefront of their niche areas of expertise. In this way Novartis Pharmaceuticals enables a number of approaches by funding development in early stages on a number of fronts. In addition, Novartis Pharmaceuticals may in-license certain products that complement its product line and are appropriate to its marketing organization.

The Group has entered into long-term research agreements with various institutions where the Group will fund various research projects totalling CHF 1,630 million in the aggregate at December 31, 1999. (See note 28 to the consolidated financial statements.)

*Implementation of new technologies*

It is increasingly recognized that genomics is a powerful new tool in the search for new drugs and new interventions. Accordingly, Novartis Pharmaceuticals is expanding the sector's functional genomics capability with research centers in Basel, Switzerland; Summit, New Jersey; and in La Jolla, California. These development centers will provide a dedicated, in-house team of 200 scientists focused on this important area. In addition, the sector will complement its in-house resources with strategic alliances and other collaborations in order to explore opportunities as they arise.

**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 such development. Novartis Pharmaceuticals believes it is in material compliance with all applicable regulations in the jurisdictions in which it operates.

The national and supranational regulatory authorities, especially in the U.S., 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, and 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 all 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. In certain instances, innovative products of particular therapeutic interest may be processed on an accelerated basis in many countries. In recent years, intensive efforts have been made among the U.S., 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 (including several member-states of the EU) 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 sector's principal markets:

*United States*

In the U.S., applications for drug registration are submitted to and reviewed by the Food and Drug Administration ("FDA"). The FDA regulates the testing, approval, manufacturing, and labeling of pharmaceutical products intended for commercialization in the U.S., as well as the monitoring of all pharmaceutical products currently on the U.S. market. The pharmaceutical development and registration

process is typically intensive, lengthy and rigorous. A new drug application ("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 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 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 Agency for the Evaluation of Medicinal Products ("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. 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 is carried out by a special body (the Organization for Drug ADR Relief, Research and Development Promotion and Product Review), a team evaluation is passed to the Central Pharmaceuticals Affairs Council ("CPAC"), whose subcommittees, 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 and Welfare ("MHW"), which makes a final determination for approval and refers this to the CPAC committee, which then advises MHW on final approvability. Drug manufacturing or import license approval is issued by the local prefecture government.

**Price Controls**

In many of the markets where Novartis Pharmaceuticals operates, 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 U.S., 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 U.S., federal legislation requires pharmaceutical manufacturers to pay prescribed rebates on certain drugs to enable them to be eligible for reimbursement under Medicaid 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 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, and drug budgets in particular, 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 a commercial pressure on pricing within a country.

In Japan, the National Health Ministry bi-annually 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 whereby a reference price system would replace the existing system. In the proposed system, drug manufacturers would have freedom in pricing their products. However, the government would set an upper limit on drug reimbursement costs and patients would be required to pay additional costs above this upper limit.

**Intellectual Property**

Novartis Pharmaceuticals attaches great importance to patents, trademarks, and know-how in order to protect its investment in research and development, manufacturing and marketing. It is the sector's 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 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. Novartis Pharmaceuticals monitors its competitors and vigorously challenges patent and trademark infringements. In addition, the sector takes advantage of any statutes, to the extent considered advisable, that may prolong the life of a patent.

Patent protection is no longer available in several major markets for the active ingredients used in a number of Novartis Pharmaceuticals' leading products. Patent protection or regulatory exclusivity will expire in major markets for two key products Sandostatin and Miacalcic Nasal. In the case of Sandostatin, the basic octreotide substance patents expire in the U.S., Japan and minor countries in the next two years, but will remain in place in the EU. However, protection continues in all major markets for the long-acting formulation, Sandostatin LAR, extending to 2010 and beyond, and this represents a significant and growing proportion of Novartis Pharmaceuticals' octreotide sales. The regulatory exclusivity protection for Miacalcic Nasal will expire in 2001 in the U.S., but there is U.S. patent protection for Novartis Pharmaceuticals' specific nasal formulation until 2014. Outside of the U.S., there is no regulatory exclusivity, but the formulation patents run until 2003 at the earliest and 2008 at the latest.

The loss of patent protection can have a significant impact on Novartis Pharmaceuticals, and the sector works to offset these negative effects by developing and patenting new processes, formulations and uses and by positioning many of its products in specific market niches. However, there can be no assurance that this strategy will be effective in the future to extend patent protection or competitive advantage, or that Novartis Pharmaceuticals will be able to avoid substantial adverse effects from future patent expirations.

**GENERICS**

Novartis Generics operates worldwide and provides off-patent pharmaceutical products and substances. Novartis Generics offers its products in two forms: finished dosage forms ("Generics Business") and active pharmaceutical ingredients and their intermediates ("Industrial Business"). In the Generics Business, finished dosage forms are sold to pharmacies, hospitals and other healthcare outlets, while in Industrial Business, active ingredients and their intermediates are sold to industrial customers.

As of December 31, 1999, Novartis Generics employed 5,451 people. The products of Novartis Generics are sold in over 120 countries throughout the world. In 1999, Novartis Generics had CHF 1,823 million in sales which represented 6% of the Group's sales.

**Key Marketed Products**

Approximately 55% of sales are derived from Generics Business and approximately 45% of sales are derived from Industrial Business. Key marketed product areas for Novartis Generics are antibiotics (such as pencillins, cephalosporins and macrolides), central nervous system drugs, cardiovascular system drugs, alimentary tract preparations and hormonal tract preparations.

**Principal Markets**

Novartis Generics' principal markets are the two largest generics markets in the world: the U.S. and Europe. The following table sets forth 1999 sales of Novartis Generics by region:

| *Novartis Generics* | *Sales 1999 (CHF millions)* | *Sales 1999 (%)* |
|---|---|---|
| U.S. | 593 | 32.5 |
| Americas (excluding the U.S.) | 60 | 3.3 |
| Europe | 823 | 45.1 |
| Rest of the World | 347 | 19.1 |
| **Total** | **1,823** | **100.0** |

**Production**

The sector's principal production facilities are located in the U.S. and the EU. For finished dosage forms, the principal plants are located in Broomfield, Colorado; Gerlingen, Germany; Kundl, Austria; Jakarta, Indonesia; and Spartan, South Africa. Plants for active pharmaceutical ingredients are located in Kundl and Schaftenau, Austria; Frankfurt, Germany; Rovereto, Italy; Les Franqueses, Spain; and Jakarta, Indonesia.

**Marketing and Distribution**

The four largest operating entities of Novartis Generics are Biochemie GmbH, which markets generics on a global basis, Geneva Pharmaceuticals Inc., a leading supplier of generic pharmaceuticals in the U.S., Azupharma GmbH, a leading supplier of generic pharmaceuticals in Germany, and Multipharma, a leading supplier of generic pharmaceuticals in the Netherlands.

In Generics Business a broad portfolio of patent-free medicines is delivered to pharmacies, hospitals, and other healthcare outlets. Depending on the structure of local markets, these markets are serviced either by the sector's own field services team or by well established partners or joint venture associates.

In Industrial Business, active pharmaceutical ingredients are distributed to manufacturers in the generic and pharmaceutical industry.

In response to rising healthcare costs, many governments and private medical care providers, such as HMOs, have instituted reimbursement schemes which favor the substitution of generic pharmaceuticals for more expensive original pharmaceuticals. In the U.S., 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 remain well below those reached in the U.S., largely because reimbursement practices often do not create an incentive for generic substitution.

**Competition**

Due to the competitive environment, it is important for Novartis Generics' products to be among the first group of generic products on the market after the patent expiration of the original ethical drug. In

order to be first on the market with its products, Novartis Generics closely monitors patent expiration dates for leading ethical drugs.

In the U.S., key competitors in the generic market are Apothecon, Barr, Merck Generics, Mylan, Teva, Watson and Zenith Goldine. In Europe, key competitors in the generics market are Alpharma, Hexal, Merck Generics, Ratiopharm, Stada and Teva.

**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, and, therefore, patent-free drugs can be offered for sale at prices much lower than those of patented drugs, the pricing of which must recoup substantial basic research and development costs over the life of the product's patent.

Currently, Novartis Generics employs approximately 500 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 the sector's facilities in Kundl, Austria; Broomfield, Colorado; and Mumbai, India. Novartis Generics invested CHF 126 million, CHF 98 million and CHF 79 million in research and development related to generic products in 1999, 1998 and 1997, respectively.

**Regulation**

The Waxman-Hatch Act in the U.S. (and similar legislation elsewhere) eliminated the need for extensive clinical trials to be repeated 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".

**CIBA Vision**

With its products sold in over 70 countries, CIBA Vision is a world leader in the research, development and manufacturing of eyecare products, namely soft contact lenses, lens care products, ophthalmic pharmaceuticals and ophthalmic surgical products. As of December 31, 1999, CIBA Vision employed 6,041 people. In 1999, CIBA Vision had sales of CHF 1,632 million, which represented 5% of the Group's sales.

**Recently Launched Products**

- CIBA Vision is also developing Visudyne™ Therapy, a potential new treatment for the wet form of age-related macular degeneration, a cause of blindness. Visudyne™ Therapy, developed by CIBA Vision in collaboration with QLT PhotoTherapeutics, involves the use of a light-activated compound combined with a non-thermal laser and is part of an emerging new platform technology called Photodynamic Therapy. The FDA recently granted approval for the marketing of Visudyne™. Visudyne™ Therapy is currently available in several European countries on a named country basis.
- Rescula™, the first of a new class of glaucoma treatments, was launched in 10 countries in 1998. An NDA was submitted to the U.S. FDA in February, 2000, and an EU application was filed on March 3, 2000.

- Zaditen®, an anti-allergic eyedrop, was launched in Japan, Argentina and Mexico, and in the U.S. under the trade name Zaditor™.
- Vitravene™, was launched in the U.S. for the treatment of cytomegalovirus retinitis in AIDS patients in November 1998. In August 1999, Vitravene™ received community marketing authorization from the EU.
- Focus® Night&Day®, a high-oxygen extended wear contact lens that can be worn for up to 30 days, was first launched in Mexico and Spain in February 1999 and received a CE Mark, the regulatory approval process for medical devices in the EU, in early 1999. Focus® Night&Day® lenses are now available in more than 30 countries. The lens is currently in clinical trials in the U.S.
- Focus® DAILIES® are daily disposable contact lenses. They are manufactured using CIBA Vision's patented Lightstream Technology™. Focus® DAILIES® are now available in more than 25 countries.
- Focus® PROGRESSIVES™, launched in the U.S. in September 1999, offers a solution for patients requiring presbyopic correction. Further launches are planned in 2000.
- SOLO-care® 10Minute, approved by the FDA in July 1999, is a one-bottle lens disinfection system for both soft contact lenses and rigid gas permeable lenses. Originally approved by the FDA in 1996, this new indication approval followed receipt of a CE Mark.

**Key Marketed Products**

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

| *Main products* | *Description* |
|---|---|
| **Contact Lenses** | |
| Focus® Toric | Lenses for people with astigmatism |
| Focus® Monthly | Monthly replacement lenses |
| Focus® DAILIES® | One-day disposable lenses |
| **Lens Care Products** | |
| AOSept® | Hydrogen peroxide disinfection system |
| SOLO-care® | One bottle lens disinfection system |
| QuickCARE™/InstaCARE™ | 5-minute disinfection system |
| **Ophthalmic Pharmaceuticals** | |
| Voltaren® Ophthalmic® | Nonstereoidal anti-inflammatory |
| Zaditen®/Zaditor™ | Anti-allergy eye drop |
| Visudyne™ Therapy | Treatment for wet form of age-related macular degeneration, now available in Switzerland |
| **Ophthalmic Surgical** | |
| MemoryLens® | Pre-rolled, foldable intra-ocular lens, used in a surgical procedure to restore vision in people with cataracts. |

**Products in Development**

CIBA Vision intends to expand its product portfolio, in particular, lenses, ophthalmic pharmaceuticals and ophthalmic surgical. Recent development activity includes the FDA filing for Focus® Night&Day® 30-night extended wear lenses and the ongoing development of an enhanced MemoryLens® product.

**Principal Markets**

CIBA Vision's principal markets, in terms of 1999 sales, were North America (U.S. and Canada) and Europe. The following table sets forth 1999 sales for CIBA Vision by region:

| *CIBA Vision* | *Sales 1999 (CHF millions)* | *Sales 1999 (%)* |
|---|---|---|
| U.S. | 656 | 40.2 |
| Americas (except the U.S.) | 104 | 6.4 |
| Europe | 557 | 34.1 |
| Rest of the World | 315 | 19.3 |
| **Total** | **1,632** | **100.0** |

**Production**

CIBA Vision has nine major manufacturing sites: Grosswaldstadt, Germany (contact lenses); Amwiler Facility, Atlanta, Georgia (contact lenses); Johns Creek Facility, Atlanta, Georgia (contact lenses); Batam, Indonesia (contact lenses); Mississauga, Canada (lens care products and ophthalmic pharmaceuticals); Annonay, France (lens care products and ophthalmic pharmaceuticals); Hettlingen, Switzerland (ophthalmic pharmaceuticals); and Cidra, Puerto Rico (intra-ocular lenses).

**Marketing and Distribution**

Contact lenses are considered medical devices by regulatory authorities and, therefore, are available only with a prescription from an eyecare professional. CIBA Vision lenses can be purchased from independent eyecare professionals and optical chains, such as Lenscrafters. CIBA Vision's ophthalmic pharmaceuticals are available by prescription only from a pharmacy. CIBA Vision's lens care and over-the-counter ophthalmic pharmaceutical products can be found in major drug, food and mass merchandising retail chains, such as Target and K-Mart. In addition, mailorder and Internet sales are becoming increasingly important channels in the industry.

Eyecare professionals are CIBA Vision's primary marketing focus. In addition, CIBA Vision has direct to consumer ("DTC") initiatives including free trials, coupons and bundling as well as disease awareness programs for ophthalmic pharmaceuticals and ophthalmic surgical products.

**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-day extended wear, toric lenses for astigmatic patients and lenses to correct presbyopia.

CIBA Vision's principal competitors in contact lenses are Bausch & Lomb, Johnson & Johnson and Wesley Jessen.

*Lens Care*

CIBA Vision expects to increase its market share in the one-bottle segment with its SOLO-Care® 10 minute lens care product and to maintain a leadership position in the peroxide category with AOSept®. Lens care is a mature market and the products will continue to face competitive pressure from daily disposable and extended wear lenses.

CIBA Vision's principal competitors in lens care are Alcon, Allergan and Bausch & Lomb.

*Ophthalmic Pharmaceuticals*

CIBA Vision expects the ophthalmic pharmaceutical market to experience growth, as new products are brought to market, patient awareness increases and the population ages. Currently, the market is split between prescription products and over-the-counter products. Significant opportunities exist in glaucoma, age-related macular degeneration, dry eye syndrome, and corneal diseases. CIBA Vision believes that it is well positioned with its glaucoma product Rescula™, which was recently filed for U.S. FDA approval, and with a number of development projects in other areas. Moreover, with Visudyne™ Therapy, CIBA Vision will be among the first to market with the only non-destructive treatment option currently available for the wet form of age-related macular degeneration.

CIBA Vision's principal competitors in ophthalmic pharmaceuticals are Alcon, Allergan, Bausch & Lomb, Merck, Pharmacia & Upjohn and Santen.

*Ophthalmic Surgical*

This market includes intra-ocular lenses for cataracts, laser vision correction, surgical devices, surgical adjuncts and vitreo-retinal. CIBA Vision believes it is well positioned with its intra-ocular lens, MemoryLens®, and other ophthalmic surgical development products.

CIBA Vision's principal competitors in the ophthalmic surgical market are Alcon, Allergan, Bausch & Lomb, Pharmacia & Upjohn and Staar.

**Research and Development**

The Group's research provides CIBA Vision with new chemical compounds for future products, existing compounds for new ophthalmic applications 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). In particular, CIBA Vision has agreements with QLT PhotoTherapeutics and Destiny Pharma to develop an emerging new technology platform that uses light-activated drugs in the treatment of eye diseases. CIBA Vision invested CHF 144 million, CHF 153 million and CHF 128 million in research and development of eye care products in 1999, 1998 and 1997 respectively.

**Regulation**

*Contact Lenses and Lens Care*

Contact lenses and lens care products are regulated as medical devices in the U.S. and the EU. Both jurisdictions have a risk-based classification system which determines the type of submission or dossier required.

Medical devices in the U.S. 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 U.S. 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 U.S., extended-wear lenses are deemed high risk and are therefore classified as Class III devices requiring a PMA. Lens care products are Class II devices and generally qualify for

510(k) submission. In addition, the FDA will inspect all manufacturing facilities in order to ensure compliance with manufacturing requirements.

The EU requires that medical products receive the right to affix the CE Mark, an international symbol of adherence to quality assurance standards and compliance with applicable medical device directives. The majority of contact lenses and lense care products are deemed medium risk in the EU. These products require prior marketing approval based on compliance with the design controls which constitute the CE Mark.

In Japan, contact lenses are categorized as medical devices and are subject to an approval process similar to that in the U.S. Although there is an improvement in the willingness to accept foreign data and a general harmonization of requirements, it is usually not possible to enter the Japanese market at the same time as the U.S. or the EU because local clinical trials must be performed and local protocols must 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. Saline solutions for hard lenses are unregulated.

*Ophthalmic Pharmaceuticals*

See "Pharmaceuticals—Regulation".

**Intellectual Property**

The majority of CIBA Vision's products are protected by patents and trademarks. It is CIBA Vision's 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 and product uses.

**CONSUMER HEALTH**

Novartis Consumer Health develops, manufactures and markets a wide range of health and medical nutrition products and a portfolio of "over-the-counter" ("OTC") self-medication brands. In 1999, Novartis Consumer Health employed 12,300 people. In 1999, Novartis Consumer Health had CHF 5,432 million in sales (including sales from divested activities), which represented 17% of the Group's sales. Headquartered in Nyon, Switzerland, Novartis Consumer Health operates in 48 countries worldwide.

Novartis Consumer Health was formed on January 1, 1999 by merging the Group's OTC and nutrition businesses. This resulted in the divestment of non-core brands in 1998 and 1999. All significant restructuring and integration activities relating to the merger have been successfully completed. Cost savings of approximately CHF 70 million per year resulting from the merger have been identified, and growth opportunities enabled by the merger are being pursued. Novartis Consumer Health is comprised of three business units: OTC, Health and Functional Nutrition and Medical Nutrition. These business units (excluding divested brands) contribute to sector sales as follows:

| *Business Unit* | *Sales 1999* |
|---|---|
| | *(%)* |
| OTC | 36.6 |
| Health and Functional Nutrition | 52.9 |
| Medical Nutrition | 10.5 |

**Key Marketed Products**

*OTC*

The OTC business provides products for in-home diagnosis, treatment and prevention of medical conditions and ailments to enhance people's overall health and well being. The main product categories

are cough, cold and allergies, gastrointestinal, dermatological, analgesic, vitamins, minerals and supplements, venous disorders and smoking cessation. The major OTC brands are:

| *Key brands* | *Market / segment* |
|---|---|
| Lamisil® Cream | Athlete's foot treatment |
| Maalox® | Antacid |
| Venoruton® | Systemic antivaricose |
| TheraFlu®/ Neocitran® | Cold & flu |
| Tavist® | Cough, cold, allergy |
| Nicotinell®/ Habitrol® | Smoking cessation |
| Triaminic® | Pediatric cough & cold |
| Otrivin® | Cold remedies |
| Fenistil® | Skin irritation |

In 1999, Novartis Consumer Health commenced marketing activities for Lamisil® Cream and Voltaren® Emulgel® after these products were switched from prescription to OTC status in several markets. Such switches are undertaken independent of patent expiry and switches may occur before or after product patents expire. Novartis Consumer Health believes that both Lamisil® Cream and Voltaren® Emugel® may become important OTC business drivers once they are switched worldwide. Novartis switched Lamisil® Cream to OTC because sector studies showed that 85% of consumers diagnose and treat the condition themselves. Lamisil® Cream already is available without prescription in the many countries. Voltaren® Emulgel® is used in the relief of rheumatic muscular pain and sports injuries. It is available in many countries without a prescription and active marketing support of the switched product has started in Germany.

*Health and Functional Nutrition*

The Health and Functional Nutrition business encompasses foods designed to serve the particular nutritional needs of target groups such as the elderly, infants and athletes. Products include baby foods, consumer products such as sports drinks, slimming aids and functional health foods. Novartis Consumer Health has prominent brands in this area, such as Gerber®, Isostar®, Ovaltine®/Ovomaltine® and Aviva®.

Novartis Consumer Health has recently introduced Aviva® in Europe, which is a consumer-oriented range of food products which contain functional ingredients and have clinically proven health benefits.

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 | U.S, Latin America, Europe, Asia |
| Céréal®, Gerblé® | Health foods | Europe |
| Ovaltine®/Ovomaltine® | Food drinks | U.S., Europe, Asia |
| Isostar® | Sports nutrition | Europe |
| Aviva® | Functional Food | Europe |
| Modifast®, Gerlinea®, Pesofarma® | Slimming | Europe |

*Medical Nutrition*

The Medical Nutrition business focuses on the nutritional needs of people with serious conditions (often chronic) as well as hospitalized or convalescing patients. The product portfolio ranges from enteral tube feeds and devices to oral supplements. The 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 |

**Principal Markets**

In 1999, Novartis Consumer Health realized the majority of its sales in its two principal markets: the U.S. and the EU. The following table sets out 1999 market sales of Novartis Consumer Health products by region (excluding CHF 182 million of sales from divested activities):

| *Novartis Consumer Health* | *Sales 1999* (CHF millions) | *Sales 1999* (%) |
|---|---|---|
| U.S. | 2,623 | 50.0 |
| Americas (except the U.S.) | 428 | 8.2 |
| Europe | 1,913 | 36.4 |
| Rest of the World | 286 | 5.4 |
| **Total** | **5,250** | **100.0** |

**Production**

Major production sites are in Australia, Brazil, China, Costa Rica, France, Germany, Mexico, the Philippines, Poland, Spain, Switzerland, Thailand, the UK, the U.S. and Venezuela.

**Marketing and Distribution**

Novartis Consumer Health aims 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 organizations are key strengths that can allow the sector to achieve this objective.

Novartis Consumer Health distributes its products through various channels, such as hospitals, nursing homes, pharmacies, food, drug and mass retail outlets. As the distribution channels increasingly overlap, significant sales and distribution synergies can be realized across Novartis Consumer Health's business units.

**Competition**

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

The functional food market is emerging at the intersection of the traditional food and pharmaceutical markets. In this segment, the health benefits of nutritional products are enhanced with specific active ingredients that have been developed using methods traditionally associated with the pharmaceutical industry. Market trends support the growth of this segment by increasing consumer awareness and scientific understanding of the role played by food in health, the drive towards self-medication, and cost pressures on healthcare funding. Novartis Consumer Health aims to combine its scientific know-how in therapeutic areas, its creditility with healthcare opinion leaders, its prominent brands in the nutrition business, and its ability to develop great tasting and convenient food products to drive market share and industry growth. The market is very fragmented and consists of a number of competitors.

Major competitors in the medical nutrition market are Abbott Ross and Mead Johnson in the U.S., and Nutricia and Fresenius in Europe.

**Research and Development**

Novartis Consumer Health's nutrition and OTC research and development mutually benefit from joint efforts and share clinical trial, regulatory and pharmaceutical development expertise. In OTC, the focus is primarily on cough, cold, allergy, gastrointestinal, minerals, analgesics, dermatology, cardiovascular risk reduction (through smoking cessation programs) and management of venous diseases. Novartis Consumer Health is also working closely with Novartis Pharmaceuticals to evaluate appropriate products that can be switched from prescription to OTC status. In Health and Functional and Medical Nutrition, there are numerous research programs underway, especially in the areas of bone, cardiovascular disease, gastrointestinal disorders and the immune system.

Currently, Novartis Consumer Health has approximately 90 research and development projects in progress. The majority of these are in the OTC sector, with approximately 20 in each of Health and Functional Nutrition and Medical Nutrition. Novartis Consumer Health supports its worldwide consumer business with a dedicated research and development team of over 350 employees based mainly in the U.S. and Switzerland. Novartis Consumer Health devoted CHF 167 million, CHF 136 million and CHF 122 million to research and development relating to its consumer health products in 1999, 1998 and 1997 respectively.

**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 U.S. or registration in the EU.

Approval of OTC products in the U.S. is regulated by the FDA. The U.S. Food Drug and Cosmetic Act establishes two legal bases for marketing an OTC product, either through an approved NDA (see "Pharmaceuticals—Regulation") to establish a product's safety and effectiveness for its intended use, or if the active ingredient is generally recognized 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 pharmacologic category) the conditions under which certain active ingredients would generally be recognized as safe and effective for their intended use. Compliance with the published monograph, therefore, permits marketing without an NDA and its formal approval process.

For regulation of OTC in the EU, see "Pharmaceuticals—Regulation—European Union".

Development, manufacturing, packaging, quality (food standards, ingredients), safety, labeling and advertising of foods are the subject of international and national food regulations. New food ingredients, new product claims, quality of new products not in conformity with existing national food law, food standards or national nutrition policies, all require special approvals from national food authorities. Many new medical foods, functional foods, dietetic foods and some new baby foods require such approvals.

In the U.S., 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, functional foods are put on the market after getting approval from the MHW as Food for Specified Health Use. This includes approval of product quality, ingredients and product claims.

**Intellectual Property**

The consumer health businesses are brand-oriented and, therefore, the sector considers its trademarks to be of particular value. Most of its brands are protected by trademarks in the majority of the markets where those brands are sold, and Novartis Consumer Health vigorously protects these trademarks from infringement. The 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.

**ANIMAL HEALTH**

Novartis Animal Health maintains and improves the health and well being of companion animals as well as farm animals, whose productivity is a significant economic factor in many countries. At December 31, 1999, Novartis Animal Health employed 1,499 people. In 1999, Novartis Animal Health had sales of CHF 927 million which represented 3% of the Group's sales.

Novartis Animal Health is represented in more than 40 countries and sells its products in over 80 countries. Novartis Animal Health researches, develops, manufactures and markets a wide variety of products for both companion animals (approximately 60% of sector sales) and farm animals (approximately 40% of sector sales). Products include parasite control in companion and farm animals, antibacterials and veterinary specialties. Novartis Animal Health has a dedicated research team and benefits from synergies with other Novartis sectors and, most notably, the research of Novartis Pharmaceuticals.

**Recently Launched Products**

| *Product* | *Description* | *Registration/Launch Status* |
|---|---|---|
| Econor® | Antimicrobial against enteric and respiratory diseases in pigs | Registered and launched in 21 countries worldwide. |
| Clik® | All-season protection against blowflies in sheep | Registered and launched in New Zealand and Australia. |
| Capstar® | Fast-acting oral flea control for pets | Product registered and launched in Australia, New Zealand, Switzerland, Brazil; Registered in South Africa. |
| Clomicalm® | Treatment of behavioral disorders in dogs | Registered in the U.S., Europe, Japan, and Australia. |

**Key Marketed Products**

Key marketed products for pets include Sentinel®, Interceptor® and Program® for the prevention of fleas, heartworm and intestinal worms; and Fortekor® for the treatment of heart failure in dogs. Key marketed products for farm animals include Acatak® and Neocidol® against ticks on cattle and against mites, lice and blowfly on sheep; Fasinex® and Endex® for the treatment and control of liver fluke and gastrointestinal roundworms and lungworms in cattle and sheep; and Tiamutin® and Dynamutilin® (antimicrobials) to treat bacterial infections in pigs and poultry. Novartis Animal Health also manufactures and sells products which control cockroach and fly infestations.

**Products in Development**

Research and development focuses on the area of antiparasitics and veterinary specialities.

**Principal Markets**

The products for companion animals are sold predominantly in the U.S., the EU and Japan. In most other countries, sales of farm animal products dominate. The following table sets out 1999 market sales of Novartis Animal Health products by region:

| *Novartis Animal Health* | *Sales 1999 (CHF millions)* | *Sales 1999 (%)* |
|---|---|---|
| U.S. | 385 | 41.5 |
| Americas (except the U.S.) | 113 | 12.2 |
| Europe | 234 | 25.3 |
| Rest of the World | 195 | 21.0 |
| **Total** | **927** | **100.0** |

**Production**

Novartis Animal Health relies heavily on third-party production, including other Novartis sectors, as outsourcing partners. Chemical production is generally done within Novartis. Three commodity products are produced in a Novartis Animal Health-owned production site located in Shanghai, China. Formulation facilities are in Bangladesh, China, Colombia, France, Taiwan, and the UK.

**Marketing and Distribution**

The products of Novartis Animal Health are predominantly prescription-only drugs for animals. The major distribution channels are, therefore, 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, participation of the company at vet conferences and organization of special educational events. Novartis Animal Health's own salesforces are active in all countries where the sector is represented. In addition, the sector engages in general public relations activities, including advertising in the general printed media and direct advertising of name brands where regulatory and legal restrictions allow it.

**Competition**

Although all leading industry players have products for all major animal species, there is an increasing focus on the companion animal sector. Major competitors of Novartis Animal Health in the companion and farm animal business are American Home Products, Bayer, Merial, Pfizer and Schering-Plough. Most of the competitors cover a broad range of products. The marketing efforts of these competitors are comparable to those of Novartis Animal Health in both resources and tactics.

**Research and Development**

Novartis Animal Health has three dedicated research facilities, two of which are located in Switzerland and one in Australia. Novartis Animal Health devoted CHF 65 million, CHF 61 million and CHF 67 million to its research in 1999, 1998 and 1997 respectively.

Based on high capacity in-vitro microscreens, high throughput screening focuses on assessing a number of natural products and synthetic chemicals. Novartis Animal Health researchers collaborate with external partners such as Heska Corporation (Fort Collins, Colorado) or VIAS (Melbourne, Australia), to develop veterinary parasite vaccines. Drug delivery projects, also in collaboration with external partners,

will concentrate on the identification and development of suitable sustained release formulations for use in parasite control.

In addition to these research activities, Novartis Animal Health exploits synergies with the other sectors to develop new products; products of human pharmaceutical origin are further developed to treat companion animals.

**Regulation**

The registration procedures for animal medicines are similar to those for human medicines. In the U.S., animal health products are regulated by the FDA, the U.S. Drug Administration and the Environmental Protection Agency (the "EPA"). Within the FDA, the Center for Veterinary Medicine is responsible for animal drugs. An NDA for product registration must be accompanied by clinical studies data which support the safety and efficacy of the product, as well as information on manufacturing, environmental effects and labeling. During this phase additional or supplemental information is submitted by the manufacturer as it becomes available.

In the EU, veterinary medicinal products need marketing authorization from the competent authority of a member-state (national authorization) or through a procedure authorized by the EU, 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.

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**

All recently introduced products of Novartis Animal Health are patent protected. It is Novartis Animal Health's 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 and product uses.

**AGRIBUSINESS**

Until the planned Spin-off of Novartis Agribusiness to create Syngenta (see "Item 1. Description of Business—Spin-off of Agribusiness"), Novartis Agribusiness operates in two areas: Novartis Crop Protection ("Crop Protection") and Novartis Seeds ("Seeds"). As a global leader in both sectors, Novartis Agribusiness strives to enhance the production of safe, healthy and high-quality foods, food ingredients, feed, plants and plant derivatives. Novartis Agribusiness is based in Basel, Switzerland, operates in more than 120 countries worldwide and employs 17,361 people at December 31, 1999. The sector had CHF 7,056 million in sales in 1999, which represented 22% of the Group's sales.

Crop Protection is active in weed control, especially for corn and cereals; disease control mainly for cereals, fruits, grapes and vegetables; insect control for fruits, vegetables and cotton; and seed treatment and products for turf & ornamentals. Seeds offers products for a wide range of crop varieties, including corn, oilseeds, sugarbeet, vegetables and flowers.

Agribusiness strengthened its business platform, in addition to its own research and development efforts, through targeted acquisitions. In 1997, Novartis acquired Merck's crop protection business, which had 1996 sales of approximately $200 million.

**Recently Launched Products**

The table below lists certain recently launched Crop Protection products:

| *Active ingredient* | *Selected Brand Names*[1] | *Crop Use* | *Targets* |
|---|---|---|---|
| **Herbicides** | | | |
| S-Metolachlor | Dual® Magnum | Corn, soybeans, peanuts, sugarbeet, sunflowers | Annual grasses and some dicots |
| **Fungicides** | | | |
| Trifloxystrobin | Flint® | Cereals, fruits, vegetables | Broad spectrum fungicide |
| Metalaxyl-M | Ridomil Gold®, Apron® XL | Broad range, including potatoes, grapes, vegetables, seed treatment and turf & ornamentals | Late blight, downey mildew and damping off diseases |
| Acibenzolar-S-Methyl | Bion® | Broad range of crops | Plant activator |
| **Insecticides** | | | |
| Thiamethoxam | Actara®, Cruiser® | Broad range of crops | Sucking and soil dwelling insects |
| Emamectin Benzoate | Proclaim®, Affirm® | Vegetables | Caterpillars |

(1) Products may have multiple brand names depending on the market in which they are sold.

Seeds works consistently to introduce plant varieties with improved agronomic and quality traits. In a typical year, dozens of new varieties across the crop groups are introduced. Recent product introductions included the following plant varieties:

| *Product* | *Brand* | *Plant Variety* | *Market* | *First Sales* |
|---|---|---|---|---|
| **Corn** | | | | |
| N58-D1 | NK® | Bt corn hybrid | U.S., Argentina | 1999 |
| Traktor | NK® | Corn hybrids (disease, drought and stress tolerant) | Brazil | 1999 |
| **Other Field Crops** | | | | |
| S29-C9 | NK® | Roundup Ready® soybean (stress tolerant) | U.S. | 1999 |
| **Vegetables and Flowers** | | | | |
| Roxy | S&G® | Virus-resistant, high quality winter bell pepper | Spain | 1998 |
| Serendipity | Rogers® | Sweet corn (Triple Sweet™ class) | U.S., Canada | 1999 |
| Cajun™ | S&G® | Impatiens flower variety assortment | U.S. | 1997 |

In addition, Seeds is launching ProShield™ technology, a proprietary, patented seed coating system that delivers protection from corn rootworm to corn plants through the direct application of insecticide to the seed.

**Key Marketed Products**

Novartis Agribusiness has a broad product range, a leading market position in all of its segments and strong worldwide market coverage. Novartis Agribusiness focuses its efforts on four pillar crops (corn, vegetables, cereals and rice) and leverages its technologies into other crops, such as oilseeds, sugarbeets, cotton, fruits, grapes, turf and ornamentals.

The following table sets out Crop Protection's key marketed products:

| *Active Ingredient* | *Selected Brand Names*[1] | *Crop Use* | *Targets* |
|---|---|---|---|
| **Herbicides** | | | |
| S-Metolachlor/ Metolachlor | Dual® Magnum/ Dual® | Corn, soybeans, peanuts, sugarbeet, sunflowers | Annual grasses and some dicots |
| Atrazine | Aatrex®/Gesaprim® | Corn, sorghum, sugarcane | Annual dicots and some grasses |
| Clodinafop | Topik®, Horizon®, Celio® | Wheat, rye, triticale | Annual grasses |
| **Fungicides** | | | |
| Metalaxyl-M/ Metalaxyl | Ridomil® Gold/Ridomil®, Apron® XL, Apron® | Potatoes, grapes, vegetables, seed treatment and turf and ornamentals | Late blight, downey mildew and damping off diseases |
| Propiconazole | Tilt® | Cereals, bananas, rice and turf | Broad spectrum disease control |
| Difenoconazole | Score®, Dividend® | Vegetables, field crops, plantation crops and seed treatment | Broad spectrum disease control |
| **Insecticides** | | | |
| Abamectin | Vertimek®, Agrimeck® | Citrus fruits, vegetables, pome fruits, ornamentals | Mites, leafminers and some caterpillars |
| Profenofos | Curacron®/Selecron® | Cotton, potatoes, soybeans and vegetables | Caterpillars, sucking insects, mites |

(1) Products may have multiple brand names depending on the market in which they are sold.

With over 3,000 varieties and 33 species, Seeds offers one of the broadest seed portfolios in the business. Seed products are derived from its germplasm pool, and are developed further utilizing modern plant breeding methods. The assortment includes corn, sugar beet, oilseeds, vegetables, and flower seeds and young plants. Approximately 15% of total Seeds sales are derived from the sale of genetically modified products.

**Products in Development**

Crop Protection line extension products include: Actara®/Cruiser®, Bion®, Flint®, and Proclaim®/ Affirm®. See "— Recently Launched Products".

In addition, Crop Protection has a number of new products in development, as shown in the following table:

| *Active Ingredient* | *Application* | *Targets* | *Status* |
|---|---|---|---|
| **Herbicides** | | | |
| Fluthiacet | Cotton | Defoliation | U.S. registration expected 2000 |
| Butafenacil (ISO-proposed) | Perennial crops | Broad spectrum, non-selective, Defoliation | Registrations expected from 2001 onwards in principal markets. |
| Pyriftalid (ISO-proposed) | Rice | Annual grasses in transplanted and seeded rice | Registrations expected from 2001 onwards in principal markets. |
| Trifloxysulfuron (ISO-proposed) | Cotton, sugarcane | Post-emergence selective herbicide against dicots and cyprus and grasses | Registrations expected from 2001 onwards in principal markets. |

Seeds also has products in development with improved input as well as output traits, which are anticipated to be available on the market as of 2002.

| *Product* | *Brand* | *Variety Type* |
|---|---|---|
| Corn | NK® Corn | Caterpillar insect tolerance |
| | NK® Corn | High protein grain, grain health/toxin free |
| Oilseeds | NK® Soybeans | Nematode tolerance |
| | NK® Sunflower | Oil quality (mid-oleic acid) |
| | NK® Sunflower | Disease (mildew/phomopsis) tolerance and improved broom rape tolerance |
| | NK® Winter Oilseed Rape | High yield top cross hybrids |
| | NK® Winter Oilseed Rape | Fungal disease resistance |
| Cotton | | Hybrids with caterpillar tolerance |
| Cereals | NK® Wheat | Superior bread/biscuit quality wheat |
| | NK® Barley | Improved malting quality |
| Vegetables and Flowers | S&G®, Rogers® | Tomatoes, lettuce and melons with virus and fungal disease tolerance |
| | S&G®, Rogers® | Tomatoes, melons and watermelons with improved shelf life/flavor/aroma |
| | S&G®, Rogers® | Caterpillar and key insect pest-tolerant cabbage and sweetcorn |

**Principal Markets**

The following table sets out 1999 sales of Novartis Agribusiness' products by region:

| *Novartis Agribusiness* | *Sales 1999 (CHF m)* | *Sales 1999 (%)* |
|---|---|---|
| U.S. | 2,152 | 30.5 |
| Americas (except the U.S.) | 1,179 | 16.7 |
| Europe | 2,477 | 35.1 |
| Asia | 867 | 12.3 |
| Rest of the World | 381 | 5.4 |
| **Total** | **7,056** | **100.0** |

**Production**

Novartis Agribusiness operates separate production facilities for Crop Protection and Seeds. In Crop Protection, the major production sites for the active ingredients are located in India, Switzerland, the UK and the U.S., with the major production sites for formulation and packaging in Brazil, China, France, South Korea, Switzerland and the U.S. Crop Protection purchases a variety of raw materials and intermediates for use in its production processes. Crop Protection believes that it will be able to obtain raw materials in sufficient quantities in the future. While Crop Protection has not experienced material supply interruptions in the past, there can be no assurance that its ability to obtain sufficient raw materials will not be adversely affected by unforeseen developments.

Seeds operates seed production facilities located throughout the world in conjunction with independent growers who tend and harvest the seed. After the harvest, the raw seed is sent to processing sites, which clean, calibrate, treat and bag the seed, the largest ones of which are located in Argentina, Brazil, Canada, France, Italy, the Netherlands, Spain, Sweden and the U.S.

**Marketing and Distribution**

Crop Protection products are normally sold through a two- or three-step distribution chain. Crop Protection generally sells its products to major wholesalers or to cooperatives or dealers, which then sell to the farmer as the end user. The relative importance of the various distribution channels varies from country to country. Crop Protection also markets directly to large farmers in some countries.

Seeds markets its products throughout the world through its wholly owned subsidiaries using a multi-brand strategy with the brands NK®, Hilleshög®, S&G® and Rogers®. The majority of Seeds brands are marketed through its own sales force, servicing customers directly, or through a network of dealers.

Traditionally, Crop Protection and Seeds products were marketed separately; however, the recent trend is developing toward providing integrated crop solutions and services.

**Competition**

Novartis Agribusiness operates in a challenging competitive environment. Factors influencing agribusiness are numerous and varied, including new product development, weather and the environment, commodity pricing, government decisions and public acceptance or disapproval of certain production methods or products (*e.g.*, genetically modified crops).

Key competitors in Crop Protection include American Home Products, AstraZeneca, Aventis, BASF, Bayer, Dow, DuPont, and Monsanto. In many countries, generic producers of off-patent compounds are additional competitors. Seeds' principal competitors include Aventis, DuPont/Pioneer, KWS, Limagrain, Monsanto, Seminis and Takii.

**Research and Development**

With major research centers in Switzerland and the U.S., Novartis Agribusiness focuses its research efforts on crop protection chemicals, conventional plant breeding, crop input traits, crop output traits, genetics and genomics, chemical trait regulation and marker assisted breeding. Novartis Agribusiness invested CHF 668 million in 1997, CHF 668 million in 1998, and CHF 673 million in 1999 on research and development.

Crop Protection research and development focuses on effective and environmentally friendly crop protection solutions suitable for integrated crop management. This process uses high throughput screening techniques to identify a compound after which it is tested worldwide for its optimal use.

A germplasm platform is central to the Seeds research and development effort. Using this platform, Seeds produces plants through both traditional breeding techniques and a number of enabling technologies, including seed technology, seed production technology, plant biotechnology and marker technologies. Seed technology is a combination of technologies that enhance the natural seed after it is harvested. Seed production technology enhances manufacturing techniques. Marker technology allows more accurate plant breeding through the use of DNA fingerprints. Plant biotechnology allows for improved plant varieties through the use of genes from other plants and organisms.

The Novartis Agricultural Discovery Institute, Inc. (''NADII'') and the Novartis Agribusiness Biotechnology Research, Inc. (''NABRI'') are dedicated to research and development in agricultural genomics and biotechnology. NADII uses genomics to generate databases that match genes with traits and provides advanced technologies that can be broadly applied in agribusiness research for the development of gene-based products. NABRI applies the results of this research to the development of new screening tools and improved crop protection compounds as well as improved plant varieties. NADII and NABRI have numerous external alliances and cooperate with other Novartis entities, such as Novartis Pharmaceuticals, in the area of genomics.

**Regulation**

Novartis Agribusiness' products must obtain government regulatory approval prior to marketing. The regulatory framework for agribusiness is directed at ensuring the protection of the consumer, the applicator and the environment.

In the U.S., the EPA is responsible for the registration of all chemicals released into the environment, including herbicides, insecticides, fungicides and plant growth regulators, whether they are used for crop protection or for public health. In the EU, active substances must be approved at Community level (''Annex 1 listing''). This listing is a precondition for full national authorizations of plant protection products containing the subject compound. Such listings are required to be reviewed every 10 years. Outside the U.S. and the EU, agricultural chemicals are regulated by various bodies of the respective countries. Specific requirements and testing methods may differ from country to country.

Most of Novartis Agribusiness' principal markets have regular re-registration procedures for plant protection products. Within certain time periods the technical dossier is reviewed in order to guarantee that it adheres to all standards, which may have changed or been added since the product was initially registered. The standards and requested trial protocols are continuously changing. Re-registration of a product or compound may not be granted if the registration package fails to meet the then current requirements.

In the EU, plant varieties must be registered. A new variety is subjected to field tests at an official examining institute and must comply with three demands: distinctness, uniformity and stability (''DUS standard''). In addition, it must be tested for value for cultural use, *i.e.*, it must demonstrate that it is better than existing varieties. There are no similar legislated requirements in the U.S.

Standards for seed purity also have been established by the International Seed Testing Association. There are different categories of seed (*i.e.,* standard seed, basic seed, certified seed) which have their own minimum standards. In addition, there are minimum national standards.

Genetically modified crops must, furthermore, be registered under the appropriate regulatory regime. In the U.S., genetically modified crops are reviewed by the Department of Agriculture (feed and environmental safety), the EPA (environmental safety) and the FDA (food safety). In the EU, genetically modified crops are regulated under Directive 90/220/EEC in the deliberate release into the environment of genetically modified organisms (environmental safety) and Regulation No. 258/97 in Novel Food and Novel Food Ingredients (food safety).

**Intellectual Property**

It is the policy of Novartis Agribusiness to protect its investment in research and development, manufacturing and marketing through patents and trademarks. Patents in Crop Protection may cover the active ingredients *per se*, formulations, mixtures, processes, intermediate products and their agricultural use. The protection depends upon the type of patent and its scope of coverage and may vary from country to country. Seeds maintains the ownership of, and controls the use of, its inbreds and varieties by means of intellectual property rights, including, but not limited to, the use of patents, trademarks, limited licenses, trade secrets, plant variety protection certificates and bag language. The level of protection varies from country to country according to local laws and international agreements. Patents that will expire in the near future are not expected to have a material impact on sales.

Laws regarding the invention of new plant varieties allow the inventor to earn back some of his investments. In the EU, in order to obtain a plant breeder's rights certificate, the variety has to be new and must meet the DUS standards, set for that particular species. In the U.S., there are two different systems of protection. There is the plant variety protection (PVP) system, which applies only to sexually reproduced varieties (such as seeds) and there is the plant patent system, which applied only to vegetatively reproduced varieties (such as cuttings).

**ENVIRONMENTAL MATTERS**

The Group integrates core values of environmental protection into its business strategy to add value to the business, manage risk and enhance the reputation of Novartis.

The Group is subject to laws and regulations concerning the environment, safety matters, regulation of chemicals and product safety in countries where it manufactures and sells its products. 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 its business, the Group is 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.

The Group complies with environmental, health and safety requirements and provides safe and environmentally sound workplaces that will not adversely affect the health or environment of employees or the communities in which the Group operates. The Group has obtained all material environmental permits required for the operation of its facilities as well as all material authorizations required for products produced by the Group. Furthermore, the Group believes that it is not currently subject to material liabilities for non-compliance with applicable environmental, health and safety laws, although there is a risk that legislation enacted in the future cold create liabilities for past activities undertaken in compliance with then current laws and regulations or that there may be environmental damage of which the Group is 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 the Group to install additional controls for certain of its emission sources, to undertake changes in its manufacturing processes or to remediate soil or groundwater contamination at facilities where such cleanup is not currently required. A few of the Group's facilities are over 50 years old, and there may be soil and groundwater contamination at such facilities. However, the Group does not believe that expenditures related to such possible contamination, beyond those already accrued, will be significant.

The Group's expenditures related to capital investments for environmental, health and safety were approximately CHF 102 million in 1999 (CHF 37 million for environment) and approximately CHF 133 million in 1998 (CHF 62 million for environment). While the Group cannot predict with certainty its aggregate capital environmental investments in 2000, based on current information and existing assets, the Group estimates such aggregate expenditures to be comparable to the 1999 figure.

It is difficult to estimate the future costs of environmental protection and remediation because of many uncertainties, including uncertainties about the states of laws, regulations and information related to individual locations and sites. Subject to the foregoing, but taking into consideration the Group's experience to date regarding environmental matters of a similar nature and facts currently known, the Group believes that compliance with existing and known federal, state and local environmental regulations will not have a material effect on the Group's total capital expenditures, earnings or competitive position.

**EMPLOYEES**

On December 31, 1999, the Group had 81,854 employees, including 29,077 employees in the Americas, 38,125 in Europe and 14,652 in the rest of the world. A relatively small number of the Group's employees are represented by unions. The Group has not experienced any material work stoppages in recent years, and it considers its employee relations to be good.

### Item 2. Description of Property

The Company's principal executive offices are located in Basel, Switzerland. Its various sectors operate through a number of offices, research facilities and production sites.

It is Novartis' policy to own its facilities. Only very few of them (mainly in the U.S.) are leased under long-term leases. Some of the Group's principal facilities are subject to mortgages and other security interests granted to secure indebtedness to certain financial institutions. As of April 28, 2000, the total amount of indebtedness secured by these facilities was not material to the Group. The Company believes that its production plants and research facilities are well maintained and generally adequate to meet its needs for the foreseeable future.

For more information on Novartis' major research and development facilities and its major production facilities, see "Item 1. Description of Business—Research and Development and—Production".

### Item 3. Legal Proceedings

Novartis is involved in a number of legal proceedings and claims incidental to the normal conduct of its businesses, relating to such matters as product liability, patent infringement, licensing, environmental claims and other matters. Although the outcome of these claims, legal proceedings and other matters in which the Group is involved cannot be predicted with any certainty, the Company does not believe that any liability resulting from the resolution of any such claim or proceeding would have a material adverse effect on the Group's financial condition, results of operations or cash flow.

Novartis also maintains general liability insurance, including product liability insurance, covering claims on a world-wide basis with coverage limits and retention amounts which management believes to be adequate and appropriate in light of the Group's businesses and the risks to which they are subject.

**Item 4. Control of Registrant**

Based on its Share register, the Company believes it is not directly or indirectly owned or controlled by another corporation or government, and that there are no plans or arrangements the operation or realization of which may result in a change of control.

At April 28, 2000, registered Share capital of the Company is CHF 1,442,602,340, divided into 72,130,117 Shares with a nominal value of CHF 20 each.

The following table sets forth information as of April 28, 2000, with respect to the total amount of the Company's share capital owned by all directors and current executive officers as a group.

| *Identity or Person or Group* | *Number of Shares Owned* | *Percentage of Class* | *Percentage of Total Capital* | *Percentage of Total Voting Rights* |
|---|---|---|---|---|
| Directors and Executive Officers . . . . . | 15,709 | 0.0218 | 0.0218 | 0.0218 |

As of April 28, 2000 no person or entity was the owner of more than 10% of the Shares, whether or not the voting rights of such Shares are exercisable. The largest shareholders of the Company, owning between 2% and 5% of the Company's Share capital, are the Emasan group (3.94%) and Swiss Life Insurance and Pension Company (2.36%). Both of these shareholders are entered in the Share register as shareholders with voting rights for their entire shareholdings. The largest nominee shareholder with voting rights is Chase (4.45%), which entered into a nominee agreement with the Company and disclosed the names, addresses and number of Shares of the beneficial owners for whose account it holds the Shares. State Street Bank as a nominee holds 2.41% of the Shares, but is only entered as a shareholder with voting rights for 2% of the Shares, since it has not entered into a nominee agreement with the Company. No other nominee shareholders nor any beneficial owner known to the Company holds more than 2% of the Company's Share capital.

**Item 5. Nature of Trading Market**

The principal trading market for the Shares of the Company is the Swiss Exchange (the "SWX"). Since 1996, the Shares have also been quoted on SEAQ International.

As of April 28, 2000 the Company had approximately 180,000 registered shareholders. Based on its share register, the Company believes that approximately 8.6% of its Shares are held of record by approximately 1,125 registered holders in the U.S. Since certain of those Shares are held by brokers and other nominees, the above numbers are not representative of the actual number of U.S. persons who are beneficial owners of Shares or of the number of Shares beneficially held by such persons.

American Depositary Shares ("ADSs"), each representing one-twentieth of a Share, have been available in the U.S. through an American Depositary Receipts ("ADR") program since December 1996, which was established pursuant to a Deposit Agreement entered into between the Company and Morgan Guaranty Trust and Company as Depositary. The Company's ADRs in the U.S. are traded in the over-the-counter market under the symbol "NVTSY." The Depositary informed the Company that as of April 28, 2000, there were in issue ADRs representing approximately 18,410 million ADSs or approximately 921,000 Shares (approximately 1.28% of all Shares). Such ADRs were held by approximately 740 holders registered with the Depositary, and an estimated 50,000 beneficial holders in the U.S. See "Item 14. Description of Securities to be Registered—American Depositary Receipts".

The table below sets forth, for the periods indicated, the high and low closing sales prices in CHF for Shares traded on the SWX and for the ADSs in U.S. dollars. The data below reflects price and volume information for trades completed by members of the SWX during the day as well as for inter-dealer trades completed off the SWX and certain inter-dealer trades completed during trading on the previous business day.

| | *Shares* | | *ADRs* | |
|---|---|---|---|---|
| | *High* | *Low* | *High* | *Low* |
| | *(CHF per Share)* | | *($ per ADR)* | |
| **2000** | | | | |
| First Quarter | 2,367 | 1,989 | 74.50 | 59.88 |
| **1999** | | | | |
| First Quarter | 2,530 | 2,350 | 104.50 | 79.50 |
| Second Quarter | 2,895 | 2,185 | 85.37 | 71.12 |
| Third Quarter | 2,418 | 2,119 | 76.50 | 69.87 |
| Fourth Quarter | 2,528 | 2,177 | 80.00 | 71.00 |
| **1998** | | | | |
| First Quarter | 2,749 | 2,306 | 93.00 | 78.75 |
| Second Quarter | 2,721 | 2,322 | 89.00 | 76.75 |
| Third Quarter | 2,573 | 2,132 | 86.25 | 74.00 |
| Fourth Quarter | 2,750 | 1,948 | 100.75 | 72.25 |

Fluctuations in the exchange rate between the Swiss franc and the U.S. dollar will affect the U.S. dollar equivalent of the Swiss franc price of the Shares on the SWX.

The average daily volumes traded on the SWX for the years 1999 and 1998 were 179,957 and 201,899, respectively. These numbers are based on total annual turnover statistics supplied by the SWX via the Swiss Market Feed, which supplies such data to subscribers and to other information providers.

On April 28, 2000, the closing sales price per Share on the SWX was CHF 2,409, equivalent to $1,400 per Share (based on the Noon Buying Rate on such date). Pursuant to the amended and restated Deposit Agreement as of May 11, 2000, each ADS will represent one-fortieth of a Share as of the date the ADSs will be listed on the NYSE.

### Item 6. Exchange Controls and Other Limitations Affecting Security Holders

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 the Company's Shares. In addition, there are no limitations imposed by Swiss law or the Company's Articles of Association on the right of non-residents or non-citizens of Switzerland to hold or vote the Company's Shares. For further information on limitations on being entered into the Company's Share register as a shareholder with voting rights, see "Item 14. Description of Securities to be Registered—Shares—Transfer of Shares".

### Item 7. 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 the Shares or ADSs. The statements of U.S. 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 U.S. 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 U.S. Internal

Revenue Code of 1986, as amended (the "Code"), and may be subject to any changes in U.S. and Swiss law, and in any double taxation convention or treaty between the U.S. and Switzerland occurring after that date which changes may have retroactive effect.

**Swiss Taxation**

***Swiss Residents***

*Withholding Tax on Dividends and Distributions.* Dividends paid and similar cash or in-kind distributions made by the Company 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 the Company in excess of the nominal value) are subject to a federal withholding tax (the "Withholding Tax") at a current rate of 35%. The Withholding Tax must be withheld by the Company from the gross distribution and be paid 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 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 the Company 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 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, 2000, 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):

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

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

In addition, negotiations have been completed for new double taxation treaties with Albania, Argentina, Belarus, Kazakhstan, Kuwait, Moldavia, Mongolia, the Philippines and Zimbabwe. Negotiations for new double taxation treaties with Macedonia and Pakistan are still in progress.

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 U.S.* A Non-resident Holder who is a resident of the U.S. 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 and (ii) holds, directly and indirectly, less than 10% of the voting stock of the Company, (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 U.S. 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 U.S., 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 calender in which the dividend became payable.

*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 it 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 U.S. federal income tax consequences to a U.S. Holder (as defined below) of the acquisition, ownership, and disposition of Shares or ADSs. Because this discussion does not consider any specific circumstances of any particular holder of Shares or ADSs, persons who are subject to U.S. taxation are strongly urged to consult their own tax advisers as to the overall U.S. federal, state and local tax consequences, as well as to the overall Swiss and other foreign tax consequences, of the acquisition, ownership and disposition of Shares. 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 U.S. dollar, and holders of 10% or more of the voting stock of the Company. This discussion generally applies only to U.S. Holders who qualify for benefits under the Treaty, who hold the Shares as a capital asset, and whose functional currency is the U.S. dollar.

For purposes of this discussion, a "U.S. Holder" is a holder of Shares or ADSs who is (i) an individual who is a citizen or resident of the U.S., (ii) a corporation or one of certain other entities created or organized under the laws of the U.S. or a political subdivision thereof, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust subject to primary supervision of a U.S. court and the control of one or more U.S. 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, U.S. Holders of ADRs will be treated as owners of the ADSs evidenced by such ADRs and the Shares represented by such ADSs.

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

In general, a U.S. Holder will be required to determine the amount of any dividend paid in Swiss francs by translating the Swiss francs into U.S. dollars at the "spot rate" on the date of receipt. The tax basis of Swiss francs received by a U.S. Holder generally will equal the U.S. 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 U.S. dollars, or upon the use of such Swiss francs to purchase property, a U.S. Holder will generally recognize exchange gain or loss equal to the difference between such U.S. Holder's tax basis for

the Swiss francs and the U.S. 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, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized on the disposition and the U.S. Holder's tax basis in the Shares or ADSs. Such gain, if any, generally will be U.S. source gain.

*Passive Foreign Investment Company Considerations.* The Company believes that it will not be treated as a passive foreign investment company (a "PFIC") for U.S. federal income tax purposes, but this is a factual determination that must be made annually and therefore is subject to change. A foreign corporation will be a PFIC in any taxable year in which either (i) 75% or more of its gross income consists of certain specified types of "passive" income or (ii) the average percentage of its assets (by value) that produce or are held for the production of passive income is at least 50%. If the Company were to become a PFIC in any taxable year during which a U.S. Holder owned Shares or ADSs, the U.S. Holder would generally be subject to additional taxes on certain distributions received from the Company and on any gain realized upon the sale or other disposition of Shares or ADSs (regardless of whether the Company continued to be a PFIC). Furthermore, a U.S. Holder who beneficially owns an interest in a PFIC is generally required to file an annual information return describing the distributions received from any gain realized upon the disposition of a beneficial interest in the PFIC.

*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 U.S. backup withholding at a 31% rate. Backup withholding will not apply, however, to a 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. Amounts withheld as backup withholding may be credited against a holder's federal income tax liability, and a 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 information reporting and backup withholding may apply for payments made after December 31, 2000. Shareholders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules, including such Treasury regulations.

**Item 8. Selected Financial Data**

The financial data set forth below at December 31, 1999, 1998, 1997, 1996 and 1995 have been derived from audited financial statements. The Company's consolidated financial statements ("Consolidated Financial Statements") for the years ended December 31, 1999, 1998 and 1997 are included elsewhere herein. The data should be read in conjunction with "Item 9. Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Company's Consolidated Financial Statements and Notes thereto included elsewhere herein and are qualified in their entirety by reference to the Consolidated Financial Statements and such Notes.

The audited financial statements from which the selected consolidated financial data set forth below have been derived were prepared in accordance with IAS, which differ in certain respects from U.S. GAAP. For a discussion of the principal differences between IAS and U.S. GAAP, see "Item 18. Financial Statements—Note 31."

For further information regarding continuing and discontinuing activities, which comprise the Agribusiness sector, see "Item 9. Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations" and "Item 1. Description of Business—Spin-off of Agribusiness".

| | Year Ended December 31, | | | | | | |
|---|---|---|---|---|---|---|---|
| | *1999[1]* | *1999* | *1999[2]* | *1998* | *1997* | *1996[3]* | *1995[3]* |
| | *($ m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* |
| **INCOME STATEMENT DATA** | | | | | | | |
| **Amounts in accordance with IAS:** | | | | | | | |
| Sales | 20,418 | 32,465 | 25,409 | 31,702 | 31,180 | 36,233 | 35,943 |
| Operating income | 4,618 | 7,343 | 6,606 | 6,920 | 6,688 | 5,781 | 5,714 |
| Income from associates | 241 | 383 | 376 | 239 | 45 | — | — |
| Net financial income/expenses | 499 | 793 | 990 | 759 | 167 | (245) | (288) |
| Income before taxes and minority interests | 5,358 | 8,519 | 7,972 | 7,918 | 6,900 | 2,597 | 5,576 |
| Taxes | (1,153) | (1,833) | (1,664) | (1,882) | (1,674) | (291) | (1,348) |
| Minority interests | (17) | (27) | (20) | (26) | (18) | (2) | (12) |
| Net income | 4,188 | 6,659 | 6,288 | 6,010 | 5,208 | 2,304 | 4,216 |
| Basic earnings per Share (CHF) | 63 | 100 | 95 | 91 | 79 | 33 | 62 |
| Cash dividends[4] | 1,217 | 1,935 | — | 1,663 | 1,320 | 1,158 | 934 |
| Cash dividends per Share (CHF) | 20.00 | 32.00 | — | 29.00 | 25.00 | 20.00 | 16.80 |

| | Year Ended December 31, | | | | | | |
|---|---|---|---|---|---|---|---|
| | *1999[1]* | *1999* | *1999[2]* | *1998* | *1997* | *1996[3]* | *1995[3]* |
| | *($ m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* | *(CHF m)* |
| **BALANCE SHEET DATA** | | | | | | | |
| **Amounts in accordance with IAS:** | | | | | | | |
| Cash, cash equivalents and current marketable securities | 10,269 | 16,328 | — | 14,170 | 13,722 | 19,044 | 15,374 |
| Inventories | 4,331 | 6,887 | — | 6,695 | 6,545 | 7,961 | 7,357 |
| Other current assets | 7,211 | 11,464 | — | 9,088 | 9,139 | 9,293 | 8,612 |
| Long-term assets | 19,401 | 30,848 | — | 26,272 | 24,244 | 21,729 | 19,545 |
| Total assets | 41,212 | 65,527 | 56,300 | 56,225 | 53,650 | 58,027 | 50,888 |
| Trade accounts payable | 1,240 | 1,971 | — | 1,537 | 1,757 | 1,983 | 2,076 |
| Other current liabilities | 9,712 | 15,442 | — | 13,453 | 15,889 | 16,819 | 12,086 |
| Long-term liabilities and minority interest | 6,854 | 10,898 | — | 9,839 | 9,533 | 11,548 | 11,200 |
| Total equity | 23,406 | 37,216 | — | 31,396 | 26,471 | 27,677 | 25,526 |
| Total liabilities and equity | 41,212 | 65,527 | 56,300 | 56,225 | 53,650 | 58,027 | 50,888 |
| **Amounts in accordance with U.S. GAAP:** | | | | | | | |
| Net income | 3,408 | 5,419 | | 4,955 | | | |
| Basic income per Share | 53 | 84 | | 77 | | | |
| Diluted income per Share | 53 | 84 | | 77 | | | |
| Total equity | 31,808 | 50,575 | | 47,823 | | | |
| Total assets | 50,161 | 79,756 | | 73,014 | | | |

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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.

(2) Financial data is presented on a continuing basis and does give effect to the Agribusiness spin-off (see "Item 1. Description of Business—Spin-off of Agribusiness").

(3) The years 1995 and 1996 have not been restated for changes in IAS adopted in 1997 and subsequent years.

(4) Cash dividends represent cash payments in the applicable year which generally relate to earnings of the previous year.

**Cash Dividends per Share**

Subject to the dividend policy described below, the Board of Directors of the Company expects to recommend the payment of a dividend in respect of each financial year. Dividends will be payable following the end of the relevant financial year, if approved by the Company's shareholders at the relevant

annual ordinary shareholders' meeting, which will normally be held in April or May. Any person who is recorded in the Share register on the date notice of a shareholders' meeting is given shall be deemed to be entitled to receive dividends and, in bonus issues, new Shares, and to exercise shareholders' preemption rights to participate in issues of securities. Dividends are reflected in the Company's financial statements in the year in which they are approved by the Company's shareholders.

The Board's stated policy is that, in the long term, the size of the dividend should be geared to Novartis' growth in earnings. All future dividends paid by the Company will depend upon Novartis' financial condition, results of operations and other factors.

Because dividends are paid by the Company in Swiss francs, exchange rate fluctuations will affect the U.S. dollar amounts received by holders of ADRs.

Cash dividends are translated into U.S. dollars at the Noon Buying Rate on the payment date.

| *Year Earned* | *Month and Year paid* | *Total Dividend per share (CHF)* | *Total Dividend per share ($)* |
|---|---|---|---|
| 1995 | April 1996 | 16.80 | 13.93 |
| 1996 | April 1997 | 20.00 | 13.61 |
| 1997 | April 1998 | 25.00 | 16.67 |
| 1998 | April 1999 | 29.00 | 19.20 |
| 1999 | April 2000 | 32.00 | 19.52 |

**Exchange Rates**

The following table sets forth, for the years and dates indicated, certain information concerning the rate of exchange of the Swiss franc to the U.S. dollar based on the Noon Buying Rate. The noon buying rate in effect on December 31, 1999, which is used to make certain conversions for the convenience of the reader, was CHF 1.59 = $1.00. The noon buying rate in effect on April 28, 2000 was CHF 1.7205 = $1.00.

| *Year ended December 31,* | *Period End* | *Average[(1)]* | *High* | *Low* |
|---|---|---|---|---|
| 1995 | 1.16 | 1.18 | 1.29 | 1.14 |
| 1996 | 1.35 | 1.24 | 1.35 | 1.18 |
| 1997 | 1.46 | 1.45 | 1.51 | 1.41 |
| 1998 | 1.38 | 1.45 | 1.52 | 1.35 |
| 1999 | 1.59 | 1.50 | 1.60 | 1.36 |

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

**Item 9. Management's Discussion and Analysis of Financial Condition and Results of Operations**

The following management's discussion and analysis should be read in conjunction with the Company's Consolidated Financial Statements included herein. The Consolidated Financial Statements and the financial information discussed below have been prepared in accordance with IAS. For a discussion of the principal differences between IAS and U.S. GAAP, see "Item 18. Financial Statements—Note 31".

**Overview on Business Portfolio**

The Group is a world leader both in sales and in innovation in its continuing core businesses: pharmaceuticals, generics, eyecare products and medicines, animal health and consumer health with global sales of CHF 25,409 million in 1999. Novartis aims to hold a leadership position in all of its businesses.

Novartis was formed in 1996 out of a merger of two global participants in the pharmaceutical and agrochemical industries, Sandoz AG and CIBA-Geigy AG (the "Merger"). 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 U.S. GAAP, the Merger is accounted for as a purchase of CIBA-Geigy AG by Sandoz AG. For a discussion of the differences between IAS and U.S. GAAP for purchase accounting under U.S. GAAP, see "Item 18. Financial Statements—Note 31".

On December 2, 1999 the Boards of Novartis and AstraZeneca announced that they agreed to spin off and merge Novartis' Crop Protection and Seeds businesses and Zeneca Agrochemicals to create the world's first dedicated agribusiness company with pro forma combined sales of approximately $7.9 billion (based on 1998 figures). The new company is expected to be named Syngenta AG ("Syngenta"), headquartered in Basel, Switzerland, and listed on the Swiss, London, New York and Stockholm Stock Exchanges. Novartis' shareholders will receive approximately 61% and AstraZeneca's shareholders will receive approximately 39% of the shares of Syngenta. Novartis' Crop Protection and Seeds businesses are shown as activities to be discontinued in the subsequent discussion. After this divestment, the focus of the Novartis Group will be on businesses in the pharmaceuticals, consumer health, generics, eyecare products and animal health sectors.

Novartis also completed the program—initiated in August 1998—to divest six non-core businesses (Redline, Roland, OLW, the Italian sugar-free business, Eden and Wasa) as part of the merger of its OTC and nutrition businesses. This resulted in a pre-tax gain of CHF 352 million in 1999 and CHF 95 in 1998.

**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.

The Company's sales revenue is directly related to its 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 Novartis, like its competitors, searches for efficacious and cost-efficient pharmaceutical solutions to health problems. The necessity for broad-based resources adequate to access the full range of new platform technologies have been among the reasons for the consolidation 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 Novartis' future development.

The competitive conditions in the pharmaceutical industry have intensified as a result of regulation, price reductions, reference prices, parallel imports, higher patient copayments and increased pressure on physicians to limit prescribing. In the future, pressure on Novartis Pharmaceuticals and other pharmaceutical companies to lower their prices is expected to increase. The pressure on prices is influenced primarily by the following factors: government actions that reduce patient 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 Novartis Pharmaceuticals' results as sales volumes in low-priced countries increase and sales volumes in high-priced countries decrease. See "Item 1. Description of Business—Pharmaceuticals—Price Controls".

Similarly, in the discontinuing Agribusiness sector, successful marketing and innovation have been the key to sales growth for selected products. However, weak farm economies and lower commodity prices which led to an increase in farm-saved seeds, increased competition and acreage reductions have caused

price pressures and lower demand for high margin crop protection products and seeds in most regions, the Asia Pacific region being an exception.

Exchange rate exposure also affects the Group's results as Novartis has both sales and operating exposure in many currencies other than the Swiss franc, giving rise to both transactional exposure and translational exposure when results and foreign subsidiary balance sheets are translated into the Swiss franc consolidated financial statements. See "Exchange Rate Exposure and Risk Management" below. Inflation has not been a significant factor in the Group's results.

**Results of Operations**

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

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(CHF m)* |
| **Sales to third parties** | | | |
| Pharmaceuticals | 15,595 | 14,501 | 14,112 |
| Generics | 1,823 | 1,529 | 1,452 |
| CIBA Vision | 1,632 | 1,505 | 1,423 |
| Consumer Health — ongoing | 5,250 | 4,752 | 4,739 |
| Divested Consumer Health activities | 182 | 1,036 | 1,127 |
| Animal Health | 927 | 901 | 893 |
| **Sales from continuing activities** | **25,409** | **24,224** | **23,746** |
| Sales from discontinuing Agribusiness activities[1] | 7,056 | 7,478 | 7,434 |
| **Group sales** | **32,465** | **31,702** | **31,180** |
| Cost of goods sold | (9,822) | (10,052) | (9,847) |
| Marketing and distribution | (9,561) | (8,790) | (8,665) |
| Research and development | (4,246) | (3,906) | (3,739) |
| Administration and general overhead | (1,493) | (2,034) | (2,241) |
| **Operating income** | **7,343** | **6,920** | **6,688** |
| **Operating income by sectors** | | | |
| Pharmaceuticals | 4,830 | 4,502 | 4,246 |
| Generics | 347 | 278 | 239 |
| CIBA Vision | 250 | 225 | 231 |
| Consumer Health — ongoing | 653 | 647 | 466 |
| Divested Consumer Health activities | 375 | 80 | 74 |
| Animal Health | 216 | 211 | 196 |
| Corporate and other expenses | (65) | (121) | (104) |
| **Operating income from continuing activities** | **6,606** | **5,822** | **5,348** |
| Operating income from discontinuing Agribusiness activities[1] | 737 | 1,098 | 1,340 |
| **Group operating income** | **7,343** | **6,920** | **6,688** |
| Income from associated companies | 383 | 239 | 45 |
| Financial income, net | 793 | 759 | 167 |
| **Income before taxes and minority interests** | **8,519** | **7,918** | **6,900** |
| Taxes | (1,833) | (1,882) | (1,674) |
| **Income before minority interests** | **6,686** | **6,036** | **5,226** |
| Minority interests | (27) | (26) | (18) |
| **Net income** | **6,659** | **6,010** | **5,208** |

(1) Agribusiness: Crop Protection and Seeds businesses

**1999 Compared to 1998**

***Overview on results***

Group sales increased by 2% in CHF to CHF 32,465 million, operating profit by 6% in CHF to CHF 7,343 million, net income by 11% in CHF to CHF 6,659 million and free cash flow by 34% in CHF to CHF 3,525 million. Ongoing activities (continuing activities less the divested Consumer Health businesses) grew at 9% in CHF in both sales and operating income.

The operating margin on ongoing activities was maintained in 1999 at 24.7% of sales, the same level as in 1998. Productivity gains were achieved in particular in administration and general overhead (where expenses were reduced by 7%), and in manufacturing (cost of goods sold growth was lower than sales growth). These gains were reinvested in marketing and distribution, which overall increased by 13%, and in research and development, which increased by 10%. Most of the marketing and distribution and research and development investments went into Pharmaceuticals, in order to support products like Neoral®, Diovan® and Lamisil®, as well as to prepare the launch of new products such as Exelon®, Comtan®, Trileptal® and Starlix®. This trend in the ongoing activities, with productivity gains in administration and general overhead and cost of goods sold, which are partially or totally reinvested in research and development, has continued over several years.

***Sales***

| | *Year ended December 31* | | |
|---|---|---|---|
| | *1999* | *1998* | *Change* |
| | *(CHF m)* | *(CHF m)* | *(%)* |
| **Sales** | | | |
| Pharmaceuticals | 15,595 | 14,501 | 8 |
| Generics | 1,823 | 1,529 | 19 |
| CIBA Vision | 1,632 | 1,505 | 8 |
| Consumer Health (excluding divested activities) | 5,250 | 4,752 | 10 |
| Animal Health | 927 | 901 | 3 |
| **Sales from ongoing activities** | **25,227** | **23,188** | **9** |
| Sales from discontinuing Agribusiness activities[(1)] | 7,056 | 7,478 | −6 |
| Sales from divested Consumer Health activities | 182 | 1,036 | −82 |
| **Group sales** | **32,465** | **31,702** | **2** |

(1) Agribusiness: Crop Protection and Seeds businesses

*Sales from ongoing activities*

Sales from ongoing activities increased by 9% in CHF, or 6% in local currencies, to CHF 25,227 million in 1999 from CHF 23,188 million in 1998. In 1999, 37% of sales were generated in the U.S. and 36% in Europe. Volumes rose by 5%, driven in particular by Generics and Consumer Health. Higher prices in Pharmaceuticals compensated for price decreases in Generics and CIBA Vision, so there was no overall price increase. The sales performance was affected by a positive currency impact of 3%, mainly due to the depreciation of the Swiss franc against the Japanese yen (21%) and the U.S. dollar (3%). No major acquisitions were made in 1999 that significantly affected the sales performance of the Group.

*Pharmaceuticals.* Sales increased by 8% in CHF, or 4% when expressed in local currencies, to CHF 15,595 million in 1999 from CHF 14,501 million in 1998. This increase was primarily due to sales growth in Japan and Europe, which offset lower sales in Latin America, especially in Brazil. Sales of the top ten products grew by 12% as a result of the continued shift of marketing resources towards key products. Sandimmun®/Neoral®, Novartis Pharmaceuticals' largest selling brand, had increased sales of 5% in local currencies to over CHF 2 billion; however, Novartis Pharmaceuticals expects in the near future the launch of generic products for Neoral® capsules in the U.S., which may lead to some erosion in sales. Voltaren® came under increased pressure from generic products and new COX II competitor products and lost therefore 13% in sales in local currencies. Approximately 1% of sales were transferred from the prescription business to the OTC due to the switch of Lamisil® Cream to OTC status in the U.S. and Voltaren® Emulgel® in Germany. Despite the switch of Lamisil® Cream to OTC status, Lamisil® sales increased 8% in local currencies. The growth in Lamisil® sales was driven by the tablet form, market share

gains against Johnson & Johnson's Sporanox and the favorable uptake in Japan. Aredia® booked a 44% sales increase in local currencies in 1999. Novartis Pharmaceuticals expects the launch of generic products in the near future which may circumvent the patent protection it currently has until 2005. However, Zometa®, a product with superior efficacy and improved delivery form, is expected to replace Aredia® as the standard in care of the treatment of skeletal complications of malignancy. An NDA for Zometa® has been filed in the U.S. and the EU and has received fast track review by the FDA. While sales of the Cibacen® group only increased slightly, Diovan® sales grew by 78% to reach CHF 740 million in the highly competitive hypertension market. Marketing and distribution resources resulted in market share gains by Diovan® in all major countries. By in-licensing the HRT patches Menorest® and Estalis® from Aventis, Novartis Pharmaceuticals complemented its product portfolio in the HRT market, where competitive pressure from combination patches had a negative impact on Estraderm® sales in 1999. Important contributors to incremental sales were also Lescol®, Tegretol®, Miacalcic®, Sandostatin®, Foradil® and Exelon®. Sales of the remaining products, excluding the top 20 pharmaceutical products, decreased from 22.7% of total sales (CHF 3,288 million) to 21.0% of total sales (CHF 3,272 million). In the effort to focus more on key products Novartis Pharmaceuticals will eliminate about one hundred brands which account for less than 1% of its sales.

**Top 20 Pharmaceutical Products**

| *Brands* | *Market segment* | *Sales 1999 (CHF m)* | *Change in local currencies (%)* |
|---|---|---|---|
| Sandimmun®/Neoral® | Transplantation, Rheumatoid arthritis, Psoriasis | 2,009 | +5 |
| Voltaren® | Inflamation | 1,420 | −13 |
| Lamisil® | Fungal infections | 1,051 | +8 |
| Cibacen® /Lotensin® | Hypertension | 882 | +2 |
| Aredia® | Oncology (Bone) | 835 | +44 |
| Diovan® | Hypertension | 740 | +78 |
| Lescol® | Cholestrol reduction | 689 | +7 |
| Tegretol® | Epilepsy | 645 | +4 |
| Leponex® /Clozaril® | Schizophrenia | 594 | −1 |
| Miacalcic® | Osteoporosis | 563 | +19 |
| Sandostatin® | Acromegaly | 541 | +18 |
| Estraderm® | Hormone replacement | 380 | −13 |
| Nitroderm® | Angina pectoris, congenital heart failure | 332 | −8 |
| Zaditen® | Asthma, allergy | 294 | −7 |
| Sandoglobulin® | Immunodeficiency syndromes | 285 | −3 |
| Foradil® | Respiratory | 270 | +21 |
| Parlodel® | Parkinson's | 233 | −9 |
| Ritalin® | Attention deficit/ hyperactivity disorder | 231 | −1 |
| Desferal® | Oncology | 167 | +18 |
| Anafranil® | Depression | 162 | −5 |

*Generics.* Sales increased by 19% in CHF, or 18% in local currencies, to CHF 1,823 million in 1999 from CHF 1,529 million in 1998. In Generics Business, sales were driven by new product launches, in particular by Terazosin (benign prostate hypertrophy) in the U.S., compensating for the price pressure on established products. In Industrial Business, the strongly performing cephalosporin-antibiotics business offset price erosion in the erythromycin and penicillin markets.

*CIBA Vision.* Sales increased by 8% in CHF, or 4% in local currencies, to CHF 1,632 million in 1999 from CHF 1,505 million in 1998, primarily due to sales growth in Japan. Opthalmic pharmaceuticals recorded sales above sector development with Arteoptic® (glaucoma) and Zaditen®/Zaditor™ (anti-allergic eye drops) more than compensating generic erosion of Voltaren® Ophthalmic. While sales of the lens care products suffered from strong competition and a flat market, sales of the contact lenses were driven by the new generation of Focus® contact lens, in particular Focus® DAILIES® (daily disposable lenses).

*Consumer Health (excluding divested activities).* Sales increased by 10% in CHF, or 8% in local currencies, to CHF 5,250 million in 1999 from CHF 4,752 million in 1998. The sales development was driven by the higher performance in Medical Nutrition, the OTC business and Health and Functional Food. Medical Nutrition sales expanded in all segments, in tube feeding products, healthcare food services, clinical supplements and medical devices, with marked sales expansion in Latin America and Europe. The OTC sales grew in particular in the U.S. due to higher sales of cough and cold products Neocitran® and Triaminic®, and due to the sales recovery of Otrivin®. The growth is also attributable to the transfer of Lamisil® Cream (athlete's foot) from prescription to OTC status. Growth in Health and Functional Food was mainly due to further market share gains of Gerber in the U.S. and Latin America.

*Animal Health.* Sales increased by 3% in CHF to CHF 927 million, and remained constant when measured in local currencies. Growth was recorded in the U.S. and in the Asia Pacific region, whereas sales volume decreased in Europe and Latin America (in particular in Brazil). In the companion animal business, higher sales from Sentinel® (combined flea, intestinal and heartworm treatment for pets) and Interceptor® (intestinal and heartworm treatment for pets) offset the decline recorded with the anti-flea product Program®. In the farm animal business, weak farm economies had a negative impact on sales.

*Sales from discontinuing/divested activities*

*Discontinuing Agribusiness activities.* Sales decreased by 6% in CHF, or 7% when measured in local currencies, to CHF 7,056 million in 1999 from CHF 7,478 million in 1998. The decline was primarily caused by difficult market conditions — particularly weak farm economies, price pressure, the introduction of a new class of fungicides by competitors (strobilurins), acreage reductions and the increased practice of using farm-saved soybean seed. Sales declined in the U.S. as well as in Europe, while a positive trend was seen in the Asia Pacific region. The economic crises in Brazil, Russia and Ukraine continued, resulting in a decrease in sales to these regions. In Crop Protection, herbicides were negatively affected by the unfavorable market environment, while fungicides met with strong competition from the strobilurins. Sales of insecticides remained stable while increased turf & ornamentals sales were realized. In Seeds, corn was affected by price pressure and acreage reductions, and soybeans by increased use of farm-saved soybean seed. Sales expanded for sugar beet, vegetables, flower seed, winter oilseed, rape and sunflowers.

*Divested Consumer Health activities.* With the sale of OLW, Eden and Wasa, Novartis Consumer Health completed the divestment program begun in August 1998. Sales from all the divested activities (including Redline, Roland, OLW, Wasa, Eden and the Italian sugar-free brands) amounted to CHF 1,036 million in 1998, whereas sales from OLW, Eden and Wasa amounted to CHF 182 million in 1999. Redline, Roland and the Italian sugar-free brands were divested in 1998.

***Expenses***

| | *Discontinuing/ divested activities* | *Ongoing activities* | *Group* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(CHF m)* |
| **1999** | | | |
| Cost of goods sold | (3,334) | (6,488) | (9,822) |
| Marketing and distribution | (1,775) | (7,786) | (9,561) |
| Research and development | (673) | (3,573) | (4,246) |
| Administration and general overhead | (344) | (1,149) | (1,493) |
| **1998** | | | |
| Cost of goods sold | (3,960) | (6,092) | (10,052) |
| Marketing and distribution | (1,909) | (6,881) | (8,790) |
| Research and development | (668) | (3,238) | (3,906) |
| Administration and general overhead | (799) | (1,235) | (2,034) |

| | *1999* | *1998* | *Change* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(%)* |
| **Sales from ongoing activities** | **25,227** | **23,188** | **9** |
| Cost of goods sold | (6,488) | (6,092) | −7 |
| Marketing and distribution | (7,786) | (6,881) | −13 |
| Research and development | (3,573) | (3,238) | −10 |
| Administration and general overhead | (1,149) | (1,235) | 7 |
| **Operating income from ongoing activities** | **6,231** | **5,742** | **9** |

*Cost of Goods Sold*

Cost of goods sold on ongoing activities as a percentage of sales decreased from 26.3% in 1998 to 25.7% in 1999. This was mainly driven by merger related cost savings. In addition, with the strengthening of the U.S. dollar and the Japanese yen, the cost exposure in Swiss francs had a positive impact on the gross margin.

Cost of goods sold related to the discontinuing/divested activities reduced by CHF 626 million over the year due to the reduction in sales in the discontinuing Agribusiness sector with the balance coming from the reduced cost of goods sold due to the divestment of the non-core Consumer Health brands.

*Marketing and Distribution Expenses*

Marketing and distribution expenses from ongoing activities as a percentage of sales went up from 29.7% in 1998 to 30.9% in 1999 with particularly high increases in Pharmaceuticals and CIBA Vision to support key products, such as Diovan® or Focus® DAILIES®. Within marketing and distribution further resources were allocated from low priority to high priority products.

Marketing and distribution costs of the discontinuing/divested activities fell by CHF 134 million. CHF 37 million relates to a lower expense in the discontinuing Agribusiness sector, the balance of CHF 97 million coming from the impact of the divested Consumer Health brands.

*Research and Development Expenses*

Research and development expenses from ongoing activities in percent of sales increased to 14.2% in 1999 compared with 14.0% in 1998. 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. Significant increases in research and development were also recorded in Consumer Health, in order to support the development of new products in the functional food business.

All of the research and development expense for the discontinuing/divested activities relates to the discontinuing Agribusiness sector.

*Administration and General Overhead*

As a percentage of sales from ongoing activities, there was a decrease in general and administration expenses to 4.6% in 1999 from 5.3% in 1998. Tight cost management enabled the Group to reduce the general and administrative overhead in particular by Pharmaceuticals, Consumer Health and Animal Health. Releases from restructuring provisions due to settlements at less than anticipated amounts were to a great extent offset by the addition of further restructuring provisions of CHF 70 million in 1999 relating to downsizing Pharmaceutical production facilities mainly in the U.S. and Canada and CHF 208 million in 1998 relating to restructuring Consumer Health worldwide and the Pharmaceuticals sector in the U.S. The net operating income impact on ongoing activities was a gain of CHF 144 million in 1999 and a charge of CHF 38 million in 1998. Furthermore, there were certain other exceptional items, such as the settlement of environmental litigations with insurance companies for which Novartis received CHF 76 million and CHF 42 million, respectively in 1999 and 1998.

The reduction of CHF 455 million in the administration and general overhead expenses relating to discontinuing/divested activities arises from a decrease of CHF 176 million in the discontinuing Agribusiness sector with the balance relating to the divested Consumer Health activities.

**Operating Income**

| | *1999* | *1998* | *Change* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(%)* |
| Pharmaceuticals | 4,830 | 4,502 | 7 |
| Generics | 347 | 278 | 25 |
| CIBA Vision | 250 | 225 | 11 |
| Consumer Health (excluding divested activities) | 653 | 647 | 1 |
| Animal Health | 216 | 211 | 2 |
| Corporate and other expenses | (65) | (121) | 46 |
| **Operating income from ongoing activities** | **6,231** | **5,742** | **9** |
| Operating income from discontinuing Agribusiness activities[1] | 737 | 1,098 | −33 |
| Gains on Consumer Health divestments and related operating income | 375 | 80 | 369 |
| **Group operating income** | **7,343** | **6,920** | **6** |

(1) Agribusiness: Crop Protection and Seeds businesses

Operating margins from ongoing activities remained virtually constant at 24.7% (1998: 24.8%). Margin improvements were recorded in Generics and CIBA Vision, compensating for the margin decrease in Consumer Health. The operating margin for the whole group including the divested or to be discontinued activities has increased from 21.8% in 1998 to 22.6% in 1999. This results in a return on net operating assets of 31.3%.

*Operating income from ongoing activities*

*Pharmaceuticals.* Pharmaceuticals generated more than three-quarters of the total operating income from ongoing businesses. Operating margins were maintained in 1999 at the high prior year level of 31.0%. Cost of goods sold as a percentage of sales improved due to merger related cost savings and a depreciation of the Swiss franc against the U.S. dollar and the Japanese yen. Novartis Pharmaceuticals significantly increased its investments in marketing and distribution and research and development in order to support

its strategic products in the market and its key projects in development. General and administration expenses remained constant in absolute terms due to tight cost control. Releases from merger related provisions due to settlements at less than initially anticipated amounts were to a great extent offset by the addition of further restructuring provisions of CHF 70 million in 1999 relating to downsizing Pharmaceutical production facilities mainly in the U.S. and Canada and CHF 112 million in 1998 relating to the U.S. The net operating income impact of these releases was a gain of CHF 23 million in 1999 and a charge of CHF 12 million in 1998.

*Generics.* Operating margins improved from 18.2% in 1998 to 19.0%. The increase resulted primarily from sales growth in both Generics Business and Industrial Business. Generics achieved a 25% increase in operating profit despite an increase in research and development expenses due to expected loss of patent protection of certain ethical drugs and a 10% price erosion. Investments in marketing and distribution and cost of goods sold increased at a lower rate than sales due to better usage of Novartis' distribution network and cost containment programs.

*CIBA Vision.* Operating margins at 15.3% represent a 0.3% improvement over the year. The increase in operating income is mainly due to the sales performance in the contact lens and ophthalmic pharmaceutical businesses. Cost of goods sold increased at a greater rate than sales as a result of price pressure. Conversely, research and development expenses were less than in the previous year, when exceptionally high investments in the development of new generation contact lenses were made. Marketing and distribution expenses developed slightly above sales due to launches of the key products Focus® DAILIES®, Focus® Night&Day® and the U.S. launch of Zaditor®.

*Consumer Health (excluding divested activities).* Operating margins decreased by 1.2% to 12.4% as more resources were allocated to research and development in order to support the development of new products in the functional food business. Investments in marketing and distribution went up as a result of numerous important launches, such as Aviva®, a hard claim brand for heart, bone and digestive health, Oclea®, a soft claim brand with natural ingredients and the Gerber® Wellness product line. Cost savings, in particular in general and administration overhead, were realized as a consequence of the merger of the OTC and nutrition businesses announced in 1998.

*Animal Health.* Operating margins at 23.3% remained at almost the previous year's level of 23.4%. Ongoing structural improvement projects led to lower general and administration expenses. Higher investments in research and development were made to broaden the sector's companion animal franchise.

*Corporate and Other Expenses.* Corporate and other expenses, which include the costs of corporate and country management were again reduced significantly to CHF 65 million in 1999 from CHF 121 million in 1998. These include the positive impacts of environmental litigation settlements of CHF 76 million in 1999 and CHF 42 million in 1998 and the benefits of allocation of the net pension contribution of the Novartis Group which was CHF 213 million in 1999 compared with CHF 42 million in 1998. The increase in net pension contribution is related to the increased expected return on plan assets due to an increase in the plan assets and reduced interest cost. Releases from merger related restructuring provisions due to settlements at less than initially anticipated amounts had a positive impact of CHF 121 million in 1999 and CHF 70 million in 1998.

*Operating income from discontinuing/divested activities*

*Discontinuing Agribusiness activities.* Operating margins declined to 10.4% from 14.7% in 1998 due to price pressures, reduced volumes and high litigation expenses for the protection of intellectual property. In addition exceptional costs of CHF 100 million were recorded for the Focus restructuring program, which was launched in August 1999. Investments in marketing and distribution as well as research and development remained high, in order to support and to prepare the launch of key products such as the fungicide Flint® and the insecticide Actara®/Cruiser®, and to further build on new technologies.

*Divested Consumer Health activities.* With the sale of OLW, Eden and Wasa, the sector completed its divestment program that started in August 1998. Operating income from all the divested activities up to their date of divestment (RedLine, Roland, OLW, Eden, Wasa and the Italian sugar-free brands) amounted to CHF 80 million in 1998, and from OLW, Eden and Wasa up to the date of their divestments in 1999 amounted to CHF 23 million. Novartis Consumer Health realized an exceptional gain due to these divestments of CHF 352 million in 1999. In 1998 the divestment gain of CHF 95 million was offset by a similar amount of one-off restructuring costs (CHF 96 million).

***Net Income***

| | *1999* | *1998* | *Change* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(%)* |
| **Group operating income** | **7,343** | **6,920** | **6** |
| Income from associated companies | 383 | 239 | 60 |
| Financial income, net | 793 | 759 | 4 |
| **Income before taxes and minority interests** | **8,519** | **7,918** | **8** |
| Taxes | (1,833) | (1,882) | 3 |
| **Income before minority interests** | **6,686** | **6,036** | **11** |
| Minority interests | (27) | (26) | 4 |
| **Net income** | **6,659** | **6,010** | **11** |

*Income from associated companies*

Income from associated companies, at CHF 383 million reflects, for the most part, Novartis' 44% stake in Chiron. Income from this stake was boosted by a gain of CHF 208 million from the divestment of the Chiron diagnostic businesses. In 1998, Novartis booked its portion of a Chiron divestment gain, that amounted to CHF 130 million.

*Financial income, net*

Financial income, net reached a new record high of CHF 793 million. Interest expense was reduced by CHF 191 million due to lower average debt levels throughout the year. Financial income, net, was also CHF 136 million lower than in 1998 as gains from options and forward contract positions were reduced by CHF 270 million and was only partially compensated by the increase in interest income of CHF 203 million due to successful interest rate management in the bond portfolio, Novartis' largest asset category. The return on the portfolio of equities compared to the market suffered from the fact that the market was mainly driven by a few high-tech stocks that were underrepresented in Novartis' portfolio. At market values, the return on liquid funds was 8.9%, significantly above the risk adjusted benchmarks based on comparable investments. This performance was achieved in spite of a very low value at risk (VAR) profile. A lower risk policy was adopted due to the high valuation of certain markets and the consequent risk of a set-back. Net currency loss was CHF 157 million.

*Taxes*

Despite increased profits, taxes were reduced by 3% and the tax rates were at a new low of 21.5%, down from 23.8% a year earlier. This improvement was possible due to a change in mix of the sectors contributing to taxable income from the more highly taxed Agribusiness activities to Pharmaceuticals, the exceptional Consumer Health divestment gain and successful tax planning measures.

*Net Income*

Net income as a percentage of total sales amounted to 20.5% up from 19% of 1998. Return on average equity fell from 20.7% in 1998 to 19.4% in 1999 due to the increase in retained earnings, positive translation movements and the increase in equity due to the adoption of IAS 19 (revised).

**1998 Compared to 1997**

***Overview on results***

Group sales increased by 2% in CHF to CHF 31,702 million, operating income by 3% in CHF to CHF 6,920 million and free cash flow by 114% to CHF 2,623 million. Ongoing activities (continuing activities less the divested Consumer Health businesses) grew at 3% in CHF in terms of sales and 9% in terms of operating income.

The operating margin on ongoing activities increased from 23.3% in 1997 to 24.7% in 1998. This was due to savings of 18.0% in administration and general overheads and as a result of both cost of goods sold and marketing and distribution, representing lower percentages of sales in 1998 compared to 1997. Research and development slightly increased from 13.6% of ongoing sales in 1997 to 14.0% of ongoing sales in 1998 due to spending on various late phase pharmaceutical projects.

***Sales***

| | *Year ended December 31* | | |
|---|---|---|---|
| | *1998* | *1997* | *Change* |
| | *(CHF m)* | *(CHF m)* | *(%)* |
| **Sales** | | | |
| Pharmaceuticals | 14,501 | 14,112 | 3 |
| Generics | 1,529 | 1,452 | 5 |
| CIBA Vision | 1,505 | 1,423 | 6 |
| Consumer Health (excluding divested activities) | 4,752 | 4,739 | 0 |
| Animal Health | 901 | 893 | 1 |
| **Sales from ongoing activities** | **23,188** | **22,619** | **3** |
| Sales from discontinuing Agribusiness activities[(1)] | 7,478 | 7,434 | 1 |
| Sales from divested Consumer Health activities | 1,036 | 1,127 | −8 |
| **Group sales** | **31,702** | **31,180** | **2** |

(1) Agribusiness: Crop Protection and Seeds businesses

*Sales from ongoing activities*

Sales from ongoing activities increased by 3% in CHF, or 6% in local currencies, to CHF 23,188 million in 1998 from CHF 22,619 million in 1997. Volumes increased by 4%, and price increases contributed 1% to the local currency sales growth. Due to the appreciation of the Swiss franc against major currencies, in particular the Japanese yen and some European currencies, sales performance was affected by a negative currency impact of 3%, which reduced the sales increase in Swiss francs to 2%.

*Pharmaceuticals.* Sales increased by 3% in CHF, or 6% when expressed in local currencies, to CHF 14,501 million in 1998 from CHF 14,112 million in 1997. This increase was primarily due to sales growth in the U.S. and Europe, which offset a sales decline in Latin America (especially Brazil) and Asia due to difficult economic conditions and stringent cost containment measures in Japan. The new class of anti-hypertensives Diovan® and Co-Diovan® was introduced in most countries worldwide in 1998 and achieved sales of CHF 409 million. Key growth drivers in 1998 included Aredia®, for the treatment of cancer, Sandostatin®, for the treatment of acromegaly, the antihypertensive Cibacen®, Foradil®, for the treatment of asthma, and Miacalcic® for the treatment of osteoporosis. Sales of the immunosuppressants Sandimmun® and Neoral® and the antifungal Lamisil® also increased in 1998. Sales of the remaining products, excluding the top 20 pharmaceutical products, decreased by 9% to CHF 3,289 million, as a result of focusing resources on fewer but bigger growth opportunities.

**Top 20 Pharmaceutical Products**

| *Brands* | *Market segment* | *Sales 1998 (CHF m)* | *Change in local currencies (%)* |
|---|---|---|---|
| Sandimmun®/Neoral® | Transplantation, Rheumatoid arthritis, Psoriasis | 1,851 | +5 |
| Voltaren® | Inflammation | 1,571 | +2 |
| Lamisil® | Fungal infections | 938 | +5 |
| Cibacen®/Lotensin® | Hypertension | 834 | +27 |
| Aredia® | Oncology (Bone) | 567 | +61 |
| Diovan® | Hypertension | 409 | +251 |
| Lescol® | Cholesterol reduction | 612 | +1 |
| Tegretol® | Epilepsy | 606 | +5 |
| Leponex®/Clozaril® | Schizophrenia | 588 | +1 |
| Miacalcic® | Osteoporosis | 463 | +21 |
| Sandostatin® | Acromegaly | 451 | +38 |
| Estraderm® | Hormone replacement | 430 | +1 |
| Nitroderm® | Angina pectoris, congenital heart failure | 334 | −13 |
| Zaditen® | Asthma, allergy | 280 | −15 |
| Sandoglobulin® | Immunodeficiency syndromes | 287 | +18 |
| Foradil® | Respiratory | 224 | +27 |
| Parlodel® | Parkinson's | 235 | −22 |
| Ritalin® | Attention deficit/hyperactivity disorder | 227 | −1 |
| Anafranil® | Oncology | 140 | +2 |
| Desferal® | Depression | 168 | −12 |

*Generics.* Sales increased by 5% in CHF, or 13% in local currencies, to CHF 1,529 million in 1998 from CHF 1,452 million in 1997. The growth was primarily due to an increase in sales of cephalosporin antibiotics amid a price-competitive Generics Business environment. The pronounced difference between sales results in Swiss francs as opposed to local currencies is due to the depreciation of Indonesian rupiah relative to the Swiss franc due to the economic crisis there. Indonesia is an important market for generics.

*CIBA Vision.* Sales increased by 6% in CHF, or 9% in local currencies, to CHF 1,505 million in 1998 from CHF 1,423 million in 1997. The increase was primarily due to increased sales of contact lens products and ophthalmic pharmaceuticals, particularly the Focus® family of contact lenses and the anti-inflammatory Voltaren® Ophthalmic.

*Consumer Health (excluding divested activities).* Sales of consumer health products remained constant in CHF and increased by 3% in local currencies, to CHF 4,752 million in 1998 from CHF 4,739 million in 1997. The increase in sales of Consumer Health products (excluding divested activities) resulted primarily from increased sales of infant and baby nutrition products in the U.S. and medical nutrition products worldwide. Sales of OTC medication decreased in 1998 as a result of a poor cough and cold season in the U.S. and Europe and a one-time inventory impact caused by consolidation in the retail industry in North America.

Sales from all the divested activities (including Redline, Roland, OLW, Wasa, Eden and the Italian sugar-free brands) amounted to CHF 1,127 million in 1997 and CHF 1,036 million in 1998.

*Animal Health.* Sales increased by 1% in CHF, or 5% when measured in local currencies, to CHF 901 million in 1998 from CHF 893 million in 1997. The increase was primarily due to increased sales in North and Latin America, with sales of the anti-flea Sentinel® increasing in the U.S.

*Sales from discontinuing/divested activities*

*Discontinuing Agribusiness activities.* Sales increased by 1% in CHF, or 4% when measured in local currencies, to CHF 7,478 million in 1998 from CHF 7,434 million in 1997. The increase was primarily due to increased sales of insecticides, turf & ornamental products and seed treatment products. The increase was also attributable to growth in corn sales in the U.S., supported by the demand for genetically engineered Bt hybrids, and higher sales of vegetables and flowers in all markets. Sales of herbicides declined in the U.S. as a result of low commodity prices and competitive price pressures, and sales of fungicides decreased in Europe as a result of new product introductions by competitors. In addition, sales of sugar beet declined local currencies, due in part to certain governmental policies (*e.g.*, an increase in set-aside programs) and increased competition.

*Divested Consumer Health activities.* The divestment of the non-core activities commenced in 1998. On September 30, 1998, Roland SA, Murten, Switzerland, on November 10, 1998 Redline Healthcare Inc., U.S. and on December 30, 1998 certain business lines of Novartis Nutrition S.r.l., Bologna, Italy were sold. Total sales of Roland and Redline activities recorded up to their respective date of divestment amounted to CHF 499 million. The Italian divested activities were consolidated for the whole year and made sales of CHF 186 million in 1998.

The Group's 51% interest in OLW Snacks AB, Sweden, and 49% interest in Chips OLW AB, Sweden, the 100% stake in the German Eden Group, and the 100% interest in Wasa operations in Sweden, Germany, Denmark, Norway and Poland were retained for all of 1998. Sales of these businesses and those already divested in 1998 totaled CHF 1,036 million compared to CHF 1,127 million for all of 1997.

***Expenses***

| | *Discontinuing/ divested activities (CHF m)* | *Ongoing activities (CHF m)* | *Group (CHF m)* |
|---|---|---|---|
| **1998** | | | |
| Cost of goods sold | (3,960) | (6,092) | (10,052) |
| Marketing and distribution | (1,909) | (6,881) | (8,790) |
| Research and development | (668) | (3,238) | (3,906) |
| Administration and general overhead | (799) | (1,235) | (2,034) |
| **1997** | | | |
| Cost of goods sold | (3,902) | (5,945) | (9,847) |
| Marketing and distribution | (1,837) | (6,828) | (8,665) |
| Research and development | (668) | (3,071) | (3,739) |
| Administration and general overhead | (740) | (1,501) | (2,241) |

| | *1998 (CHF m)* | *1997 (CHF m)* | *Change (%)* |
|---|---|---|---|
| **Sales from ongoing activities** | **23,188** | **22,619** | **3** |
| Cost of goods sold | (6,092) | (5,945) | −2 |
| Marketing and distribution | (6,881) | (6,828) | −1 |
| Research and development | (3,238) | (3,071) | −5 |
| Administration and general overhead | (1,235) | (1,501) | 18 |
| **Operating income from ongoing activities** | **5,742** | **5,274** | **9** |

*Cost of Goods Sold*

The increase in ongoing cost of goods sold to CHF 5,945 million reflected higher sales. As a percentage of total sales, cost of goods sold remained constant at approximately 26% in 1998 and 1997.

Cost of goods sold related to the discontinuing/divested activities increased by CHF 58 million over the year of which CHF 108 million relates to higher cost of goods sold in the discontinuing Agribusiness sector. Cost of goods sold reduced by CHF 50 million for the divested non-core Consumer Health products.

*Marketing and Distribution Expenses*

The increase in marketing and distribution expenses from ongoing activities was primarily due to increased marketing expenses incurred by CIBA Vision and Pharmaceuticals and to increased provisions for bad debt in the Agribusiness sector, mainly in relation to Russia and Eastern Europe. As a percentage of total sales, marketing and distribution expenses remained stable at approximately 30%.

Marketing and distribution costs of the discontinuing/divested activities increased by CHF 72 million. CHF 119 million relates to a higher expense in the discontinuing Agribusiness sector, offset by CHF 47 million of reductions coming from the divested Consumer Health activities.

*Research and Development Expenses*

As a percentage of total sales, research and development expenses from ongoing activities increased slightly to approximately 14% in 1998 compared to 13.6% in 1997. This reflects the continuing development program in Pharmaceuticals, where numerous projects are in late phase clinical development.

All of the research and development expense for the discontinuing/divested activities relates to the discontinuing Agribusiness sector.

*Administration and General Overhead*

As a percentage of total sales, administration and general overhead from ongoing activities decreased to 5% in 1998 from 7% in 1997. The decrease was primarily due to cost synergies related to the Merger. These cost synergies were predicted to be CHF 2 billion and they were fully realized, within the three years following the Merger in 1996.

The increase of CHF 64 million in the administration and general overhead expenses relating to discontinuing/divested activities arises from a decrease of CHF 9 million in the discontinuing Agribusiness sector, offset by an increase of CHF 73 million relating to the divested Consumer Health activities.

***Operating Income***

| | Year ended December 31 | | |
|---|---|---|---|
| | *1998* | *1997* | *Change* |
| | *(CHF m)* | *(CHF m)* | *(%)* |
| Pharmaceuticals | 4,502 | 4,246 | 6 |
| Generics | 278 | 239 | 16 |
| CIBA Vision | 225 | 231 | −3 |
| Consumer Health (excluding divested activities) | 647 | 466 | 39 |
| Animal Health | 211 | 196 | 8 |
| Corporate and other expenses | (121) | (104) | −16 |
| **Operating income from ongoing activities** | **5,742** | **5,274** | **9** |
| Operating income from discontinuing Agribusiness activities[(1)] | 1,098 | 1,340 | −18 |
| Operating income from Consumer Health divestments | 80 | 74 | 8 |
| **Group operating income** | **6,920** | **6,688** | **3** |

(1) Agribusiness: Crop Protection and Seeds businesses

Operating income from ongoing operations increased by 9% to CHF 5,742 million in 1998 from CHF 5,274 million in 1997. The increase was primarily due to the slight increase in sales combined with the decrease in administration and general overhead.

*Operating income from ongoing activities*

*Pharmaceuticals.* Pharmaceuticals generated more than three-quarters of the total operating income from continuing businesses. Operating margin increased slightly to 31% in 1998 from 30% in 1997. The increase was primarily due to more effective cost control which resulted in lower administration and general overhead and cost of goods sold, along with other functional costs which fell slightly as a percentage of sales.

*Generics.* Operating margin improved to 18.2% in 1998 from 16.4% in 1997. The increase resulted primarily from the performance of the cephalosporin business in Industrial Business, the recovery of the Generics Business in the U.S. and more effective cost-control measures.

*CIBA Vision.* Operating margin deteriorated to 15.0% in 1998 from 16.2% in 1997. The decrease was primarily due to increased investments in research and development in both contact lenses and ophthalmic pharmaceuticals (development of Visudyne™ and Rescula™) and higher marketing and distribution expenses for the launch of Focus® DAILIES® in the U.S.

*Consumer Health (excluding divested activities).* Operating margin improved to 13.6% in 1998 from 9.8% in 1997. The increase was primarily due to an increase in sales of Gerber in North America and to cost savings resulting from the restructuring of Gerber. In addition, operating profit in 1997 was affected by a one-time restructuring charge of CHF 70 million due to the reorganization of Gerber. The merger of the Group's OTC and nutrition businesses in 1998 resulted in CHF 96 million of restructuring costs, which was offset by divestment gains from disposal of non-core nutrition activities.

*Animal Health.* Operating margin improved to 23.4% in 1998 from 21.9% in 1997. The increase was primarily due to increased sales of higher-margin companion animal products, further improved gross margins and more effective cost control measures.

*Corporate and Other Expenses.* Corporate and other expenses, which include the costs of corporate and country management as well as a number of exceptional items, increased by 16% to CHF 121 million in 1998 from CHF 104 million in 1997. Corporate research and development costs increased by CHF 135 million due to the opening of new research facilities in La Jolla, California. This was partially

mitigated by an 8% decrease in corporate and country management expenses and by a CHF 42 million gain related to insurance recoveries on outstanding environmental claims.

*Operating income from discontinuing/divested activities*

*Discontinuing Agribusiness activities.* The operating margin decreased to 14.7% in 1998 from 18.0% in 1997, primarily due to price pressure, increased provisions for bad debts, increased research and development expenses and litigation expenses for the protection of intellectual property.

*Divested Consumer Health activities.* Operating income on the divested activities amounted to CHF 80 million in 1998 compared to CHF 74 million in 1997.

***Net Income***

| | *1998* | *1997* | *Change* |
|---|---|---|---|
| | *(CHF m)* | *(CHF m)* | *(%)* |
| **Group operating income** | **6,920** | **6,688** | **3** |
| Income from associated companies | 239 | 45 | 431 |
| Financial income, net | 759 | 167 | 355 |
| **Income before taxes and minority interests** | **7,918** | **6,900** | **15** |
| Taxes | (1,882) | (1,674) | −12 |
| **Income before minority interests** | **6,036** | **5,226** | **15** |
| Minority interests | (26) | (18) | −44 |
| **Net income** | **6,010** | **5,208** | **15** |

*Income from associated companies*

Income from associated companies is for the most part reflective of Novartis' 44% stake in Chiron, which was boosted by a gain from a Chiron divestiture of CHF 130 million.

*Financial Income, Net*

Financial income, net, increased to CHF 759 million in 1998 from CHF 167 million in 1997. The higher income was the result of a change in the portfolio mix into higher yielding investments, a slightly higher average amount of available liquid funds and increased capital gains and income from options and forward contracts.

*Taxes*

Tax expenses increased by 12% to CHF 1,882 million in 1998 from CHF 1,674 million in 1997. The increase resulted primarily from an increase in taxable income. The effective tax rate decreased to 23.8% in 1998 from 24.2% in 1997 due to the higher proportion of net financial income in 1998 being taxed at a lower rate than operating income.

*Net Income*

As a result of the foregoing, net income increased by 15% to CHF 6,010 million in 1998 from CHF 5,208 million in 1997.

**Liquidity and Capital Resources**

The following table sets forth certain information about the Group's cash flow for each of the periods indicated.

| | *Year ended December 31,* | | |
|---|---|---|---|
| | *1999* | *1998* | *1997* |
| | *(CHF m)* | *(CHF m)* | *(CHF m)* |
| **Cash Flow and Liquidity Condensed Consolidated Cash Flow Statements** | | | |
| Cash flow from operating activities | 6,893 | 5,853 | 4,565 |
| Cash flow from investing activities | (3,017) | (3,836) | (9,431) |
| Cash flow from financing activities | (4,320) | (3,213) | (2,381) |
| Translation effect on cash and cash equivalents | 74 | (31) | (25) |
| **Change in cash and cash equivalents** | **(370)** | **(1,227)** | **(7,272)** |
| Increase in short- and long-term marketable securities | 1,755 | 2,503 | 6,786 |
| Decrease in short- and long-term financial debts | 466 | 2,274 | 1,573 |
| Financial debt transferred to Ciba Speciality Chemicals | — | — | 881 |
| Translation effect on marketable securities and financial debts | 63 | 42 | 17 |
| **Increase in net liquidity** | **1,914** | **3,592** | **1,985** |
| Net liquidity at beginning of the year | 10,764 | 7,172 | 5,187 |
| **Net liquidity at end of the year** | **12,678** | **10,764** | **7,172** |

The primary source of liquidity for Novartis is cash generated from operations. Cash flow from operations increased to CHF 6,893 million in 1999 from CHF 5,853 million in 1998 and CHF 4,565 million in 1997. Of the CHF 1 billion increase in 1999, CHF 253 million is attributable to an increase in net financial receipts, CHF 210 million to reduced restructuring provision payments, CHF 153 million to a reduction in tax payments, and CHF 79 million to reductions in the funding of working capital. The increase of CHF 1.3 billion in 1998 from 1997 resulted primarily from a CHF 772 million reduction in restructuring payments, a CHF 234 million increase in net financial receipts and a CHF 986 million reduction in other working capital items, offset by higher taxes paid of CHF 609 million.

Cash flow used for investing activities decreased to CHF 3,017 million in 1999 from CHF 3,836 million in 1998. This CHF 819 million decrease primarily resulted from the fact that the Group invested CHF 748 million less in marketable securities and CHF 206 million less in tangible fixed assets.

The cash flow used for investing activities in 1998 was CHF 5.6 billion less than 1997. This was principally due to a CHF 4.3 billion lower investment in marketable securities and CHF 1.1 billion less being spent on the purchase of intangible and financial assets.

Cash flow used for financing activities increased to CHF 4,320 million in 1999 from CHF 3,213 million in 1998 due to the cash spent on the acquisition of treasury Shares of CHF 1,919 million, compared to proceeds from sale of CHF 722 million in 1998. In 1999, CHF 466 million was spent reducing debt compared to CHF 2.3 billion in 1998. In 1998, cash flow used for financing was CHF 832 million more than in 1997. This increase primarily arose from CHF 343 million of higher dividend payments and the non-recurrence of the CSC advance repayment and debt transfer which had occurred in 1997.

Overall net liquidity (cash, cash equivalents and marketable securities less financial debt) at December 31, 1999 compared to at December 31, 1998 has increased by CHF 1,914 million to CHF 12,678 million. At December 31, 1998, the Group's net liquidity increased by CHF 3,592 million over 1997 to CHF 10,764 million.

Free cash flow (defined as cash flow from operating activities minus net investment in tangible fixed, intangible and financial assets minus dividends paid to third parties) went up by CHF 974 million to

CHF 3.5 billion in 1999, principally due to the CHF 1.0 billion increase of cash flow from operations, which offset CHF 272 million in higher dividend payments. In 1998, free cash flow increased to CHF 2,613 million from CHF 1,677 million in 1997, primarily as a result of the CHF 1,288 million increase in cash flow from operating activities.

Novartis' gross capital expenditure on tangible fixed assets at average rates of exchange for the 1999 fiscal year totaled CHF 1,371 million, compared to CHF 1,577 million in 1998. This level of capital expenditure reflects the ongoing investment in production and research and development facilities. Novartis intends to maintain spending at 1999 levels in 2000. The Group expects to fund these expenditures with internally generated resources.

The Group has entered into long-term research agreements with various institutions where the Group will fund various research projects in the future totalling CHF 1,630 million in the aggregate at December 31, 1999. (See note 28 to the consolidated financial statements.)

**Exchange Rate Exposure and Risk Management**

Novartis transacts its business in many currencies other than the Swiss franc. In 1999, 42% of sales were generated in U.S. dollars, 26% in euro, 6% in Swiss francs, 7% in Japanese yen and 19% in other currencies. In 1998, 43% of the Group's sales were generated in U.S. dollars, 27% in euro, 6% in Swiss francs, 6% in Japanese yen and 18% in other currencies.

In 1999, 31% of the Group's operating costs were generated in U.S. dollars, 23% in euro, 23% in Swiss francs, 5% in Japanese yen, and 18% in other currencies. In 1998, 31% of such operating costs were generated in U.S. dollars, 25% in euro, 23% in Swiss francs, 4% in Japanese yen and 17% in other currencies.

As a result of the Group's foreign currency exposure, exchange rate fluctuations have a significant impact in the form of both translation risk and transaction risk on the Group's income statement. Translation risk is the risk that the Group's 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 currency structure of the Group's costs and liabilities deviates to some extent from the currency structure of the Group's sales proceeds and assets.

On average in 1999, the Swiss franc was weaker against the U.S. dollar and the Japanese yen, yet remained even with the major European currencies. The positive currency effect on sales growth was 3% and the positive impact on operating income was 2%.

See "Item 9A. Quantitative and Qualitative Disclosures About Market Risk" and "Item 18. Financial Statements—Note 1" for further information.

***Share repurchase program***

On August 27, 1999, Novartis announced its intention to repurchase Shares in the open market for an amount of up to CHF 4 billion over an undefined period. The program will be wholly financed with Novartis' surplus liquidity. It is anticipated that the acquired Shares will be kept as treasury stock. Up to December 31, 1999, the Novartis Group increased its holding of treasury Shares according to IAS by 740,000 to 6.5 million Shares, which is 9.0% of the total number of Shares.

***One class of Shares***

Novartis simplified its Share structure by converting all existing bearer Shares into registered Shares on a one-to-one basis from May 3, 1999 to June 30, 1999. Each of the 8,071,868 existing bearer Shares was converted into one registered Share, bringing the total number of registered Shares to 72,130,117.

***Introduction of new accounting policies***

In 1999, Novartis adopted several important International Accounting Standards (IAS) such as those on Employee Benefits, Presentation of Financial Statements, Discontinuing Operations and Consolidation of Special Purpose Entities. In 2000 Novartis will adopt the new standards on Impairment of Assets, Provisions and Intangible Assets and in 2001 a new standard on the recognition and measurement of Financial Instruments is due for implementation.

The impact of adopting the new standards in 1999 has been principally in a one-off increase of equity of CHF 1.1 billion due to the adoption of the employee benefit standard and the consolidation of CHF 223 million (1998: CHF 181 million) of additional research and development expenses performed by entities that were previously considered related parties. This expenditure has largely been offset by additional financial income. Consolidation of these entities for IAS purposes has also increased the holding of treasury Shares by 1.9 million and 2.1 million at December 31, 1999 and 1998 respectively. This has resulted in a restatement of the 1998 earnings per Share from CHF 89 per Share to CHF 91 per Share.

***Introduction of the Euro***

On January 1, 1999, the euro was introduced in 11 member-states of the EU participating in the European Monetary Union as a common legal currency alongside the national currencies (each, a "legacy currency") of the participating countries.

The conversion rates between the euro and the legacy currencies are fixed. From January 1, 1999 through January 1, 2002, the participating countries are also scheduled to maintain their legacy currencies as the legal tender for goods and services. Beginning January 1, 2002, new euro-denominated bills and coins will be issued, and legacy currencies must be withdrawn from circulation no later than July 1, 2002.

Novartis established task forces in each of the participating countries to plan, coordinate and implement all measures necessary for the transition to the euro. Each task force reports directly to the Group's treasurer. Novartis implemented dual currency reporting (legacy currencies and euro) on January 1, 2000. Novartis did not experience, and does not expect to experience, any operational or technological difficulties with regard to the introduction of the euro.

Novartis believes that the introduction of the euro will reduce its 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 U.S. dollar or Japanese yen or other currencies outside the European Monetary Union will not be changed by the introduction of the euro and will depend on actual exposure at the time of risk assessment.

***Year 2000***

Novartis' companies throughout the world coped with the changeover with only minor problems. Systems which, as a precautionary measure, had been shut down before the New Year were successfully restarted after undergoing extensive tests. Production has resumed in all areas. There were no substantial negative consequences of the change to the new millennium for Novartis customers or businesses. The Group's efforts to assure complete Y2K readiness resulted in a smooth rollover into the Year 2000 for our customers and other stakeholders.

**Item 9A. Quantitative and Qualitative Disclosures About Market Risk**

| | *Local Currencies* | *CHF* |
|---|---|---|
| **Growth 1999 and currency contribution:** | | |
| Sales | 0% | 2% |
| Operating Income | 4% | 6% |
| Net income | 9% | 11% |

| | *Sales* | *Costs* |
|---|---|---|
| **Sales and operating costs by currencies:** | | |
| $ | 42% | 31% |
| Euro | 26% | 23% |
| CHF | 6% | 23% |
| Yen | 7% | 5% |
| Other | 19% | 18% |

| | *Liquid funds* | *Financial debt* |
|---|---|---|
| **Liquid funds and financial debt by currencies:** | | |
| $ | 49% | 38% |
| Euro | 20% | 9% |
| CHF | 27% | 29% |
| Yen | 2% | 9% |
| Other | 2% | 15% |

| | *Local Currencies* | *CHF* |
|---|---|---|
| **Growth 1998 and currency contribution:** | | |
| Sales | 5% | 2% |
| Operating Income | 6% | 4% |
| Net income | 17% | 15% |

| | *Sales* | *Costs* |
|---|---|---|
| **Sales and operating costs by currencies:** | | |
| $ | 43% | 31% |
| Euro | 27% | 25% |
| CHF | 6% | 23% |
| Yen | 6% | 4% |
| Other | 18% | 17% |

| | *Liquid funds* | *Financial debt* |
|---|---|---|
| **Liquid funds and financial debt by currencies:** | | |
| $ | 49% | 37% |
| Euro | 17% | 21% |
| CHF | 34% | 29% |
| Other | 0% | 13% |

**Market Risk**

Novartis is exposed to market risk, primarily related to foreign exchange, interest rates and market value of the investments of liquid funds. Management actively monitors these exposures. To manage the volatility relating to these exposures, Novartis 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 investments of liquid funds. It is Novartis' policy and practice to use derivative financial instruments to manage exposures and to enhance the yield on the investment of liquid funds. Novartis does not enter any financial transactions containing a risk that cannot be quantified at the time the transaction is concluded; *i.e.*, it does not sell short. Novartis only sells existing assets in transactions and future transactions (in the case of anticipatory hedges) which it confidently expects it will have in the future based on past experience. In the case of liquid funds, it writes call options on assets it has or it writes put options on positions it wants to acquire and has the liquidity to acquire. Novartis, therefore, expects that any loss in value for those instruments generally would be offset by increases in the value of the underlying transactions.

***Foreign exchange rates:*** Novartis uses the Swiss franc as its reporting currency and is, therefore, exposed to foreign exchange movements, primarily in U.S., 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. Novartis uses forward contracts and foreign currency option contracts to hedge certain anticipated net revenues in foreign currencies. At December 31, 1999, Novartis had long and short forward exchange/option contracts with U.S. dollar equivalent notional principal values of CHF 4.3 billion and CHF 19.1 billion, respectively. At December 31, 1998, Novartis had long and short forward exchange/option contracts with U.S. dollar equivalent notional principal values of CHF 4.0 billion and CHF 14.5 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 will compensate the change due to currency movements. For this reason, Novartis does not normally hedge the net investments in foreign countries.

***Commodities:*** Novartis 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 not more than 10% of that margin and thus below materiality levels. Accordingly, Novartis does not enter into commodity future, forward and option contracts to manage fluctuations in prices of anticipated purchases.

***Interest rates:*** Novartis manages its net exposure to interest rate risk through the proportion of fixed rate debt and variable rate debt in its total debt portfolio. To manage this mix, Novartis 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. The Group's percentage of fixed rate debt to total financial debt was 28% and 32% at December 31, 1999 and 1998, respectively.

***Equity risk:*** Novartis purchases equities as investments of its liquid funds. As a policy, it limits its holdings in another company to 5% of its liquid funds. Companies to be invested in are thoroughly analyzed for their past financial track record (mainly cash flow return on investment), their market potential, their management and their competitors. Call options are written on stocks which Novartis has and put options are written on equities which Novartis wants to buy and for which cash has been reserved.

Use of the above-mentioned derivative financial instruments has not had a material impact on the Group's financial position at December 31, 1999 and 1998 or the Group's results of operations for the year ended December 31, 1999.

***Value at risk:*** Novartis uses a value at risk ("VAR") computation to estimate the potential ten-day loss in the fair value of its interest rate-sensitive financial instruments, the loss in pre-tax earnings of its foreign currency price-sensitive derivative financial instruments as well as the potential ten-day loss of its equity holdings. Novartis uses 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 the Group's debt; short-term and long-term investments; foreign currency forwards, swaps and options. 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. Novartis uses a "Delta Normal" model to determine the observed interrelationships between movements in interest rates, stock markets and various currencies. These interrelationships 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 the Group's 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 its equity holdings, as calculated in the VAR model, follow:

| | *At December 31, 1999* |
|---|---|
| | *(CHF million)* |
| Instruments sensitive to foreign currency rates | 41.1 |
| Instruments sensitive to equity market moves | 79.8 |
| Instruments sensitive to interest rates | 79.9 |
| Total all Instruments | 123.4 |

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 Novartis, nor does it consider the effect of favorable changes in market rates. Novartis cannot predict actual future movements in such market rates and does 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 its future results of operations or financial position.

In addition to these VAR analyses, Novartis uses stress-testing techniques. Such stress-testing is aimed at reflecting a worst case scenario. For those calculations, Novartis uses the worst move during a period of six months over the past 20 years in each category. For 1999, the worse case loss scenario was configured as follows:

| | |
|---|---|
| Bond portfolio | CHF 1,143 million |
| Money market and linked financial instruments | CHF 206 million |
| Equities | CHF 591 million |
| Foreign Exchange Risks | CHF 314 million |
| Total: | CHF 2,254 million |

In its risk analysis, Novartis considers 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 moves in the future.

The major financial risks are managed centrally by the central treasury group. Only residual risks and some currency risks are managed in the subsidiaries. The collective amount of the residual risks is, however, below 10% of the global risks.

The Company has a written Treasury Policy, has implemented a strict segregation of front office and back office controls and does random checks of its positions with the counterparties. In addition, internal audits on the information management of the treasury function are performed in regular intervals.

**Item 10. Directors and Executive Officers of Registrant**

The Board of Directors of the Company has the duties set forth under the Swiss Code of Obligations. The Board is ultimately responsible for the policies and management of the corporation and establishes the strategic, accounting, organizational and financial policies to be followed by the corporation. The Board further appoints the executive officers and the authorized signatories of the corporation and supervises the management of the corporation. Moreover, the Board is entrusted with preparing shareholders' meetings and carrying out shareholders' resolutions. The Board may, pursuant to its regulations, delegate the conduct of the day-to-day business operations to management.

Certain information regarding the directors and executive officers of the Company is set out below.

**Directors**

***Dr. Daniel Vasella (Age 46).*** Chairman of the Board of Directors, Chief Executive Officer of the Company and Head of the Executive Committee. Dr. Vasella assumed the position of Chairman in April 1999, having served as President, Chief Executive Officer and Head of the Executive Committee since the Merger in December 1996. From 1995 until the Merger, Dr. Vasella was a member of the Sandoz Group Executive Committee and served as Chief Executive Officer of Sandoz Pharma Ltd. In that position he was responsible for managing all pharmaceutical activities of the Sandoz Group worldwide. Prior to his appointment as Chief Executive Officer of Sandoz Pharma Ltd., Dr. Vasella was Chief Operating Officer of Sandoz Pharma Ltd. Prior to that, he was Senior Vice President and Head of Worldwide Development, where he was responsible for the separation of research and development functions and the establishment of a matrix organization of international project teams and worldwide line functions. In 1993, Dr. Vasella was Head of Corporate Marketing of the former Sandoz Group. Dr. Vasella currently is a member of the Board of Directors of Credit Suisse Group, the Supervisory Board of Siemens AG in Munich, Germany and the International Board of Governors of the Press Center of 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 Board of INSEAD (Institute Européen d'Administration des Affaires, *i.e.,* the European Institute for Business Administration), IMD (International Institute of Management Development) and a member of the Global Leaders for Tomorrow Group 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.

***Hans-Jörg Rudloff (Age 59).*** Vice Chairman of the Board of Directors of the Company. Mr. Rudloff has served in this position since the Merger in December 1996. 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). He also serves on the Advisory Board of the Landeskreditbank in Baden

Württemberg. Mr. Rudloff studied economics at the Universities of Berne and Grenoble and graduated in 1965.

***Prof. Dr. Helmut Sihler (Age 69).*** Vice Chairman of the Board of the Company and a member of the Chairman's Committee. He has served in these positions since the Merger in December 1996. 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 Supervisory Boards of Deutsche Telekom AG, Bonn, Germany and Dr. Ing. H.c. F. Porsche AG in Stuttgart, 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.

***Heini Lippuner (Age 66).*** Director of the Company 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. From 1986 to 1996, he was a member of the Executive Committee as well as Chief Operating Officer of the CIBA-Geigy Group. Mr. Lippuner is a member of the Boards of Directors of Credit Suisse Group, Bühler AG in Uzwil, Switzerland and Winterthur Insurance Ltd. in Winterthur, Switzerland. He also serves in a number of industry organizations.

***Birgit Breuel (Age 62).*** Director of the Company. 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. Since 1995, Mrs. Breuel has been acting as the General Commissioner and since 1997, she has been a member of the Executive Board for 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 GmbH in Frankfurt, Germany. Mrs. Breuel studied politics at the Universities of Hamburg, Oxford and Geneva.

***Prof. Dr. Peter Burckhardt (Age 61).*** Director of the Company. Prof. Burckhardt has held this position since the Merger in December 1996. 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 also serves as the Head of Medical Service at the University Hospital of Lausanne 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 60).*** Director of the Company. Dr. Doerig has held this position since the Merger in December 1996. Since 1998, Dr. Doerig has served as Vice Chairman of the Executive Board and Chief Risk Officer of Credit Suisse Group. With the merger of the former Credit Suisse International and the former CS First Boston in 1997, he became Chief Executive Officer of Credit Suisse First Boston in Zurich. In 1996, he was appointed President of the General Management of Credit Suisse in Zurich, in view of the Credit Suisse Group restructuring. From 1993 to 1996, Dr. Doerig served as full-time Vice Chairman of the Board of Credit Suisse, heading the Credit and Finance Committee as well as the Audit Committee of the Board. Dr. Doerig is also Vice Chairman of the Board of the University of Zurich. In addition, he is the author of various publications and lectures at the University of Zurich and the Swiss

Banking School in Zurich. Dr. Doerig studied economics and law at the University of St. Gallen and graduated with a Ph.D. in economics.

***Walter G. Frehner (Age 66).*** Director of the Company. Mr. Frehner has served as a Director since the Merger in 1996, and prior to that, as Director of CIBA-Geigy AG since 1994. 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 also a Director of Schindler Holding AG and Vice Chairman of the insurance company Bâloise Holding AG, in Basel, Switzerland.

***William W. George (Age 57).*** Director of the Company. Mr. George has held this position since May 1999. 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 also a member of the Boards of Directors of Dayton Hudson, Imitation, and Allina Health Systems. Mr. George received his BIE with high honors from Georgia Tech in 1964 and his MBA with high distinction from Harvard University 1966.

***Alexandre F. Jetzer (Age 59).*** Director of the Company. Mr. Jetzer has held this position since the Merger in 1996. From the Merger until 1999, he was a member of the Executive Committee and Head of International Coordination, Legal & Taxes of Novartis. From May 1995 to December 1996, he was Vice Chairman and Chief Executive Officer of Sandoz Corporation in East Hanover, NJ and Chief Executive Officer of Sandoz Pharmaceuticals Corporation in New York, NY. 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 52).*** Director of the Company. Mr. Landolt has held this position since the Merger, and prior to that, was a Director of Sandoz AG since 1986. 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. Upon closing of the Spin-off, Mr. Landolt will become a director of Syngenta.

***Prof. Dr. Rolf M. Zinkernagel (Age 56).*** Director of the Company. Prof. Zinkernagel has held this position since May 1999. 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, the International Society for Antiviral Research, the Scientific Advisory Board of Cytos in Zurich, CTL Toronto/Delaware and Lombard & Odier bank in Zurich. Prof. Zinkernagel graduated from the University of Basel with a Ph.D. in medicine in 1970.

**Executive Officers**

***Dr. Daniel Vasella (Age 46).*** Chief Executive Officer of Novartis and Head of the Executive Committee. For further information, see "—Directors".

***Dr. Raymund Breu (Age 54).*** Chief Financial Officer and a member of the Executive Committee. Dr. Breu has held these positions since the Merger in December 1996. Dr. Breu was Head of Group Finance and a member of the Sandoz Group Executive Committee from 1993 until December 1996. Prior

to that, he served as Group Treasurer of the former Sandoz AG. Dr. Breu graduated from the Swiss Federal Institute of Technology in Zurich with a Ph.D. in mathematics in 1971.

***Dr. Hans Kindler (Age 61).*** Head of Novartis Switzerland and of Group Technology and a member of the Executive Committee. Dr. Kindler has held these positions since the Merger in December 1996. From 1990 until 1996, he served as a member of the Executive Committee of the former CIBA-Geigy AG where he was responsible for personnel, production and technology, as well as for safety and environmental protection. Dr. Kindler graduated from the Swiss Federal Institute of Technology in Zurich with a degree in chemical engineering in 1962, followed by a Ph.D. in organic chemistry in 1965. Upon closing of the Spin-off, Mr. Kindler will also become a director of Syngenta.

***Dr. A. N. "Jerry" Karabelas (Age 47).*** Head of Novartis' Healthcare Division and Chief Executive Officer of its pharmaceutical operations, as well as a member of the Executive Committee. Dr. Karabelas has held these positions since January 1998. His responsibilities include overseeing the entire Healthcare Division, *i.e.,* Pharmaceuticals, Eyecare Products and Medicines, (CIBA Vision) and Generics. From 1981 until 1997, Dr. Karabelas held various positions of increasing responsibility with SmithKline Beecham Pharmaceuticals: in 1997 he was Executive Vice President with worldwide responsibilities; from 1995 until 1997 he was a member of the Executive Management Team; from 1994 to 1996 he was Head of Diversified Pharmaceutical Services and President of U.S. Pharmaceuticals; and from 1993 to 1994 he was President of North American Pharmaceuticals. In addition to his responsibilities at Novartis, Dr. Karabelas serves on the Boards of Directors of the Philadelphia College of Pharmacy and Science and the Fox Chase Cancer Center. He is also a member of the Scientific Advisory Committee of the Massachusetts General Hospital. Dr. Karabelas graduated from the University of New Hampshire with a degree in biochemistry and earned a Ph.D. in pharmacokinetics from the Massachusetts College of Pharmacy. He also attended business school at Boston University and was a graduate student at the Massachusetts Institute of Technology.

***Thomas Ebeling (Age 41).*** Chief Operating Officer of Novartis Pharmaceuticals (since December 1999) and member of the Executive Committee (since September 1998). From September 1998 to December 1999, Mr. Ebeling was Chief Executive Officer of Novartis' Consumer Health Division. 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 and was responsible for the management of three business units: Medical Nutrition, Health and Functional Nutrition and Consumer Retail Brands. 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, responsible for the restructuring and streamlining of the organization and the introduction of several new products; 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.

***Al Piergallini (Age 53).*** Chief Executive Officer of Novartis' Consumer Health Division and member of the Executive Committee. Mr. Piergallini assumed these positions in December 1999. Prior to that, he was President and Chief Executive Officer of Novartis Consumer Health North America. Before that, he was Chairman, President and Chief Executive Officer of Gerber Products Company. He joined Gerber in 1989 as President and Chief Operating Officer. Mr. Piergallini has more than 30 years of marketing, sales and operating experience while leading consumer goods companies. He holds an MBA in Finance and Marketing from the University of Chicago and a B.A. in Economics from Lafayette College.

***Heinz Imhof (Age 57).*** Head of Novartis' Agribusiness Division and a member of the Executive Committee. Mr. Imhof has held these positions since June 1999. As Head of Novartis' Agribusiness Division, he is responsible for overseeing Crop Protection, Seeds and Animal Health. Since the Merger he has been Head of Novartis Seeds. From 1995 until the Merger, he served as a Member of the Sandoz Group Executive Committee and was responsible for Agribusiness/MBT. From 1993 to 1995, he was

Chairman and Chief Executive Officer of Sandoz Corporation in New York and was responsible for all U.S. affiliates of the Sandoz Group. Additionally, he was Chairman and Chief Executive Officer of Sandoz Pharmaceuticals Corporation in East Hanover, NJ. Mr. Imhof graduated from the Swiss Federal Institute of Technology in Zurich with a degree in agronomy. Upon closing of the Spin-off, Mr. Imhof will no longer hold any functions with Novartis, but will serve as the Chairman of Syngenta.

***Dr. Urs Bärlocher (Age 57).*** Head of International Coordination, Legal and Taxes and Corporate Security as well as a member of the Executive Committee. Mr. Bärlocher has held these positions since June 1999. From December 1996 until May 1999, he was Head of Corporate Legal, Taxes and Insurance. From 1995 until the Merger, Dr. Bärlocher 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 47).*** Head of Human Resources since May 1998 and a member of the 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 ISMP from Harvard Business School.

***Dr. John Atkin (Age 46).*** Chief Executive Officer of Novartis Crop Protection. Dr. Atkin has held this position since June 1999. From January to May 1999, he served as Chief Operating Officer of Novartis Crop Protection. From February 1997 to July 1998, Dr. Atkin was Head of Insecticides and Patron for Asia (area responsibility), and thereafter until December 1998 he was Head of Product Portfolio Management of Novartis Crop Protection. Dr. Atkin was General Manager of Sandoz Agro France and before that, Head of Sandoz Agro Northern Europe until 1996. Earlier appointments were in crop protection with FMC Europe in Brussels (marketing and sales manager), Rhône Poulenc (product development) and the British Ministry for Agriculture. Dr. Atkin graduated from the University of Newcastle-upon-Tyne with a Ph.D. and a B.S. degree in agricultural zoology in 1979. Upon closing of the Spin-off, Dr. Atkin will no longer hold any functions with Novartis, but will become the Chief Operating Officer of Syngenta's crop protection business.

***Dr. Glen Bradley (Age 55).*** Chief Executive Officer of CIBA Vision. Dr. Bradley has held this position since 1990. Dr. Bradley is responsible for all aspects of CIBA Vision's worldwide contact lens and lens care operations, as well as its ophthalmic pharmaceuticals business. Prior to becoming the Chief Executive Officer of CIBA Vision, Dr. Bradley headed the U.S. 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 52).*** Head of Novartis Animal Health. Mr. Gürtler has held this position since the Merger in December 1996. From 1990 to 1996, he was the Head of the Animal Health Sector of the former CIBA-Geigy Group. Before that, he had served as the Head of the former CIBA-Geigy's Animal Health Sector in the Northern hemisphere for eight years. Mr. Gürtler graduated with a diploma in commerce in 1966 and joined CIBA-Geigy AG in 1969.

***Dr. Oswald Sellemond (Age 66).*** Chief Executive Officer of Novartis Generics. Dr. Sellemond has held this position since the Merger in December 1996. Since 1990, he has been Chief Executive Officer of Biochemie GmbH in Kundl, Austria, formerly a division of the Sandoz Group, and in 1999 he became Chairman of Biochemie GmbH. From 1979 to 1989, he served as a member of the Executive Committee of Biochemie GmbH in Kundl, Austria where he was responsible for technical operations, safety and

environmental protection and quality control. Dr. Sellemond received a Ph.D. in technical chemistry in 1957 from the University for Technical Sciences in Graz, Austria.

None of the above officers has any family relationship with any Director or any other executive officer of the Company. 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 executive officers were appointed pursuant to an arrangement or understanding between such officer and the Board or any member or members thereof.

**Item 11. Compensation of Directors and Executive Officers**

The aggregate amount of compensation expensed in 1999 by the Group in respect of its current directors and executive officers, including current executive officers who will leave the employ of Novartis upon closing of the Spin-off into Syngenta, for services in all capacities was CHF 21.630 million, of which CHF 12.119 million was salaries and CHF 6.860 million for cash bonuses (to executive officers only). CHF 2.651 million was set aside for pension, retirement and similar non-cash benefits.

In 1997, the Compensation Committee approved the Novartis Stock Appreciation Rights Plans ("SAR-Plan") for selected employees. Pursuant to the SAR-Plan a total of 1,503,630 Stock Appreciation Rights ("SARs") were granted on April 9, 1999, to approximately 750 employees of the Novartis Group, mainly to key employees in the U.S. Out of that number of SARs, the current executive officers as a group were granted a total of 58,760 SARs in 1999. All SARs were granted free of charge and have a strike price of U.S.$ 84.25. The SARs may be exercised from April 9, 2002 to April 9, 2009 at 4 p.m. Eastern Standard Time (NYSE Close). If exercised, the SAR-Holders will receive the difference in U.S. dollars between the exercise price of $84.25 and the fair market value of the Novartis ADRs as reported by the Company's Depositary, Morgan Guaranty Trust Company of New York, at the close of business on the date an SAR-Holder exercises his/her SARs. As of April 28, 2000, the fair market value of a Novartis ADR evidencing one ADS stood at $69.69. With effect as of the consummation of the Spin-Off, the strike price of the SARs will be adjusted to reflect the decreased value of the Novartis ADRs due to such Spin-Off.

In addition, all current executive officers as a group were granted an aggregate of 10,087 Novas08 Options in 1999 under the Novartis Stock Option Plan. For further information on the Novartis Stock Option Plan, see "Item 12. Options to Purchase Securities from Registrant or Subsidiaries—Novartis Stock Option Plan".

Finally, the executive officers as a group were granted, free of charge, an aggregate of 370 Shares of the Company in 1999, which had a fair market value as of December 31, 1999 of CHF 865,060. These Shares vest on April 9, 2002. If an executive officer leaves the employ of Novartis prior to such date, his free Shares will be forfeited. However, free Shares granted to current executive officers of the Company who as of consummation of the Spin-Off will be employed by Syngenta will not be forfeited.

In 1999, directors of the Company were neither granted any Novas08 Options under the Novartis Stock Option Plan, nor any other stock options, nor any SARs, nor any Shares free of charge.

**Item 12. Options to Purchase Securities From Registrant or Subsidiaries**

**Sandoz Options**

The former Sandoz AG implemented a Stock Option Plan in 1990 according to which executive officers and other selected employees of Sandoz were granted options to purchase shares of Sandoz AG ("Sandoz Options"). As of the Merger in December 1996, the Sandoz Options entitle the holders thereof to purchase Shares of the Company at a pre-determined price during the exercise period of the Options. The Sandoz Options were granted free of charge. The Shares delivered upon conversion of the Sandoz Options will not be newly issued Shares, but will be issued and outstanding Shares which have been

deposited by the Novartis Mitarbeiterbeteiligungsstiftung (a foundation legally independent from Novartis under Swiss law which, for purposes of the consolidated accounts in this Registration Statement, has been included as a U.S. GAAP adjustment in the reconciliation from IAS to U.S. GAAP) with the depositary bank for the Sandoz Options. The depositary bank must remit the net proceeds received upon conversion of the Sandoz Options to the Novartis Mitarbeiterbeteiligungsstiftung. Under the Sandoz stock option plan, a total of 42,014 Sandoz Options were granted in the years 1990 to 1996.

All of the Sandoz Options granted in 1990 to 1993 were non-tradable options and have been exercised. The Sandoz Options which were granted in the years 1994 to 1996 are tradable, *i.e.*, the holders can either convert them for Shares or sell them to a third party. The Sandoz Options granted in 1994 may be exercised until May 30, 2000, and have an exercise price of CHF 727 per Share. The 1995 Sandoz Options can be exercised until May 12, 2001 and have an exercise price of CHF 1,237. The 1996 Sandoz Options are exercisable until December 21, 2001, and have an exercise price of CHF 1,432. As of April 28, 2000, there remain 3,395 Sandoz Options outstanding; 2,336 of them are held by current executive officers of the Company. The terms of the Sandoz Options will be adjusted effective as of the closing of the Spin-Off to reflect the decreased value of the Shares due to such Spin-Off. All Sandoz-Options held by persons who will be employed by Syngenta will remain exercisable.

**CIBA Options**

In July 1991, the former CIBA-Geigy AG sold options to the public for CHF 2,500 each (the "CIBA Options"). Each CIBA Option currently entitles the holder to five Shares of the Company until July 19, 2001. Upon conversion of a CIBA Option, each optionee will additionally be paid CHF 250. As of April 28, 2000, only one CIBA Option remains outstanding, which is not held by a director or executive officer of the Company. The Shares delivered upon conversion of the CIBA Options will not be newly issued Shares but will be issued and outstanding Shares. The Shares will be delivered by CIBA Beteiligungsstiftung, (a foundation legally independent from Novartis under Swiss law which, for purposes of the consolidated accounts in this Registration Statement, has been included as a U.S. GAAP adjustment in the reconciliation from IAS to U.S. GAAP). Upon closing of the Spin-Off, the terms of the CIBA Options will be adjusted to reflect the decreased value of the Shares due to such Spin-Off. All CIBA Options held by persons who will be employed by Syngenta will remain exercisable.

**Novartis Stock Option Plan**

As part of its compensation strategy, Novartis 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 Shares of the Company. Currently there are approximately 970 Participants. The Participants are determined each year by the Stock Option Committee. 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 stock price of the Shares increases over time, and thus provide the Participants with a long-term incentive to improve the Group's profitability and success. If a Participant voluntarily leaves the employ of Novartis, options not yet vested will generally forfeit. The options under the Novartis Stock Option Plan are granted free of charge and entitle the holder thereof to exercise the options during the exercise period, *i.e.*, after the lapse of a vesting period until the end of the term of the options. The options may be exercised either by converting them for one Share per option against payment of a pre-determined exercise price or by selling the options to the market maker or a third party. Novartis is only informed if the options are converted, but not if a Participant sells his/her options to the market maker or a third party. If options are converted, the market maker will deliver to the Participant such number of Shares as options have been converted against 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 1997 Novartis Stock Option Plan, an aggregate of 41,502 options ("Novas07 Options") were granted to all Participants in June 1998. Of that, an aggregate of 8,661 Novas07 Options were granted to the Company's current executive officers. The Novas07 Options have an exercise price of currently CHF 1,700 and may be converted at any time between April 8, 2000 and January 15, 2007. Since the Novas07 Options are to be exercised vis-à-vis a bank acting as the market maker, the Company knows the number of options exercised only at the end of the exercise period.

Under the 1998 Novartis Stock Option Plan, an aggregate of 40,161 options ("Novas08 Options") were granted to all Participants in April 1999. Of that, an aggregate of 10,087 Novas08 Options were granted to the Company's current executive officers. These Novas08 Options have an exercise price of currently CHF 2,800 and may be converted at any time between April 16, 2001 and January 16, 2008. As of April 28, 2000, no Novas08 Options have been exercised and a total of 39,893 Novas08 options were outstanding (the difference being due to Novas08 Options which were forfeited), 10,087 of which were held by the Company's current executive officers.

Under the 1999 Novartis Stock Option Plan, an aggregate of 59,289 options ("Novas09 Options") were granted to all Participants in March 2000. The Novas09 Options have an exercise price of CHF 2,100 and may be converted at any time between March 8, 2002 and March 10, 2009. Of the 59,289 Novas09 Options granted to all Participants, 17,609 were held by the Company's current directors and executive officers.

Upon closing of the Spin-off, the exercise price of the Novas07, Novas08 and Novas09 Options, or the number of Shares subject to such Options, will be adjusted to reflect the decreased value of the Shares due to such Spin-off. The number of Participants will decrease to approximately 810. All Novas07, Novas08 and Novas09 Options held by Participants who will be employed by Syngenta after the closing of the Spin-off will remain exercisable after the lapse of the vesting period.

**Novartis Employee Ownership Plan**

Pursuant to the Novartis Employee Ownership Plan, which was approved by the Board of Directors in 1998, all employees of Swiss subsidiaries of the Company are entitled to purchase three Shares at a predetermined discount price of currently CHF 500 per Share after each full year of service. Employees are required to immediately buy the Shares to which they have become entitled. During 1999 and 1998, an aggregate of 38,860 and 40,582 Shares, respectively were acquired by employees under this plan.

**Additional Stock Options**

On December 1, 1997, the Company granted a total of 3,900 stock options to its current executive officers. These stock options were granted free of charge and will vest on November 30, 2000. They are not tradable and may be converted for one Share per stock option until November 30, 2007 at an exercise price of CHF 2,280 per Share. As of April 28, 2000, all of the 3,900 stock options held by the Company's current executive officers were still outstanding. Upon closing of the Spin-Off, the terms (exercise price or number of Shares subject to such options) will be adjusted to reflect the decreased value of the Shares due to such Spin-Off. All such additional stock options held by persons who will be employed by Syngenta will remain exercisable.

**Convertible Bonds**

On October 6, 1995, Sandoz Capital BVI Ltd. (now Novartis Capital Ltd., "Novartis Capital"), Tortola, British Virgin Islands, an indirectly wholly owned subsidiary of the Company, 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 9.366 Shares of the Company. The number of Shares deliverable upon conversion is subject to certain adjustments under certain circumstances. Fractions of Shares will not be delivered on conversion but cash payments in Swiss francs

based on the then current market price of the Shares will be made in respect thereof. The bonds may be converted up to and including September 30, 2002. As of April 25, 2000, bonds in the amount of $729.45 million entitling their holders to a maximum of 683,203 Shares were outstanding. Upon closing of the Spin-Off, the terms of the bonds will be adjusted to reflect the decreased value of the Shares due to such Spin-Off. All bonds will remain exercisable.

On October 23, 1995, Novartis Capital issued a 1¼% Convertible Bond Guaranteed by Sandoz AG due 2002 in the amount of CHF 750 million. Each bond in the principal amount of CHF 5,000 is convertible into 5 Shares of the Company up to and including October 9, 2002. In case of a conversion, each bondholder will also receive an amount of CHF 289.95 per bond in cash. The conversion terms are subject to certain adjustments under certain circumstances. As of April 25, 2000, bonds in the amount of CHF 52.515 million entitling their holders to a maximum of 52,515 Shares were outstanding. Upon closing of the Spin-Off, the terms of the bonds will be adjusted to reflect the decreased value of the Shares due to such Spin-Off. All bonds will remain exercisable.

**Item 13. Interest of Management in Certain Transactions**

N/A

## Part II

### Item 14. Description of Securities to be Registered

**Shares**

Set forth below is a summary of the material provisions of the Company's Articles of Association (the "Articles") and the Swiss Code of Obligations relating to the Shares. This description does not purport to be complete and is qualified in its entirety by reference to Swiss statutory law and to the Articles.

The Shares are registered Shares with a nominal value of CHF 20 each. The Shares are fully paid-up and non-assessable.

Each Share carries one vote at the shareholders' meeting of the Company. Voting rights may be exercised only after a shareholder has been recorded in the Share register of the Company as a shareholder with voting rights. Registration with voting rights is subject to certain restrictions. See "—Transfer of Shares" and "—Shareholders' Meeting."

The Company may issue certificates representing several Shares which may be exchanged at any time for smaller portions or individual Share certificates. With the consent of the owner of the Shares, the Company may renounce the printing and delivery of Share certificates.

***Capital Structure***

The Share capital of the Company is CHF 1,442,602,340 divided into 72,130,117 fully paid-up registered Shares, with a nominal value of CHF 20 each.

As of December 31, 1999, the Group (including some foundations which are independent from Novartis under Swiss company law, but which, for purposes of this Registration Statement, have been included as a U.S. GAAP adjustment in the reconciliation from IAS to U.S. GAAP) hold 8,755,277 Shares in treasury, out of which 4,576,504 Shares qualify as treasury Shares in the sense of the Swiss Code of Obligations. See "—Repurchase of Shares".

***Transfer of Shares***

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 is effected by corresponding entry in the books of a bank or depository institution following an agreement in writing by the selling shareholder and notification of such assignment to the Company by the bank or the depository institution. In each case, the transfer of Shares further requires that the purchaser file a Share registration form in order to be registered in the Share register of the Company as a shareholder with voting rights. Failing such registration, the purchaser may not vote at or participate in shareholders' meetings.

No shareholder may be registered as a shareholder with voting rights in respect of more than 2% of the Share capital as set forth in the commercial register. If a shareholder purchases more than 2% of Novartis' Shares, such shareholder will be recorded in the Share register for the excess Shares as a shareholder without voting rights. For purposes of this 2% rule, groups of companies and groups of shareholders acting in concert are considered to be one shareholder.

Subject to the foregoing restriction, a shareholder will be registered in the Share register as a shareholder with voting rights upon disclosure of its name, domicile, address and citizenship (in case of legal entities the registered office). However, the Company may decline a registration with voting rights if the shareholder does not explicitly declare that it has acquired the Shares in its own name and for its own account. If the shareholder refuses to make such declaration, it will be registered as a shareholder without voting rights.

The Board of Directors may register nominees with the right to vote in the Share register to the extent of up to 0.5% of the Share capital. Nominees are persons who do not explicitly declare in the request for registration to hold the Shares for their own account and with whom the Board of Directors has entered into a corresponding agreement. Shares held by a nominee that exceed this limit may be registered in the Share register if the nominee discloses the names, addresses and the number of Shares of the persons for whose account it holds 0.5% or more of the Share capital. The Company has agreed, 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 its Share register with voting rights with respect to Shares deposited with the Custodian up to a limit of 5% of the Company's Share capital for the benefit of the holders of ADSs.

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

Subject to the limitation on voting rights described above applicable to shareholders generally, there are no limitations under Swiss law or the Company's Articles on the right of non-Swiss residents or nationals to own or vote Shares.

***Shareholders' Meetings***

Under Swiss law, an annual ordinary shareholders' meeting must be held within six months after the end of the corporation's fiscal 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 Share capital. Shareholders holding Shares with a nominal value of at least CHF 1,000,000 (*i.e.*, 50,000 Shares of the Company) 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 the majority of the votes present at a shareholders' meeting (*i.e.,* abstentions have the effect of votes against the resolution). Shareholders' resolutions requiring a vote by such "absolute majority" include amendments to the Articles, elections of directors and statutory auditors, approval of the annual report and the annual accounts, setting the annual dividend, decisions to discharge directors and management from liability for matters disclosed to the shareholders' meeting, and the ordering of an independent investigation into specific matters proposed to the shareholders' meeting.

A resolution passed at the shareholders' meeting with a supermajority of at least two-thirds of the votes present at such meeting is required for: (1) an alteration of the purpose of the Company; (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 out of equity, by contribution in kind, for the purpose of an acquisition of property and the grant of special rights; (6) a restriction or an elimination of preeemptive rights of shareholders; (7) a dislocation of the place of incorporation; or (8) the dissolution of the Company without liquidation (*e.g.*, by a merger). In addition, the introduction or abolition of any provision in the Articles providing for a supermajority must be resolved in accordance with such supermajority voting requirements.

At shareholders' meetings, shareholders can be represented by proxy. However, such proxy must either be the shareholder's legal representative, another shareholder with the right to vote, a proxy appointed by the Company, an independent representative nominated by the Company, or a depository.

Votes are taken by a show of hands unless the shareholders' meeting resolves to have a ballot or such ballot is ordered by the chairman of the meeting.

***Net Profit and Dividends***

Swiss law requires that at least 5% of the annual net profits of a corporation be retained as general reserves for so long as these reserves amount to less than 20% of the corporation's registered share capital. The articles of a corporation may provide for further mandatory reserves. The Articles of the Company do not contain any such provision for further reserves.

Under Swiss law, dividends may be paid out only if the Company has sufficient distributable retained earnings from previous business years, or if the reserves of the Company are sufficient to allow distribution of a dividend. In either event, dividends may only be paid out after approval by the shareholders' meeting. The Board of Directors may propose that a dividend be paid out, but cannot itself set the dividend. The auditors must confirm that the dividend proposal of the Board conforms with the Swiss Code of Obligations and the Articles. In practice, the shareholders' meeting usually approves the dividend proposal of the Board of Directors. The Board of the Company intends to propose a dividend once a year. See "Item 8. Selected Financial Data—Cash Dividends per Share".

Dividends are usually due and payable immediately after the shareholders' resolution relating to the allocation of retained earnings has been passed. 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 7. Taxation".

***Preemptive Rights***

Under Swiss law, any issuance of shares, whether for cash or non-cash consideration or for no consideration at all, is subject to prior approval of the shareholders' meeting. Shareholders of a Swiss corporation have certain preemptive rights to subscribe for newly issued shares in proportion to the nominal value of the shares they already hold. A resolution adopted at a shareholders' meeting with a supermajority may, however, limit or suspend preemptive rights in certain limited cases.

***Borrowing Power***

Neither Swiss law nor the Articles restrict in any way the Company's power to borrow or raise funds. The decision to borrow funds is taken by or under the direction of the Company's 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 payments made to a shareholder or a director or any other persons associated with them, other than payments at arm's length, must be repaid to the corporation if the shareholder or director was acting in bad faith.

***Repurchase of Shares***

Swiss law limits a corporation's ability to hold or repurchase its own shares. Therefore, the Company and its subsidiaries may only repurchase Shares if the Company has sufficient free reserves to pay the

purchase price, and if the aggregate nominal value of all such Shares held by the Company and its subsidiaries does not exceed 10% of the nominal value of its Share capital. Furthermore, the Company must create a special reserve on its balance sheet in the amount of the repurchase price of the acquired Shares. Such Shares held by the Company or its 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, which requires consolidation for financial reporting purposes of special purpose entities, irrespective of their legal structure, 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.

***Notices***

Notices to shareholders are validly made by publication in the Swiss Official Commercial Gazette. The Board of Directors may designate further means of communication for publishing notices to the shareholders.

Notices required under the listing rules of the SWX will be published in two Swiss newspapers in German and French. The Company or the SWX may also disseminate the relevant information on the online exchange information system.

***Purpose, Duration, Liquidation, Merger***

The business purpose of the Company as stated in the Articles is to hold interests in enterprises, particularly in the area of health care, agriculture, nutrition, specialty chemicals, physics or related areas. The Company may acquire, mortgage, liquidate or sell real estate and intellectual property rights in Switzerland and abroad.

The duration of the Company is unlimited. The Company may be dissolved at any time by a shareholders' resolution. In case of a dissolution by way of liquidation, such resolution requires the approval of the majority of votes present at the shareholders' meeting. In case of a dissolution without liquidation, at least two-thirds of the votes present at the meeting must vote their Shares in favor of such resolution. Dissolution by court is possible if the Company becomes bankrupt or for cause if shareholders holding at least 10% of the registered Share capital so demand. Under Swiss law, any surplus arising out of a liquidation (*i.e.*, after the settlement of all claims of all creditors) is distributed to the shareholders in proportion to the paid-up nominal value of their shares.

A resolution to merge with another corporation may be passed at any time. Such resolution requires 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 voting securities of a listed Swiss company are required to notify the company and the stock exchange where such securities are listed of the level of their holding whenever such holding reaches, exceeds, or falls short of, certain thresholds which have been set at 5%, 10%, 20%, 33⅓%, 50% and 66⅔% of the company's outstanding voting rights, whether or not such voting rights are exercisable. Following receipt of such notification the corporation has to inform the public.

***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 a listed Swiss company will have to submit a takeover bid

to all remaining shareholders. This mandatory bid obligation may be waived under certain circumstances, in particular if another shareholder owns a higher percentage of voting rights than the acquirer. A waiver from the mandatory bid rule is granted by the Swiss Takeover Board or the Swiss Federal Banking Commission. If no waiver is granted, the mandatory takeover bid must be made pursuant to the procedural rules set forth in the Swiss Stock Exchange Act and the ordinances enacted thereunder.

**American Depositary Receipts**

The following is a summary of all material provisions of the Deposit Agreement (including any exhibits thereto, the "Deposit Agreement") dated as of December 17, 1996, as amended and restated as of May 11, 2000, among the Company, Morgan Guaranty Trust Company of New York, as depositary (the "Depositary"), and the registered Holders from time to time of the ADRs issued thereunder. This summary does not purport to be complete and is qualified in its entirety by reference to the Deposit Agreement. Copies of the Deposit Agreement are available for inspection at the principal office of the Depositary in New York (the "Principal New York Office"), which is presently located at 60 Wall Street, New York, NY 10260. Terms used herein and not otherwise defined shall have the respective meanings set forth in the Deposit Agreement.

ADRs means the American Depositary Receipts executed and delivered pursuant to the terms of the Deposit Agreement. ADRs may be either in physical certificated form or Direct Registration. Each ADS represents, as of the date of the listing of the listing of the Company's ADSs, the right to receive one-fortieth of a Share deposited under the Deposit Agreement (together with any additional Shares deposited thereunder and all other securities, property and cash received and held thereunder at any time in respect of or in lieu of such deposited Shares, the "Deposited Securities") with the Custodian under the Deposit Agreement (together with any successor or successors thereto, the "Custodian"). An ADR may evidence any number of ADSs. Only persons in whose names ADRs are registered on the books of the Depositary will be treated by the Depositary and the Company as Holders.

***Deposit, Transfer and Withdrawal***

In connection with the deposit of Shares under the Deposit Agreement, the Depositary or the Custodian may require the following in form satisfactory to it: (a) a written order directing the Depositary to issue to, or upon the written order of, the person or persons designated in such order a Direct Registration ADR or ADRs evidencing the number of ADSs representing such deposited Shares (a "Delivery Order"); (b) proper endorsements or duly executed instruments of transfer in respect of such deposited Shares; (c) instruments assigning to the Custodian or its nominee any distribution on or in respect of such deposited Shares or indemnity therefor; and, (d) proxies entitling the Custodian to vote such deposited Shares. As soon as practicable after the Custodian receives Deposited Securities pursuant to any such deposit or pursuant to the form of ADR, the Custodian shall present such Deposited Securities for registration of transfer into the name of the Custodian or its nominee, to the extent such registration is practicable, at the cost and expense of the person making such deposit (or for whose benefit such deposit is made) and shall obtain evidence satisfactory to it of such registration. Deposited Securities shall be held by the Custodian for the account and to the order of the Depositary at such place or places and in such manner as the Depositary shall determine. Deposited Securities may be delivered by the Custodian to any person only under the circumstances expressly contemplated in the Deposit Agreement.

After any such deposit of Shares, the Custodian shall notify the Depositary of such deposit and of the information contained in any related Delivery Order by letter, first class airmail postage prepaid, or, at the request, risk and expense of the person making the deposit, by cable, telex or facsimile transmission. After receiving such notice from the Custodian, the Depositary, subject to the terms and conditions of the Deposit Agreement, shall issue at the Transfer Office, (the "Transfer Office") which is presently located at the Principal New York Office, to or upon the order of any person named in such notice, an ADR or ADRs registered as requested and evidencing the aggregate ADSs to which such person is entitled.

Subject to the terms and conditions of the Deposit Agreement, the Depositary may so issue ADRs for delivery at the Transfer Office only against deposit with the Custodian of: (a) Shares in form satisfactory to the Custodian; (b) rights to receive Shares from the Company or any registrar, transfer agent, clearing agent or other entity recording Share ownership or transactions; or, (c) other rights to receive Shares (until such Shares are actually deposited pursuant to (a) or (b) above, "Pre-released ADRs") only if (i) Pre-released ADRs are fully collateralized (marked to market daily) with cash or U.S. government securities held by the Depositary for the benefit of Holders and beneficial owners of ADSs (but such collateral shall not constitute "Deposited Securities"), (ii) each recipient of Pre-released ADRs agrees in writing with the Depositary that such recipient (a) owns such Shares, (b) assigns all beneficial right, title and interest therein to the Depositary, (c) holds such Shares for the account of the Depositary and (d) will deliver such Shares to the Custodian as soon as practicable and promptly upon demand therefor and (iii) all Pre-released ADRs evidence not more than 20% of all ADSs (excluding those evidenced by Pre-released ADRs), provided, however, that the Depositary reserves the right to change or disregard such limit from time to time as it deems appropriate. The Depositary may retain for its own account any earnings on collateral for pre-released ADRs and its charges for issuance thereof. At the request, risk and expense of the person depositing Shares, the Depositary may accept deposits for forwarding to the Custodian and may deliver ADRs at a place other than its office. Every person depositing Shares under the Deposit Agreement is deemed to represent and warrant that such Shares are validly issued and outstanding, fully paid, nonassessable and free of preemptive rights, that the person making such deposit is duly authorized so to do and that such Shares (A) are not "restricted securities" as such term is defined in Rule 144 under the Securities Act of 1933 unless at the time of deposit they may be freely transferred in accordance with Rule 144(k) and may otherwise be offered and sold freely in the U.S. or (B) have been registered under the Securities Act of 1933. Such representations and warranties shall survive the deposit of Shares and issuance of ADRs.

Subject to the terms and conditions of the Deposit Agreement, upon surrender of (i) an ADR in form satisfactory to the Depositary at the Transfer Office or (ii) proper instructions and documentation in the case of a Direct Registration ADR, the Holder thereof is entitled to delivery at the Custodian's office of the Deposited Securities at the time represented by the ADSs evidenced by such ADR. At the request, risk and expense of the Holder thereof, the Depositary may deliver such Deposited Securities at such other place as may have been requested by the Holder. Notwithstanding any other provision of the Deposit Agreement or the ADRs, the withdrawal of Deposited Securities may be restricted only for the reasons set forth in General Instruction I.A.(1) of Form F-6 (as such instructions may be amended from time to time) under the Securities Act of 1933.

***Distributions on Deposited Securities***

Subject to the terms and conditions of the Deposit Agreement, to the extent practicable, the Depositary will distribute by mail to each Holder entitled thereto on the record date set by the Depositary therefor at such Holder's address shown on the ADR Register, in proportion to the number of Deposited Securities (on which the following distributions on Deposited Securities are received by the Custodian) represented by ADSs evidenced by such Holder's ADRs:

(a) *Cash:* Any U.S. dollars available to the Depositary resulting from a cash dividend or other cash distribution or the net proceeds of sales of any other distribution or portion thereof authorized in the Deposit Agreement ("Cash"), on an averaged or other practicable basis, subject to (i) appropriate adjustments for taxes withheld, (ii) such distribution being impermissible pursuant to applicable law with respect to certain Holders, and (iii) deduction of the Depositary's expenses in (1) converting any foreign currency to U.S. dollars by sale or in such other manner as the Depositary may determine to the extent that it determines that such conversion may be made on a reasonable basis, (2) transferring foreign currency or U.S. dollars to the U.S. by such means as the Depositary may determine to the extent that it determines that such transfer may be made on

a reasonable basis, (3) obtaining any approval or license of any governmental authority required for such conversion or transfer, which is obtainable at a reasonable cost and within a reasonable time and (4) making any sale by public or private means in any commercially reasonable manner.

(b) *Shares:* (i) Additional ADRs evidencing whole ADSs representing any Shares available to the Depositary resulting from a dividend or free distribution on Deposited Securities consisting of Shares (a "Share Distribution") and (ii) U.S. dollars available to it resulting from the net proceeds of sales of Shares received in a Share Distribution, which Shares would give rise to fractional ADSs if additional ADRs were issued therefor, as in the case of Cash.

(c) *Rights:* (i) Warrants or other instruments in the discretion of the Depositary representing rights to acquire additional ADRs in respect of any rights to subscribe for additional Shares or rights of any nature available to the Depositary as a result of a distribution on Deposited Securities ("Rights"), to the extent that the Company timely furnishes to the Depositary evidence satisfactory to the Depositary that the Depositary may lawfully distribute the same (the Company has no obligation to so furnish such evidence), or (ii) to the extent the Company does not so furnish such evidence and sales of Rights are practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Rights as in the case of Cash, or (iii) to the extent the Company does not so furnish such evidence and such sales cannot practicably be accomplished by reason of the nontransferability of the Rights, limited markets therefor, their short duration or otherwise, nothing (and any Rights may lapse); and

(d) *Other Distributions:* (i) Securities or property available to the Depositary resulting from any distribution on Deposited Securities other than Cash, Share Distributions and Rights ("Other Distributions"), by any means that the Depositary may deem equitable and practicable, or (ii) to the extent the Depositary deems distribution of such securities or property not to be equitable and practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Other Distributions as in the case of cash.

Such U.S. dollars available will be distributed by checks drawn on a bank in the U.S. for whole dollars and cents (any fractional cents being withheld without liability for interest and added to future cash distributions).

To the extent that the Depositary determines in its discretion that any distribution is not practicable with respect to any Holder, the Depositary may make such distribution as it so determines is practicable, including the distribution of foreign currency, securities or property (or appropriate documents evidencing the right to receive foreign currency, securities or property) or the retention thereof as Deposited Securities with respect to such Holder's ADRs (without liability for interest thereon or the investment thereof).

*There can be no assurance that the Depositary will be able to effect any currency conversion or to sell or otherwise dispose of any distributed or offered property, subscription or other rights, Shares or other securities in a timely manner or at a specified rate or price, as the case may be.*

***Disclosure of Interests***

To the extent that the provisions of or governing any Deposited Securities may require disclosure of or impose limits on beneficial or other ownership of Deposited Securities, other Shares and other securities and may provide for blocking transfer, voting or other rights to enforce such disclosure or limits, Holders and all persons holding ADRs agree to comply with all such disclosure requirements and ownership limitations and to cooperate with the Depositary in the Depositary's compliance with any Company instructions in respect thereof, and, in the Deposit Agreement, the Depositary has agreed to use reasonable efforts to comply with such Company instructions.

***Record Dates***

The Depositary may, after consultation with the Company, if practicable, fix a record date (which shall be as near as practicable to any corresponding record date set by the Company) for the determination of the Holders who shall be entitled to receive any distribution on or in respect of Deposited Securities, to give instructions for the exercise of any voting rights, to receive any notice or to act in respect of other matters and only such Holders shall be so entitled.

***Voting of Deposited Securities***

As soon as practicable after receipt from the Company of notice of any meeting or solicitation of consents or proxies of holders of Shares or other Deposited Securities, the Depositary shall mail to Holders a notice stating (a) such information as is contained in such notice and any solicitation materials, (b) that each Holder on the record date set by the Depositary therefor will be entitled to instruct the Depositary as to the exercise of the voting rights, if any, pertaining to the Deposited Securities represented by the ADSs evidenced by such Holder's ADRs and (c) the manner in which such instructions may be given, including instructions to give a discretionary proxy to a person designated by the Company. Upon receipt of instructions of a Holder on such record date in the manner and on or before the date established by the Depositary for such purpose, the Depositary shall endeavor insofar as practicable and permitted under the provisions of or governing Deposited Securities to vote or cause to be voted (or to grant a discretionary proxy to a person designated by the Company to vote in accordance with (c) above) the Deposited Securities represented by the ADSs evidenced by such Holder's ADRs in accordance with such instructions. The Depositary will not itself exercise any voting discretion in respect of any Deposited Securities.

***Inspection of Transfer Books***

The Deposit Agreement provides that the Depositary will keep books at its Transfer Office for the registration, registration of transfer, combination and split-up of ADRs, which at all reasonable times will be open for inspection by the Holders and the Company for the purpose of communicating with Holders in the interest of the business of the Company or a matter related to the Deposit Agreement.

***Reports and Other Communications***

The Depositary shall make available for inspection by Holders at the Transfer Office any reports and communications received from the Company which are both (a) received by the Depositary as the holder of the Deposited Securities and (b) made generally available to the holders of such Deposited Securities by the Company. The Depositary shall also send to the Holders copies of such reports when furnished by the Company. Any such reports and communications furnished to the Depositary by the Company shall be furnished in English.

On or before the first date on which the Company makes any communication available to holders of Deposited Securities or any securities regulatory authority or stock exchange, by publication or otherwise, the Company shall transmit to the Depositary a copy thereof in English or with an English translation or summary. The Company has delivered to the Depositary, the Custodian and any Transfer Office, a copy of all provisions of or governing the Shares and any other Deposited Securities issued by the Company or any affiliate of the Company and, promptly upon any change thereto, the Company shall deliver to the Depositary, the Custodian and any Transfer Office, a copy (in English or with an English translation) of such provisions as so changed. The Depositary and its agents may rely upon the Company's delivery thereof for all purposes of the Deposit Agreement.

*Changes Affecting Deposited Securities*

Subject to the terms and conditions of the Deposit Agreement, the Depositary may, in its discretion, amend the form of ADR or distribute additional or amended ADRs (with or without calling the ADRs for exchange) or cash, securities or property on the record date set by the Depositary therefor to reflect any change in par value, split-up, consolidation, cancellation or other reclassification of Deposited Securities, any Share Distribution or Other Distribution not distributed to Holders or any cash, securities or property available to the Depositary in respect of Deposited Securities from (and, in the Deposit Agreement, the Depositary is authorized to surrender any Deposited Securities to any person and to sell by public or private sale any property received in connection with) any recapitalization, reorganization, merger, consolidation, liquidation, receivership, bankruptcy or sale of all or substantially all the assets of the Company, and to the extent the Depositary does not so amend the ADR or make a distribution to Holders to reflect any of the foregoing, or the net proceeds thereof, whatever cash, securities or property results from any of the foregoing shall constitute Deposited Securities and each ADS shall automatically represent its pro rata interest in the Deposited Securities as then constituted.

*Amendment and Termination of Deposit Agreement*

The ADRs and the Deposit Agreement may be amended by the Company and the Depositary, provided that any amendment that imposes or increases any fees or charges (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, cable, telex or facsimile transmission costs, delivery costs or other such expenses), or that shall otherwise prejudice any substantial existing right of Holders, shall become effective 30 days after notice of such amendment shall have been given to the Holders. Every Holder of an ADR at the time any amendment to the Deposit Agreement so becomes effective shall be deemed, by continuing to hold such ADR, to consent and agree to such amendment and to be bound by the Deposit Agreement as amended thereby. In no event shall any amendment impair the right of the Holder of any ADR to surrender such ADR and receive the Deposited Securities represented thereby, except in order to comply with mandatory provisions of applicable law. Any amendments or supplements which (i) are reasonably necessary (as agreed by the Company and the Depositary) in order for (a) the ADSs to be registered on Form F-6 under the Securities Act of 1933 or (b) the ADSs or Shares to be traded solely in electronic book-entry form and (ii) do not in either such case impose or increase any fees or charges to be borne by Holders, shall be deemed not to prejudice any substantial rights of Holders.

Notwithstanding the foregoing, if any governmental body should adopt new laws, rules or regulations which would require amendment or supplement of the Deposit Agreement or the form of ADR to ensure compliance therewith, the Company and the Depositary may amend or supplement the Deposit Agreement and the ADR at any time in accordance with such changed rules. Such amendment or supplement to the Deposit Agreement in such circumstances may become effective before a notice of such amendment or supplement is given to Holders or within any other period of time as required for compliance.

The Depositary may, and shall at the written direction of the Company, terminate the Deposit Agreement and the ADRs by mailing notice of such termination to the Holders at least 30 days prior to the date fixed in such notice for such termination. After the date so fixed for termination, the Depositary and its agents will perform no further acts under the Deposit Agreement and the ADRs, except to receive and hold (or sell) distributions on Deposited Securities and deliver Deposited Securities being withdrawn. As soon as practicable after the expiration of six months from the date so fixed for termination, the Depositary shall sell the Deposited Securities and shall thereafter (as long as it may lawfully do so) hold in a segregated account the net proceeds of such sales, together with any other cash then held by it under the Deposit Agreement, without liability for interest, in trust for the pro rata benefit of the Holders not theretofore surrendered. After making such sale, the Depositary shall be discharged from all obligations in respect of the Deposit Agreement and the ADRs, except to account for such net proceeds and other cash.

After the date so fixed for termination, the Company shall be discharged from all obligations under the Deposit Agreement except for its obligations to the Depositary and its agents.

***Charges of Depositary***

The Depositary may charge each person to whom ADRs are issued against deposits of Shares including deposits in respect of Share Distributions, Rights and Other Distributions and each person surrendering ADRs for withdrawal of Deposited Securities, U.S. $5.00 for each 100 ADSs (or portion thereof) evidenced by the ADRs delivered or surrendered. The Company will pay all other charges and expenses of the Depositary and any agent of the Depositary (except the Custodian) pursuant to agreements from time to time between the Company and the Depositary, except (i) stock transfer or other taxes and other governmental charges (which are payable by Holders or persons depositing Shares), (ii) cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or Holders delivering Shares, ADRs or Deposited Securities (which are payable by such persons or Holders), (iii) transfer or registration fees for the registration of transfer of Deposited Securities on any applicable register in connection with the deposit or withdrawal of Deposited Securities (which are payable by persons depositing Shares or Holders withdrawing Deposited Securities; there are no such fees in respect of the Shares as of the date of the Deposit Agreement) and (iv) expenses of the Depositary in connection with the conversion of foreign currency into U.S. dollars (which are paid out of such foreign currency).

***Liability of Holders for Taxes***

If any tax or other governmental charge shall become payable by or on behalf of the Custodian or the Depositary with respect to the ADRs, any Deposited Securities represented by the ADSs evidenced thereby or any distribution thereon, such tax or other governmental charge shall be paid by the Holder thereof to the Depositary. The Depositary may refuse to effect any registration, registration of transfer, split-up or combination thereof or, subject to the terms and conditions of the Deposit Agreement, any withdrawal of such Deposited Securities until such payment is made. The Depositary may also deduct from any distributions on or in respect of Deposited Securities, or may sell by public or private sale for the account of the Holder thereof any part or all of such Deposited Securities (after attempting by reasonable means to notify the Holder thereof prior to such sale), and may apply such deduction or the proceeds of any such sale in payment of such tax or other governmental charge, the Holder thereof remaining liable for any deficiency, and shall reduce the number of ADSs evidenced thereby to reflect any such sales of Deposited Securities. In connection with any distribution to Holders, the Company will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Company; and the Depositary and the Custodian will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Depositary or the Custodian. If the Depositary determines that any distribution in property other than cash (including Shares or rights) on Deposited Securities is subject to any tax that the Depositary or the Custodian is obligated to withhold, the Depositary may dispose of all or a portion of such property in such amounts and in such manner as the Depositary deems necessary and practicable to pay such taxes, by public or private sale, and the Depositary shall distribute the net proceeds of any such sale or the balance of any such property after deduction of such taxes to the Holders entitled thereto.

***General Limitations***

The Depositary, the Company, their agents and each of them shall: (a) incur no liability (i) if law, regulation, the provisions of or governing any Deposited Securities, act of God, war or other circumstance beyond its control shall prevent, delay or subject to any civil or criminal penalty any act which the Deposit Agreement or the form of ADR provides shall be done or performed by it, or (ii) by reason of any exercise

or failure to exercise any discretion given it in the Deposit Agreement or the form of ADR; (b) assume no liability except to perform its obligations to the extent they are specifically set forth in the ADR and the Deposit Agreement without gross negligence or bad faith; (c) in the case of the Depositary and its agents, be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADR; (d) in the case of the Company and its agents under the Deposit Agreement be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADRs, which in its opinion may involve it in expense or liability, unless indemnity satisfactory to it against all expense (including fees and disbursements of counsel) and liability be furnished as often as may be required; or (e) not be liable for any action or inaction by it in reliance upon the advice of or information from legal counsel, accountants, any person presenting Shares for deposit, any Holder, or any other person believed by it to be competent to give such advice or information. The Depositary, its agents and the Company may rely and shall be protected in acting upon any written notice, request, direction or other document believed by them to be genuine and to have been signed or presented by the proper party or parties. The Depositary and its agents will not be responsible for any failure to carry out any instructions to vote any of the Deposited Securities, for the manner in which any such vote is cast or for the effect of any such vote. The Depositary and its agents may own and deal in any class of securities of the Company and its affiliates and in ADRs. The Company has agreed to indemnify the Depositary and its agents under certain circumstances and the Depositary has agreed to indemnify the Company against losses incurred by the Company to the extent such losses are due to the negligence or bad faith of the Depositary. No disclaimer of liability under the Securities Act of 1933 is intended by any provision hereof.

Prior to the issue, registration, registration of transfer, split-up or combination of any ADR, the delivery of any distribution in respect thereof, or, subject to the terms and conditions of the Deposit Agreement, the withdrawal of any Deposited Securities, the Company, the Depositary or the Custodian may require: (a) payment with respect thereto of (i) any stock transfer or other tax or other governmental charge, (ii) any stock transfer or registration fees in effect for the registration of transfers of Shares or other Deposited Securities upon any applicable register, and (iii) any applicable charges as provided in the form of ADR; (b) the production of proof satisfactory to it of (i) the identity and genuineness of any signature and (ii) such other information, including without limitation, information as to citizenship, residence, exchange control approval, beneficial ownership of any securities, compliance with applicable law, regulations, provisions of or governing Deposited Securities and terms of the Deposit Agreement and the ADRs, as it may deem necessary or proper; and (c) compliance with such regulations as the Depositary may establish consistent with the Deposit Agreement. The issuance of ADRs, the acceptance of deposits of Shares, the registration, registration of transfer, split-up or combination of ADRs or, subject to the terms of the Deposit Agreement, the withdrawal of Deposited Securities may be suspended, generally or in particular instances, when the ADR Register or any register for Deposited Securities is closed or when any such action is deemed advisable by the Depositary or the Company.

***Governing Law***

The Deposit Agreement is governed by and shall be construed in accordance with the laws of the State of New York.

***Morgan Guaranty Trust Company of New York***

The Depositary is Morgan Guaranty Trust Company of New York, a New York banking corporation, which has its principal office located in New York, NY. Morgan Guaranty Trust Company of New York is a commercial bank offering a wide range of banking and trust services to its customers in the New York metropolitan area, throughout the U.S. and around the world.

The Consolidated Balance Sheets of J.P. Morgan & Co. Incorporated (“J.P. Morgan”), the parent corporation of Morgan Guaranty Trust Company of New York, are set forth in the most recent Annual

Report and Form 10-Q. The Annual Report, Form 10-K and Form 10-Q of J.P. Morgan are on file with the Securities and Exchange Commission.

The Articles of Association of Morgan Guaranty Trust Company of New York and By-Laws together with the annual report, Form 10-K and Form 10-Q of J.P. Morgan will be available for inspection at the Principal New York Office of the Depositary.

## Part III

### Item 15. Defaults Upon Senior Securities

N/A

### Item 16. Changes in Securities and Changes in Security for Registered Securities

N/A

## Part IV

### Item 17. Financial Statements

The registrant has responded to Item 18 in lieu of responding to this item.

### Item 18. Financial Statements

Reference is made to Item 19 for a list of financial statements filed as part of this Registration.

### Item 19. Financial Statements and Exhibits

(a) The following consolidated financial statements, together with the report of PricewaterhouseCoopers AG thereon, are filed as part of this Registration Statement:



(b) Documents filed as exhibits to this Registration Statement (previously filed):

1.1 Articles of Association as amended to date (in English translation)

1.2 Deposit Agreement (incorporated by reference from the Registration Statement on Form F-6, File No. 333-11758)

1.3 Spin-off Agreement

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant certifies that it meets all of the requirements for filing on Form 20-F and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

NOVARTIS AG

Daniel Vasella
Chief Executive Officer and Chairman
of the Board

Dated May 9, 2000

**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, 1999 and 1998 and for each of the three years in the period ended December 31, 1999, 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, 1999 and 1998 and the results of operations and the cash flows for each of the three years in the period ended December 31, 1999 in accordance with the International Accounting Standards and comply with the law and the accounting provisions as contained in the Listing Rules of the Swiss Exchange.

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 two years in the period ended December 31, 1999 and the determination of equity of the Novartis Group also expressed in Swiss francs at December 31, 1999 and 1998 to the extent summarized in Note 31 to the consolidated financial statements.

PricewaterhouseCoopers AG

S.A.J. Bachmann Joseph P. Herron

Basel, February 16, 2000,
except as to Note 31 which is May 8, 2000

## NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED INCOME STATEMENTS

**(for the years ended December 31, 1999, 1998 and 1997)**

| | *Notes* | *1999* | *1999* | *1998* | *1997* |
|---|---|---|---|---|---|
| | | *$ millions*[1] | *CHF millions* | *CHF millions* | *CHF millions* |
| **Sales** | **3/4** | **20,418** | **32,465** | **31,702** | **31,180** |
| Cost of goods sold | | (6,178) | (9,822) | (10,052) | (9,847) |
| **Gross profit** | | **14,240** | **22,643** | **21,650** | **21,333** |
| Marketing & distribution | | (6,013) | (9,561) | (8,790) | (8,665) |
| Research & development | 3 | (2,670) | (4,246) | (3,906) | (3,739) |
| Administration & general overheads | | (939) | (1,493) | (2,034) | (2,241) |
| **Operating income** | **3/4** | **4,618** | **7,343** | **6,920** | **6,688** |
| Income from associated companies | 11 | 241 | 383 | 239 | 45 |
| Financial income, net | 5 | 499 | 793 | 759 | 167 |
| Income before taxes and minority interests | | 5,358 | 8,519 | 7,918 | 6,900 |
| Taxes | 6 | (1,153) | (1,833) | (1,882) | (1,674) |
| **Income before minority interests** | | **4,205** | **6,686** | **6,036** | **5,226** |
| Minority interests | | (17) | (27) | (26) | (18) |
| **NET INCOME** | | **4,188** | **6,659** | **6,010** | **5,208** |
| Earnings per Share (CHF/Share) | 7 | 63 | 100 | 91 | 79 |
| Diluted earnings per Share (CHF/Share) | 7 | 63 | 100 | 91 | 79 |

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

1997 and 1998 have been restated to be comparable with 1999

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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.

## NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED BALANCE SHEETS

## (at December 31, 1999 and 1998)

| | *Notes* | *1999* | *1999* | *1998* |
|---|---|---|---|---|
| | | *$ millions*[1] | *CHF millions* | *CHF millions* |
| **ASSETS** | | | | |
| **Long-term assets** | | | | |
| Tangible fixed assets | 8 | 7,337 | 11,666 | 11,372 |
| Intangible assets | 9 | 2,021 | 3,214 | 2,655 |
| Marketable securities | 10 | 3,945 | 6,273 | 5,508 |
| Investments in associated companies | 11 | 1,031 | 1,640 | 1,109 |
| Deferred taxes | 12 | 2,176 | 3,458 | 3,060 |
| Other financial assets | 13 | 2,891 | 4,597 | 2,568 |
| **Total long-term assets** | | **19,401** | **30,848** | **26,272** |
| **Current assets** | | | | |
| Inventories | 14 | 4,331 | 6,887 | 6,695 |
| Trade accounts receivable | 15 | 4,429 | 7,041 | 5,814 |
| Other current assets | 16 | 2,782 | 4,423 | 3,274 |
| Marketable securities | 10 | 6,319 | 10,047 | 7,519 |
| Cash and cash equivalents | | 3,950 | 6,281 | 6,651 |
| **Total current assets** | | **21,811** | **34,679** | **29,953** |
| **TOTAL ASSETS** | | **41,212** | **65,527** | **56,225** |
| **EQUITY AND LIABILITIES** | | | | |
| **Equity** | 17 | | | |
| Share capital | | 908 | 1,443 | 1,443 |
| Treasury Shares | | (82) | (130) | (115) |
| Reserves | | 22,580 | 35,903 | 30,068 |
| **Total equity** | | **23,406** | **37,216** | **31,396** |
| **Minority interests** | | **139** | **221** | **194** |
| **Liabilities** | | | | |
| **Long-term liabilities** | | | | |
| Financial debts | 18 | 1,537 | 2,444 | 2,839 |
| Deferred taxes | 12 | 2,293 | 3,646 | 2,837 |
| Other long-term liabilities | 19 | 2,885 | 4,587 | 3,969 |
| **Total long-term liabilities** | | **6,715** | **10,677** | **9,645** |
| **Short-term liabilities** | | | | |
| Trade accounts payable | | 1,240 | 1,971 | 1,537 |
| Financial debts | 20 | 4,704 | 7,479 | 6,075 |
| Other short-term liabilities | 21 | 5,008 | 7,963 | 7,378 |
| **Total short-term liabilities** | | **10,952** | **17,413** | **14,990** |
| **Total liabilities** | | **17,667** | **28,090** | **24,635** |
| **TOTAL EQUITY AND LIABILITIES** | | **41,212** | **65,527** | **56,225** |

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

1998 has been restated to be comparable with 1999

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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.

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
## (for the years ended December 31, 1999, 1998 and 1997)
## in CHF millions

| | *Share premium* | *Retained Earnings* | *Cumulative translation differences* | *Total reserves* | *Total Share capital* | *Treasury Shares*[1] | *Total equity* |
|---|---|---|---|---|---|---|---|
| **December 31, 1996** | **2,792** | **23,173** | **(1,197)** | **24,768** | **1,443** | **(129)** | **26,082** |
| Reduction in equity due to CIBA SC spin-off | | (4,303) | 190 | (4,113) | | | (4,113) |
| **January 1, 1997** | **2,792** | **18,870** | **(1,007)** | **20,655** | **1,443** | **(129)** | **21,969** |
| Dividends to third parties | | (1,320) | | (1,320) | | | (1,320) |
| Exercise of option rights | 15 | | | 15 | | 1 | 16 |
| Disposal of treasury Shares | 855 | | | 855 | | 6 | 861 |
| Translation effects | | | (263) | (263) | | | (263) |
| Net income | | 5,208 | | 5,208 | | | 5,208 |
| **January 1, 1998** | **3,662** | **22,758** | **(1,270)** | **25,150** | **1,443** | **(122)** | **26,471** |
| Change in accounting policy on deferred taxes | | 478 | | 478 | | | 478 |
| Dividends to third parties | | (1,663) | | (1,663) | | | (1,663) |
| Exercise of option rights | 2 | | | 2 | | | 2 |
| Disposal of treasury Shares | 715 | | | 715 | | 7 | 722 |
| Goodwill on disposals[2] | | 77 | | 77 | | | 77 |
| Translation effects | | | (701) | (701) | | | (701) |
| Net income | | 6,010 | | 6,010 | | | 6,010 |
| **January 1, 1999** | **4,379** | **27,660** | **(1,971)** | **30,068** | **1,443** | **(115)** | **31,396** |
| Change in accounting policy on employee benefits[3] | | 1,071 | | 1,071 | | | 1,071 |
| Dividends to third parties | | (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** |

1997 and 1998 have been restated to be comparable with 1999

(1) Treasury Shares are deducted from equity at their nominal value of CHF 20 per share. Differences between this amount and the amount paid for acquiring, or received for disposing of, treasury Shares is allocated to the Share premium account.

(2) Portion of disposal proceeds relating to the goodwill on the original acquisition that was written off directly to retained earnings between the adoption of International Accounting Standards in 1991 and the end of 1994 when the capitalization of goodwill arising on acquisition became mandatory under International Accounting Standards.

(3) The following is a summary of the adjustments resulting from adopting revised 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-retirement benefit plans | 218 |
| Deferred tax | (316) |
| Minority interest | (15) |
| Net increase in equity at January 1, 1999 | 1,071 |

If the Group had adopted revised IAS 19 as of January 1, 1998, the effect on the Group's 1998 consolidated income statement would not have been material.

Total recognized gains and losses, representing the total of net income, translation effects and goodwill on disposals allocated to equity, for the years ended December 31, 1999, 1998 and 1997 were CHF 8,603 million, CHF 5,386 million and CHF 4,945 million, respectively.

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.

The Board of Directors proposes a dividend in respect of 1999 of CHF 32 per Share (1998: CHF 29 per Share; 1997: CHF 25 per Share) totalling CHF 2.2 billion for all dividend bearing Shares.

## CONSOLIDATED CASH FLOW STATEMENTS

## NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

**(for the years ended December 31, 1999, 1998 and 1997)**

| | Notes | 1999 $ millions[1] | 1999 CHF millions | 1998 CHF millions | 1997 CHF millions |
|---|---|---|---|---|---|
| **Net income** | | **4,188** | **6,659** | **6,010** | **5,208** |
| Reversal of non-cash items | | | | | |
| Minority interests | | 17 | 27 | 26 | 18 |
| Taxes | | 1,153 | 1,833 | 1,882 | 1,674 |
| Depreciation and amortization on | | | | | |
| Tangible fixed assets | | 793 | 1,261 | 1,161 | 1,140 |
| Intangible assets | | 156 | 248 | 227 | 152 |
| Income from associated companies | | (241) | (383) | (239) | (45) |
| Divestment gains | | (180) | (288) | (89) | |
| Net financial income | | (499) | (793) | (759) | 167 |
| Interest and other financial receipts | | 1,142 | 1,816 | 2,114 | 1,014 |
| Interest and other financial payments | | (513) | (815) | (1,366) | (500) |
| Taxes paid | | (1,063) | (1,690) | (1,843) | (1,234) |
| **Cash Flow before working capital changes** | | **4,953** | **7,875** | **7,124** | **7,594** |
| Restructuring payments | | (307) | (488) | (698) | (1,470) |
| Change in net current assets and other operating cash flow items | 23 | (311) | (494) | (573) | (1,559) |
| **Cash Flow from operating activities** | | **4,335** | **6,893** | **5,853** | **4,565** |
| Investment in tangible fixed assets | | (862) | (1,371) | (1,577) | (1,568) |
| Proceeds from disposals of tangible fixed assets | | 180 | 286 | 303 | 335 |
| Purchase of intangible and financial assets | | (461) | (733) | (384) | (1,476) |
| Proceeds from disposals of intangible and financial assets | | 243 | 385 | 91 | 688 |
| Acquisition/divestment of subsidiaries | 24 | 150 | 239 | 235 | (516) |
| Acquisition of minorities | | (43) | (68) | (1) | (108) |
| Investment in marketable securities | | (1,104) | (1,755) | (2,503) | (6,786) |
| **Cash Flow used for investing activities** | | **(1,897)** | **(3,017)** | **(3,836)** | **(9,431)** |
| Premium from option rights | | | | 2 | 16 |
| Repayment of advance to CIBA SC | | | | | 526 |
| Change in treasury shares | | (1,207) | (1,919) | 722 | 861 |
| Change in long-term financial debts | | (211) | (336) | (691) | (1,666) |
| Change in short-term financial debts | | (82) | (130) | (1,583) | (798) |
| Dividends paid | | (1,217) | (1,935) | (1,663) | (1,320) |
| **Cash Flow used for financing activities** | | **(2,717)** | **(4,320)** | **(3,213)** | **(2,381)** |
| Net effect of currency translation on cash and cash equivalents equivalents | | 46 | 74 | (31) | (25) |
| **Net change in cash and cash equivalents** | | **(233)** | **(370)** | **(1,227)** | **(7,272)** |
| **Cash and cash equivalents at the beginning of the year** | | **4,183** | **6,651** | **7,878** | **15,150** |
| **Cash and cash equivalents at end of the year** | | **3,950** | **6,281** | **6,651** | **7,878** |

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

1997 and 1998 have been restated to be comparable with 1999

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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.

## NOTES TO THE NOVARTIS GROUP CONSOLIDATED FINANCIAL STATEMENTS

### 1. Accounting policies

The Novartis Group ("Group") consolidated financial statements are prepared in accordance with the historical cost convention and comply with the standards formulated by 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 results could differ from those estimates.

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

Investments in associated companies, (generally investments of between 20% and 50% in a company's equity) where the Group has significant influence, and joint ventures are accounted for by using the equity method. All other minority investments are valued at their acquisition cost less any impairment in value.

With effect from 1999, the Group has adopted Interpretation 12 of the IAS Standing Interpretations Committee (SIC) concerning the consolidation of special purpose entities. This requires consolidation for financial reporting purposes of special purpose entities, irrespective of their legal structure, 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. This has resulted in the consolidation of certain entities which had previously been considered as related parties not requiring consolidation. All years have been restated in these consolidated financial statements to reflect this change in accounting principle.

**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.

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 provided for 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 translation in accordance with IAS 21 (revised) and IAS 29.

**1. Accounting policies (Continued)**

In the respective local 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 local 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 uses the concept of portfolio basis valuation. For each portfolio the net unrealized gain or loss is determined by adding up all unrealized gains and losses per instrument.

Realized and unrealized gains and losses on contracts designated as specific hedges are recognized in the same period that the foreign currency exposure is realized. The result on instruments which hedge risk positions in future years (forecasted transactions including foreign currency hedges of anticipated transactions, cash flows and earnings) is deferred to the period when gains and losses on the corresponding positions materialize. Option premiums, realized gains and losses and unrealized losses are included in the currency losses, net component of financial income, net.

Non-hedging currency instruments, such as options and forward contracts, are valued at the lower of cost on inception and fair value on a portfolio basis. A net unrealized loss is included in the current year's result. A net unrealized gain is not recorded. Option premiums, realized gains and losses and changes in net unrealized losses are recorded in the income or expense on options, forwards and other derivatives component of financial income, net.

Financial instruments which are intended to be held for the long-term or to maturity, principally interest rate swaps and Forward Rate Agreements (FRAs), are valued on a portfolio basis at the lower of cost, which is usually zero, and a valuation taking into account market values and anticipated cash flows through to the maturity of the instruments. A net unrealized loss is recorded in the current year's result in the income or expense on options, forwards and other derivatives component of financial income, net. A net unrealized gain is not recorded. FRA settlement sums and interest paid and received are recorded as interest income and expense.

Forward Rate Agreements (FRAs) not included above are valued on a portfolio basis with a net loss recognized in the income statement in the income or expense on options, forwards and other derivatives component of financial income, net together with the settlement sums. A net unrealized gain is not recorded.

Equity options are accounted for at the lower of cost and fair value. Net unrealized losses on written options and the underlying assets as well as option premiums are recorded in the income statement in the income or expense on options, forwards and other derivatives component of financial income, net. Net unrealized gains are not recorded.

Option premiums are recognized immediately on payment or receipt.

**1. Accounting policies (Continued)**

**Tangible fixed assets** Tangible fixed assets have been valued at acquisition or production costs 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. The 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 future cash flows (undiscounted and without interest charges) 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 results 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. 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 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.

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

| | |
|---|---|
| Trademarks | 10 to 15 years |
| Product Rights | 5 to 15 years |
| Others | 3 to 5 years |
| Software | 3 years |

**1. Accounting policies (Continued)**

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 15 years. The Group believes that useful lives assigned to acquired product rights is based on the maturity of the product and the estimated economic benefit that such product rights can provide.

**Financial assets** Associated companies and joint ventures are accounted for by the equity method. All other minority investments are reported at their acquisition cost and loans at their nominal value. Adjustments are made for any permanent impairment in 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 have been made for inventories with a lower market value or which are slow-moving. Unsaleable inventory has been 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 and are classified as available for sale or as bonds held to maturity. Marketable securities available for sale are stated at the lower of cost and market value on an individual basis. Gross unrealized losses are included as financial expense in the income statement. Unrealized gains are not recorded. The portfolio of bonds intended to be held to maturity is valued at amortized cost, whereby the discount or premium is 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 are not recorded for this portfolio of bonds.

**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.

Adoption of revised IAS 12 from January 1, 1998 has resulted in a change in the recognition of deferred tax on unrealized intercompany profits. The impact of this change at January 1, 1998 has been credited directly to retained earnings of the Group. The total deferred tax asset or liability, calculated

**1. Accounting policies (Continued)**

using applicable local tax rates, is 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-retirement 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-retirement 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.

*(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.

*(e) Change in accounting policy*

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.

**1. Accounting policies (Continued)**

**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 no longer considered to be research and development and 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.

**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 collectible 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.

**Restructuring charges** Restructuring charges are accrued against operating income in the period management commits itself 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 the release occurs.

**Exceptional income and expense** Exceptional income and expense represents items which are not considered to be part of the recurring operating income and expense of the Group but which are nevertheless related to the ordinary activities of the Group. They are therefore not separately shown as extraordinary items.

**Treasury Shares** Treasury Shares are deducted from equity at their nominal value of CHF 20 per Share. Differences between this amount and the amount paid for acquiring, or received for disposing of, treasury Shares are recorded in the Share premium account in consolidated equity.

**2. Changes in the scope of consolidation**

The following significant changes were made during 1999, 1998 and 1997:

**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.

**2. Changes in the scope of consolidation (Continued)**

*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.

**Acquisitions 1998**

*Generics*

On November 1, 1998, the Generics sector acquired the antibiotics business and the Frankfurt fermentation plant of Hoechst Marion Roussel Germany, GmbH for CHF 49 million in cash. No goodwill has been recognized on this acquisition. Sales have been included in operations since the acquisition date.

*Agribusiness*

On September 1, 1998, Novartis acquired a production plant and related operating assets from Oriental Chemicals Industries, South Korea for CHF 196 million. The acquisition was accounted for under the purchase method of accounting and the related goodwill was CHF 110 million. This goodwill is being amortized on a straight-line basis over 15 years based on the expected accelerated growth achieved as a result of the immediate control of sales and marketing and better positioning for the development of new products in the Korean market, the 12th largest crop protection market in the world. In addition, the Group does not believe that actions by competitors would materially affect the estimated useful life of goodwill. Sales have been included in operations since the acquisition date.

**Acquisitions 1997**

*Pharmaceuticals*

On February 19, 1997, Novartis acquired the remaining 27% of the Shares not already owned of SyStemix Inc., Palo Alto, USA at $19.50 per Share. This acquisition cost CHF 108 million ($76 million).

*Agribusiness*

On July 1, 1997, Novartis acquired the product rights to the insecticide abamectin and fungicide thiabendazole from Merck & Co. for CHF 1.3 billion ($910 million).

The net assets acquired consisted of tangible fixed assets (CHF 876,000), inventories (CHF 44 million), and other intangibles (CHF 1.3 billion). The other intangibles are being amortized on a straight-line basis over 15 years. The fair value of the products acquired was determined with the assistance of investment bankers.

**2. Changes in the scope of consolidation (Continued)**

The Group has entered into a supply agreement in connection with the acquisition of the above noted product rights from Merck & Co. Total minimum purchase commitments under this agreement as of December 31, 1999 are as follows:

| | *(in CHF thousands)* |
|---|---|
| 2000 | 58,692 |
| 2001 | 72,773 |
| 2002 | 72,773 |
| 2003 | 72,773 |
| 2004 | 72,773 |
| 2005 – 2007 | 218,317 |
| **Total** | **568,101** |

The above mentioned 1999, 1998 and 1997 acquisitions did not have a material effect on the Group's results of operations, cash flows or financial position.

**Divestments 1999**

*Consumer Health*

The Group's 51% interest in OLW Snacks AB, Sweden and 49% interest in Chips OLW AB, Sweden were 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 totalled 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 and those already divested in 1998 as mentioned below totalled CHF 1036 million and generated operating income in 1999 and 1998 of CHF 23 million and CHF 80 million, respectively.

*Agribusiness*

On December 1, 1999 the Board of Novartis approved the divestment of the Novartis Agribusiness sector by merging it with the Agrochemicals business of AstraZeneca Plc. The merged business will be named Syngenta AG and will be spun-off to the respective shareholders such that Novartis AG shareholders will own 61% of the new company and AstraZeneca shareholders 39%.

The transaction is still subject to approval by Novartis AG and AstraZeneca Plc shareholders and regulatory approval. It is currently anticipated that completion will be possible in the second half of 2000.

The Novartis Agribusiness sector has been presented as a discontinuing sector in the segment information in these consolidated financial statements.

**2. Changes in the scope of consolidation (Continued)**

**Divestments 1998**

*Consumer Health*

On September 30, 1998 Roland SA, Murten, Switzerland on November 10, 1998 Redline Healthcare Inc., USA and on December 30, 1998 certain business lines of Novartis Nutrition S.r.l., Bologna, Italy, were sold. Total sales of Roland and Redline activities recorded up to their respective date of divestment amounted to CHF 499 million.

The Italian divested activities were consolidated for the whole year and made sales of CHF 186 million in 1998. The sale price for these divestments totalled CHF 490 million.

*Agribusiness*

Effective April 30, 1998, SDS Biotech K.K., Tokyo, Japan was divested. Sales in the period up to divestment were CHF 59 million.

**Divestments 1997**

*Industry*

On March 13, 1997 Ciba Specialty Chemicals Holding Inc., and its subsidiaries (Ciba SC) was spun off completely to existing Novartis Shareholders via a Rights Offering. The spin-off was effective as of January 1, 1997. The equity transferred to Novartis Shareholders has been deducted from the Novartis consolidated equity at January 1, 1997. The exclusion of the operating results of CIBA SC for the period January 1, 1997 to March 13, 1997 did not have a material impact on the Group's net income.

**2. Changes in the scope of consolidation (Continued)**

The following is a summary of the impact on the Novartis Group consolidated balance sheet of the Ciba spin-off:

| | *December 31, 1996* | *Ciba SC spin-off*[1] | *January 1, 1997* |
|---|---|---|---|
| | *CHF billions* | *CHF billions* | *CHF billions* |
| **ASSETS** | | | |
| **Long-term assets** | | | |
| Tangible fixed assets | 16.0 | (4.5) | 11.5 |
| Other long-term assets | 5.7 | (0.8) | 4.9 |
| **Total long-term assets** | **21.7** | **(5.3)** | **16.4** |
| **Current assets** | | | |
| Inventories | 8.0 | (2.2) | 5.8 |
| Receivable from Ciba SC | — | 1.4 | 1.4 |
| Trade accounts receivable and other current assets | 9.1 | (1.2) | 7.9 |
| Marketable securities, cash and cash equivalents | 19.2 | (0.5) | 18.7 |
| **Total current assets** | **36.3** | **(2.5)** | **33.8** |
| **TOTAL ASSETS** | **58.0** | **(7.8)** | **50.2** |
| **EQUITY AND LIABILITIES** | | | |
| **Equity** | **26.1** | **(4.1)** | **22.0** |
| **Minority interests** | **0.3** | **(0.1)** | **0.2** |
| **Liabilities** | | | |
| **Long-term liabilities** | | | |
| Financial debts | 5.6 | (0.3) | 5.3 |
| Other long-term liabilities | 5.6 | (2.0) | 3.6 |
| **Total long-term liabilities** | **11.2** | **(2.3)** | **8.9** |
| **Short-term liabilities** | | | |
| Financial debts | 8.8 | (0.6) | 8.2 |
| Other short-term liabilities | 11.6 | (0.7) | 10.9 |
| **Total short-term liabilities** | **20.4** | **(1.3)** | **19.1** |
| **TOTAL EQUITY AND LIABILITIES** | **58.0** | **(7.8)** | **50.2** |

(1) The Ciba SC Master Spin-Off Agreement specifies that each party has the right to request the transfer of all assets to which it is entitled under the Agreement until April 30, 2000. Novartis is not aware of any material assets that have not been appropriately transferred to Ciba SC with effect from January 1, 1997.

**3. Sectorial breakdown of key figures 1999, 1998 and 1997**

Novartis is organized on a worldwide basis into five continuing operating sectors and Corporate activities. Agribusiness is presented as a discontinuing 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: transplantation and immunology; Central Nervous System (CNS);

**3. Sectorial breakdown of key figures 1999, 1998 and 1997 (Continued)**

rheumatism, bone and hormone replacement therapy; oncology and hematology; dermatology; cardiovascular, endocrine and respiratory diseases.

The *Generics* sector manufactures, distributes and sells off patent pharmaceutical products and substances.

The *CIBA Vision* sector manufactures, distributes and sells contact lenses, lens care products, pharmaceuticals and ophthalmic surgical products.

The *Consumer Health* sector manufactures, distributes and sells health and medical nutrition products and a variety of OTC medicines.

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. No allocation of any of these amounts is made to the sectors.

*Discontinuing sector*

The *Agribusiness* sector principally manufactures, distributes and sells insecticides, herbicides and fungicides and sells 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. 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) and deferred and current taxes.

The following sectorial and geographic segmentation complies with the requirements of IAS 14 (revised).

## 3. Sectorial breakdown of key figures 1999, 1998 and 1997 (Continued)

**(in CHF millions except employees)**

| 1999 | Pharmaceuticals | Generics | Ciba Vision | Consumer Health | Animal Health | Corporate | Total continuing activities | Discontinuing Agribusiness activities | Group |
|---|---|---|---|---|---|---|---|---|---|
| Sales of sector | 15,749 | 1,992 | 1,634 | 5,490 | 928 | | 25,793 | 7,143 | 32,936 |
| Sales to other sectors | (154) | (169) | (2) | (58) | (1) | | (384) | (8) | (392) |
| Sales between continuing and discontinuing activities | | | | | | | | (79) | (79) |
| **Third party sales of sectors** | **15,595** | **1,823** | **1,632** | **5,432** | **927** | | **25,409** | **7,056** | **32,465** |
| Research & development expense | (2,848) | (126) | (144) | (167) | (65) | (223) | (3,573) | (673) | (4,246) |
| Depreciation of tangible fixed assets | (589) | (107) | (57) | (105) | (9) | (139) | (1,006) | (255) | (1,261) |
| Amortization of intangible assets | (45) | (41) | (19) | (27) | (1) | (5) | (138) | (110) | (248) |
| Divestment gains | | | | 352 | | | 352 | | 352 |
| Restructuring charges | (70) | | | | | | (70) | (100) | (170) |
| Operating income from divestments | | | | 23 | | | 23 | | 23 |
| Other operating expenses | (7,213) | (1,202) | (1,162) | (4,480) | (636) | 302 | (14,391) | (5,181) | (19,572) |
| **Operating income** | **4,830** | **347** | **250** | **1,028** | **216** | **(65)** | **6,606** | **737** | **7,343** |
| Income from associated companies | 363 | 2 | 11 | | | | 376 | 7 | 383 |
| Financial income, net | | | | | | | 990 | (197) | 793 |
| **Income before taxes and minority interest** | | | | | | | **7,972** | **547** | **8,519** |
| Taxes | | | | | | | (1,664) | (169) | (1,833) |
| **Income before minority interests** | | | | | | | **6,308** | **378** | **6,686** |
| Minority interests | | | | | | | (20) | (7) | (27) |
| **Net income** | | | | | | | **6,288** | **371** | **6,659** |
| **Total assets** | **14,784** | **2,552** | **1,195** | **4,123** | **623** | **33,023** | **56,300** | **9,227** | **65,527** |
| Liabilities | (4,094) | (661) | (403) | (2,025) | (162) | (19,043) | (26,388) | (1,702) | (28,090) |
| **Total equity and minority interests** | **10,690** | **1,891** | **792** | **2,098** | **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** | **792** | **2,098** | **461** | **1,302** | **17,234** | **7,525** | **24,759** |
| Included in net operating assets are: | | | | | | | | | |
| Total tangible fixed assets | 6,285 | 887 | 461 | 865 | 59 | 731 | 9,288 | 2,378 | 11,666 |
| Additions to tangible fixed assets | 621 | 157 | 143 | 116 | 10 | 64 | 1,111 | 260 | 1,371 |
| Total investment in associated companies | 1,319 | 5 | | | | 146 | 1,470 | 170 | 1,640 |
| **Employees at year end** | **35,721** | **5,451** | **6,041** | **12,300** | **1,499** | **3,481** | **64,493** | **17,361** | **81,854** |

## 3. Sectorial breakdown of key figures 1999, 1998 and 1997 (Continued)

**(in CHF millions except employees)**

| 1998 | Pharmaceuticals | Generics | Ciba Vision | Consumer Health | Animal Health | Corporate | Total continuing activities | Discontinuing Agribusiness activities | Group |
|---|---|---|---|---|---|---|---|---|---|
| Sales of sector | 14,666 | 1,687 | 1,506 | 5,841 | 903 | | 24,603 | 7,568 | 32,171 |
| Sales to other sectors | (165) | (158) | (1) | (53) | (1) | | (378) | (7) | (385) |
| Sales between continuing and discontinuing activities | | | | | (1) | | (1) | (83) | (84) |
| **Third party sales of sectors** | **14,501** | **1,529** | **1,505** | **5,788** | **901** | | **24,224** | **7,478** | **31,702** |
| Research & development expense | (2,609) | (98) | (153) | (136) | (61) | (181) | (3,238) | (668) | (3,906) |
| Depreciation of tangible fixed assets | (583) | (96) | (40) | (119) | (8) | (86) | (932) | (229) | (1,161) |
| Amortization of intangible assets | (36) | (37) | (4) | (32) | (2) | (17) | (128) | (99) | (227) |
| Divestment gains | | | | 95 | | | 95 | | 95 |
| Restructuring charges | (112) | | | (96) | | | (208) | | (208) |
| Operating income from divestments | | | | 80 | | | 80 | | 80 |
| Other operating expenses | (6,659) | (1,020) | (1,083) | (4,853) | (619) | 163 | (14,071) | (5,384) | (19,455) |
| **Operating income** | **4,502** | **278** | **225** | **727** | **211** | **(121)** | **5,822** | **1,098** | **6,920** |
| Income from associated companies | 230 | 2 | | 3 | | | 235 | 4 | 239 |
| Financial income net | | | | | | | 1,034 | (275) | 759 |
| **Income before taxes and minority interests** | | | | | | | **7,091** | **827** | **7,918** |
| Taxes | | | | | | | (1,586) | (296) | (1,882) |
| **Income before minority interests** | | | | | | | **5,505** | **531** | **6,036** |
| Minority interests | | | | | | | (19) | (7) | (26) |
| **Net income** | | | | | | | **5,486** | **524** | **6,010** |
| **Total assets** | **13,391** | **2,056** | **890** | **3,609** | **540** | **26,970** | **47,456** | **8,769** | **56,225** |
| Liabilities | (3,496) | (505) | (316) | (1,765) | (174) | (16,528) | (22,784) | (1,851) | (24,635) |
| **Total equity and minority interests** | **9,895** | **1,551** | **574** | **1,844** | **366** | **10,442** | **24,672** | **6,918** | **31,590** |
| Less net liquidity | | | | | | (10,764) | (10,764) | | (10,764) |
| **Net operating assets** | **9,895** | **1,551** | **574** | **1,844** | **366** | **(322)** | **13,908** | **6,918** | **20,826** |
| Included in net operating assets are: | | | | | | | | | |
| Total tangible fixed assets | 6,007 | 803 | 353 | 957 | 55 | 946 | 9,121 | 2,251 | 11,372 |
| Additions to tangible fixed assets | 789 | 153 | 151 | 124 | 11 | 57 | 1,285 | 292 | 1,577 |
| Total investments in associated companies | 844 | 3 | | 9 | | 120 | 976 | 133 | 1,109 |
| **Employees at year end** | **36,170** | **4,888** | **5,926** | **13,636** | **1,474** | **3,633** | **65,727** | **16,722** | **82,449** |

## 3. Sectorial breakdown of key figures 1999, 1998 and 1997 (Continued)

**(in CHF millions except employees)**

| 1997 | Pharmaceuticals | Generics | Ciba Vision | Consumer Health | Animal Health | Corporate | Total continuing activities | Discontinuing Agribusiness activities | Group |
|---|---|---|---|---|---|---|---|---|---|
| Sales of sector | 14,261 | 1,603 | 1,424 | 5,924 | 896 | | 24,108 | 7,502 | 31,610 |
| Sales to other sectors | (149) | (151) | (1) | (58) | | | (359) | (7) | (366) |
| Sales between continuing and discontinuing activities | | | | | (3) | | (3) | (61) | (64) |
| **Third party sales of sectors** | **14,112** | **1,452** | **1,423** | **5,866** | **893** | | **23,746** | **7,434** | **31,180** |
| Research & development expense | (2,629) | (79) | (128) | (122) | (67) | (46) | (3,071) | (668) | (3,739) |
| Depreciation of tangible fixed assets | (550) | (91) | (44) | (138) | (9) | (83) | (915) | (225) | (1,140) |
| Amortization of intangible assets | (33) | (40) | (5) | (26) | | | (104) | (48) | (152) |
| Restructuring charges | | | | (78) | | | (78) | | (78) |
| Operating income from divestments | | | | 74 | | | 74 | | 74 |
| Other operating expenses | (6,654) | (1,003) | (1,015) | (5,036) | (621) | 25 | (14,304) | (5,153) | (19,457) |
| **Operating income** | **4,246** | **239** | **231** | **540** | **196** | **(104)** | **5,348** | **1,340** | **6,688** |
| Income from associated companies | 43 | (2) | | 2 | | | 43 | 2 | 45 |
| Financial income, net | | | | | | | 328 | (161) | 167 |
| **Income before taxes and minority interests** | | | | | | | **5,719** | **1,181** | **6,900** |
| Taxes | | | | | | | (1,253) | (421) | (1,674) |
| **Income before minority interests** | | | | | | | **4,466** | **760** | **5,226** |
| Minority interests | | | | | | | (9) | (9) | (18) |
| **Net income** | | | | | | | **4,457** | **751** | **5,208** |
| **Total assets** | **13,009** | **1,957** | **748** | **3,996** | **466** | **24,527** | **44,703** | **8,947** | **53,650** |
| Liabilities | (4,037) | (448) | (328) | (1,866) | (104) | (18,158) | (24,941) | (2,009) | (26,950) |
| **Total equity and minority interests** | **8,972** | **1,509** | **420** | **2,130** | **362** | **6,369** | **19,762** | **6,938** | **26,700** |
| Less net liquidity | | | | | | (7,172) | (7,172) | | (7,172) |
| **Net operating assets** | **8,972** | **1,509** | **420** | **2,130** | **362** | **(803)** | **12,590** | **6,938** | **19,528** |
| Included in net operating assets are: | | | | | | | | | |
| Total tangible fixed assets | 6,120 | 715 | 259 | 1,110 | 57 | 1,054 | 9,315 | 2,288 | 11,603 |
| Additions to tangible fixed assets | 771 | 132 | 92 | 181 | 10 | 62 | 1,248 | 320 | 1,568 |
| Total investments in associated companies | 717 | 4 | | 9 | | 69 | 799 | 129 | 928 |
| **Employees at year end** | **37,683** | **4,429** | **6,122** | **15,382** | **1,457** | **4,137** | **69,210** | **18,029** | **87,239** |

## 4. Regional breakdown of key figures 1999, 1998 and 1997

**(in CHF millions except employees)**

| 1999 | Europe | The Americas | Asia/Africa Australia | Total |
|---|---|---|---|---|
| **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** |

| 1998 | Europe | The Americas | Asia/Africa Australia | Total |
|---|---|---|---|---|
| **Sales[1]** | **11,789** | **15,292** | **4,621** | **31,702** |
| **Operating income[2]** | **3,658** | **2,742** | **520** | **6,920** |
| Depreciation of tangible fixed assets included in operating income | (770) | (321) | (70) | (1,161) |
| **Net operating assets[3]** | **12,765** | **6,266** | **1,795** | **20,826** |
| Additions to tangible fixed assets included in net operating assets | 1,010 | 498 | 69 | 1,577 |
| Personnel costs | 3,904 | 2,610 | 579 | 7,093 |
| **Employees at year end** | **40,105** | **27,832** | **14,512** | **82,449** |

| 1997 | Europe | The Americas | Asia/Africa Australia | Total |
|---|---|---|---|---|
| **Sales[1]** | **11,665** | **14,572** | **4,943** | **31,180** |
| **Operating income[2]** | **3,932** | **2,223** | **533** | **6,688** |
| Depreciation of tangible fixed assets included in operating income | (721) | (330) | (89) | (1,140) |
| **Net operating assets[3]** | **11,830** | **6,130** | **1,568** | **19,528** |
| Additions to tangible fixed assets included in net operating assets | 1,017 | 440 | 111 | 1,568 |
| Personnel costs | 4,016 | 2,640 | 642 | 7,298 |
| **Employees at year end** | **41,463** | **30,641** | **15,135** | **87,239** |

(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 1999, 1998 and 1997 (Continued)

The following countries accounted for more than 5% of the respective Group totals as at, or for the years ended, December 31, 1999, 1998 and 1997:

| | *Sales*[1] | | | | | | *Investment in tangible fixed assets* | | | | | | *Net operating assets*[3] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Country* | *1999* | *%* | *1998* | *%* | *1997* | *%* | *1999* | *%* | *1998* | *%* | *1997* | *%* | *1999* | *%* | *1998* | *%* | *1997* | *%* |
| Switzerland | 631 | 2 | 654 | 2 | 708 | 2 | 280 | 20 | 400 | 26 | 481 | 22 | 6,383 | 26 | 6,461 | 31 | 6,215 | 32 |
| USA | 11,912 | 37 | 11,822 | 37 | 11,241 | 36 | 440 | 32 | 407 | 26 | 325 | 20 | 6,400 | 26 | 4,971 | 24 | 4,940 | 25 |
| Japan | 2,266 | 7 | 1,775 | 6 | 1,936 | 6 | 16 | 1 | 13 | 1 | 32 | 2 | 934 | 4 | 886 | 4 | 745 | 4 |
| Germany | 2,257 | 7 | 2,185 | 7 | 2,135 | 7 | 76 | 6 | 56 | 4 | 12 | 5 | 875 | 4 | 971 | 5 | 857 | 4 |
| France | 2,223 | 7 | 2,258 | 7 | 2,320 | 7 | 50 | 4 | 63 | 4 | 14 | 4 | 882 | 4 | 915 | 4 | 779 | 4 |
| Other | 13,176 | 40 | 13,008 | 41 | 12,840 | 42 | 509 | 37 | 638 | 39 | 704 | 47 | 9,285 | 36 | 6,622 | 32 | 5,992 | 31 |
| **Total Group** | **32,465** | **100** | **31,702** | **100** | **31,180** | **100** | **1,371** | **100** | **1,577** | **100** | **1,568** | **100** | **24,759** | **100** | **20,826** | **100** | **19,528** | **100** |

(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.

No single customer accounts for 10% or more of the Group's total sales.

## 5. Financial income, net

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Interest income | 1,132 | 929 | 999 |
| Dividend income | 23 | 34 | 34 |
| Capital gains | 628 | 677 | 185 |
| Income on options and forward contracts | 121 | 391 | 77 |
| Other financial income | 6 | 15 | 26 |
| **Financial income** | **1,910** | **2,046** | **1,321** |
| Interest expense | (542) | (733) | (892) |
| Expenses on options and forward contracts | (303) | (337) | (108) |
| Other financial expense | (115) | (88) | (97) |
| **Financial expense** | **(960)** | **(1,158)** | **(1,097)** |
| **Currency losses, net** | **(157)** | **(129)** | **(57)** |
| **Total, net** | **793** | **759** | **167** |

1999 interest income includes a total of CHF 1 million (1998: CHF 8 million expense; 1997: CHF 36 million expense) received from the foundations referred to in note 27 at commercial interest rates on the outstanding short-term debt.

## 6. Taxes

Income before taxes and minority interests consists of the following:

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Switzerland | 3,575 | 3,163 | 2,880 |
| Foreign | 4,944 | 4,755 | 4,020 |
| **Total income before taxes and minority interests** | **8,519** | **7,918** | **6,900** |

Current income tax expense consists of the following:

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Switzerland | (349) | (317) | (337) |
| Foreign | (1,312) | (1,215) | (944) |
| **Total current income tax expense** | **(1,661)** | **(1,532)** | **(1,281)** |

Deferred income tax expense consists of the following:

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Switzerland | (136) | (328) | (230) |
| Foreign | (36) | (22) | (163) |
| **Total deferred tax expense** | **(172)** | **(350)** | **(393)** |
| **Total income tax expense** | **(1,833)** | **(1,882)** | **(1,674)** |
| Temporary differences related to tax write-down of investments in subsidiaries on which no deferred tax has been provided as they are permanent in nature. | 2,421 | 2,619 | 2,262 |

The gross value of net operating loss carryforwards with their expiry dates is as follows:

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| one year | 21 | 13 |
| two years | 22 | 3 |
| three years | 21 | 25 |
| four years | 23 | 17 |
| five years | 115 | 8 |
| more than five years | 810 | 593 |
| **Total** | **1,012** | **659** |

Of these gross values CHF 245 million has been capitalized as a deferred tax asset (1998: CHF 255 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:

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *%* | *%* | *%* |
| Expected tax rate | 21.2 | 23.1 | 25.1 |
| Effect of disallowed expenditures | 1.8 | 1.8 | 2.3 |
| Effect of utilization of tax losses brought forward from prior periods | (0.3) | (0.7) | (0.8) |
| Effect of income taxed at reduced rates | (3.2) | (1.4) | (1.2) |
| Prior year and other items | 2.0 | 1.0 | (1.1) |
| **Effective tax rate** | **21.5** | **23.8** | **24.3** |

The utilization of tax loss carryforwards lowered the tax charge by CHF 27 million, CHF 53 million and CHF 53 million in 1999, 1998 and 1997, respectively.

## 7. Earnings per Share (EPS)

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 the average number of Shares purchased by the Group and held as treasury Shares from the issued Shares.

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| Net income attributable to shareholders (CHF millions) | 6,659 | 6,010 | 5,208 |
| Weighted average number of Shares outstanding | 66,345,501 | 66,172,155 | 65,857,082 |
| **Basic earnings per Share (expressed in CHF per Share)** | **100** | **91** | **79** |

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. In the diluted EPS calculation the convertible debt is assumed to have been converted into Shares and the net income is adjusted to eliminate the applicable interest expense less the tax effect.

## 7. Earnings per Share (EPS) (Continued)

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| Net income attributable to shareholders (CHF millions) | 6,659 | 6,010 | 5,208 |
| Elimination of interest expense on convertible debt (net of tax effect) | 3 | 4 | 8 |
| Net income used to determine diluted earnings per Share | 6,662 | 6,014 | 5,216 |
| Weighted average number of Shares outstanding | 66,345,501 | 66,172,155 | 65,857,082 |
| Adjustment for assumed conversion of convertible debt | 149,935 | 180,622 | 293,019 |
| Adjustment for dilutive stock options | 13,977 | 18,104 | 9,227 |
| Weighted average number of Shares for diluted earnings per Share | 66,509,413 | 66,370,881 | 66,159,328 |
| **Diluted earnings per Share (expressed in CHF per Share)** | **100** | **91** | **79** |

## 8. Tangible fixed asset movements

| | *Land* | *Buildings* | *Machinery* | *Plant under construction and other equipment* | *1999 CHF millions* | *1998 CHF millions* |
|---|---|---|---|---|---|---|
| **Cost** | | | | | | |
| **January 1** | **560** | **7,760** | **11,714** | **1,518** | **21,552** | **21,624** |
| Consolidation changes | 10 | (6) | (91) | (3) | (90) | (75) |
| Additions | 10 | 469 | 1,183 | (291) | 1,371 | 1,577 |
| Disposals | (59) | (327) | (859) | (20) | (1,265) | (1,151) |
| Translation effects | 44 | 546 | 758 | 97 | 1,445 | (423) |
| **December 31** | **565** | **8,442** | **12,705** | **1,301** | **23,013** | **21,552** |
| **Accumulated depreciation** | | | | | | |
| **January 1** | **(2)** | **(3,491)** | **(6,688)** | | **(10,181)** | **(10,021)** |
| Consolidation changes | | 15 | 58 | | 73 | 88 |
| Depreciation charge | | (501) | (955) | | (1,456) | (1,204) |
| Depreciation on disposals | 2 | 227 | 659 | | 888 | 780 |
| Translation effects | (1) | (224) | (446) | | (671) | 177 |
| **December 31** | **(1)** | **(3,974)** | **(7,372)** | | **(11,347)** | **(10,180)** |
| **Net book value—December 31** | **564** | **4,468** | **5,333** | **1,301** | **11,666** | **11,372** |
| **Insured value—December 31** | | | | | **22,775** | **22,260** |
| **Net book value of tangible fixed assets under finance lease contracts** | | | | | **22** | **15** |

Included in the restructuring accruals at December 31, 1999 is approximately CHF 42 million (1998: CHF 300 million) related to tangible fixed assets which are in the process of being retired as a result of the merger of Sandoz and Ciba. This amount will be transferred to accumulated depreciation as soon as the tangible fixed assets cease to be operational and the amount can be allocated to the respective categories. Facility closures associated with the retirement of the tangible fixed assets are expected to be completed by December 31, 2000. Further information regarding provisioning for tangible fixed assets is discussed at Note 22—Restructuring charges.

At December 31, 1999 commitments for purchases of tangible fixed assets totalled CHF 139 million (1998: CHF 193 million).

## 9. Intangible asset movements

| | *Goodwill CHF millions* | *Product rights CHF millions* | *Trademarks CHF millions* | *Software CHF millions* | *Other CHF millions* | *1999 CHF millions* | *1998 CHF millions* |
|---|---|---|---|---|---|---|---|
| **Cost** | | | | | | | |
| **January 1** | **1,439** | **1,379** | **122** | **45** | **140** | **3,125** | **2,914** |
| Additions | 214 | 248 | 121 | 17 | 33 | 633 | 454 |
| Disposals | (5) | (3) | (3) | (4) | (2) | (17) | (167) |
| Translation effects | 120 | 95 | 17 | 4 | 4 | 240 | (76) |
| **December 31** | **1,768** | **1,719** | **257** | **62** | **175** | **3,981** | **3,125** |
| **Accumulated amortization** | | | | | | | |
| **January 1** | **(157)** | **(161)** | **(42)** | **(31)** | **(79)** | **(470)** | **(275)** |
| Amortization | (62) | (117) | (14) | (15) | (40) | (248) | (227) |
| Disposals | 1 | 1 | 0 | 4 | 3 | 9 | 33 |
| Translation effects | (16) | (30) | (5) | (3) | (4) | (58) | (1) |
| **December 31** | **(234)** | **(307)** | **(61)** | **(45)** | **(120)** | **(767)** | **(470)** |
| **Net book value— December 31** | **1,534** | **1,412** | **196** | **17** | **55** | **3,214** | **2,655** |

## 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. 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 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 has the liquidity to acquire.

The Group therefore expects that any loss in value for those instruments generally would be offset by increases in the value of those hedged transactions.

*(a) Foreign exchange rates*

The Group uses the CHF as its reporting currency and is therefore exposed to foreign exchange movements, primarily in $, 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. At December 31, 1999, the Group had long and short forward exchange/option contracts with equivalent values of CHF 4.3 billion and CHF 19.1 billion, respectively. At December 31, 1998, the Group had long

**10. Marketable securities and derivative financial instruments (Continued)**

and short forward exchange/option contracts with equivalent values of CHF 4.0 billion and CHF 14.5 billion, respectively.

*(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 not more than 10% of that margin and 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 through 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. The Group's percentage of fixed rate debt to total financial debt was 28% and 32% at December 31, 1999 and 1998, respectively.

Use of the above-mentioned derivative financial instruments has not had a material effect on the Group's financial position at December 31, 1999 and 1998 or the Group's results of operations for the years ended December 31, 1999, 1998 and 1997.

**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 tables below show the contract or underlying principal amounts and fair values of derivative financial instruments analyzed by type of contract at December 31, 1999 and 1998. Contract or underlying principal amounts indicate the volume of business outstanding at the balance sheet date and do not represent amounts at risk. The fair values represent the gain or loss a contract would

**10. Marketable securities and derivative financial instruments (Continued)**

realize when exchanged or settled using values determined by the markets or standard pricing models at December 31, 1999 and 1998.

| | *Contract or underlying principal amount CHF millions* | | *Positive fair values CHF millions* | | *Negative fair values CHF millions* | |
|---|---|---|---|---|---|---|
| | *1999* | *1998* | *1999* | *1998* | *1999* | *1998* |
| **Currency related hedging instruments** | | | | | | |
| Forward foreign exchange rate contracts | 1,632 | 1,024 | 25 | 70 | (49) | (72) |
| Over the counter currency options | 4,911 | 7,491 | 10 | 101 | (59) | (78) |
| **Total of currency related hedging instruments** | **6,543** | **8,515** | **35** | **171** | **(108)** | **(150)** |
| **Currency related non-hedging instruments** | | | | | | |
| Forward foreign exchange rate contracts | 2,638 | 2,953 | 19 | 20 | (54) | (16) |
| Over the counter currency options | 14,169 | 7,006 | 4 | 26 | (22) | (58) |
| Cross currency swaps | 354 | 423 | 3 | 41 | (29) | (46) |
| **Total of currency related non-hedging instruments** | **17,161** | **10,382** | **26** | **87** | **(105)** | **(120)** |
| **Interest related instruments** | | | | | | |
| Interest rate swaps | 3,945 | 4,704 | 44 | 98 | (39) | (73) |
| Forward rate agreements | 11,310 | 18,682 | 8 | 35 | (22) | (43) |
| Caps and floors | 960 | 1,165 | 3 | — | (11) | (17) |
| **Total of interest related instruments** | **16,215** | **24,551** | **55** | **133** | **(72)** | **(133)** |
| **Equity options** | **2,050** | **2,307** | **46** | **6** | **(122)** | **(79)** |
| **Total derivative financial instruments** | **41,969** | **45,755** | **162** | **397** | **(407)** | **(482)** |

All of the currency related hedging instruments mature within twelve months. Out of the total currency related hedging instruments included above, CHF 1,659 million (1998: CHF 835 million) was contracted with the intention of hedging anticipated transactions. Anticipatory hedges are only made with options.

All negative fair values of the currency related non-hedging options are recognized in the income statement. Net losses per portfolio on other currency contracts and on interest related instruments are recognized in the income statement. Net unrealized gains are not recorded.

The majority of interest related instruments are utilized for managing the returns on the Group's liquidity.

**10. Marketable securities and derivative financial instruments (Continued)**

The contract or underlying principal amount of currency and interest related derivative financial instruments at December 31, 1999 and 1998 are set forth by currency in the table below.

| | *Forward Foreign Exchange CHF millions* | *Forward rate agreements CHF millions* | *Options, Caps and Floors CHF millions* | *Total 1999 CHF millions* | *Total 1998 CHF millions* |
|---|---|---|---|---|---|
| CHF | | 10,900 | 960 | 11,860 | 18,365 |
| $ | 1,115 | | 5,735 | 6,850 | 1,102 |
| EUR | 1,523 | | 7,248 | 8,771 | |
| DEM | | 410 | | 410 | 8,482 |
| FRF | | | | | 540 |
| GBP | | | 1,186 | 1,186 | 1,238 |
| JPY | | | | | 46 |
| ITL | | | | | 33 |
| **Total** | **2,638** | **11,310** | **15,129** | **29,077** | **29,806** |
| Currency related hedging instruments | | | | 6,543 | 8,515 |
| Cross currency swaps | | | | 354 | 423 |
| Interest rate swaps | | | | 3,945 | 4,704 |
| Equity options | | | | 2,050 | 2,307 |
| **Total derivative financial instruments** | | | | **41,969** | **45,755** |

| | *Balance sheet value CHF millions* | | *Unrealized gains/losses CHF millions* | | *Market value CHF millions* | |
|---|---|---|---|---|---|---|
| *Marketable securities* | *1999* | *1998* | *1999* | *1998* | *1999* | *1998* |
| *Bonds held to maturity* | | | | | | |
| Debt securities issued or backed by foreign governments | 1,134 | 992 | (17) | 34 | 1,117 | 1,026 |
| Corporate debt securities | 5,373 | 5,014 | (113) | 107 | 5,260 | 5,121 |
| Other debt securities | 1,104 | 440 | (21) | 17 | 1,083 | 457 |
| **Total bonds held to maturity** | **7,611** | **6,446** | **(151)[1]** | **158[1]** | **7,460** | **6,604** |
| *Available for sale* | | | | | | |
| Equities | 2,141 | 1,613 | 319 | 625 | 2,460 | 2,238 |
| Debt securities | 5,998 | 4,425 | 139 | 78 | 6,137 | 4,503 |
| **Total available for sale securities** | **8,139** | **6,038** | **458** | **703** | **8,597** | **6,741** |
| **Time deposits longer than 90 days** | **570** | **543** | | | **570** | **543** |
| **Total at December 31** | **16,320** | **13,027** | **307[1]** | **861[1]** | **16,627** | **13,888** |

(1) Excludes CHF 507 million of unrealized currency gains (1998: CHF 395 million of losses) which would be realized if the bonds held to maturity were to be sold.

**10. Marketable securities and derivative financial instruments (Continued)**

**Maturity analysis of bonds held to maturity at December 31, 1999**

| | *Within 1 year CHF millions* | *Between 1 year and 5 years CHF millions* | *Between 5 years and 10 years CHF millions* | *Total 1999 CHF millions* | *Total 1998 CHF millions* |
|---|---|---|---|---|---|
| Total amortized cost of bonds held to maturity | 1,338 | 4,082 | 2,191 | 7,611 | 6,446 |

**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* | | *Income statement effect* | | |
|---|---|---|---|---|---|
| | *1999 CHF millions* | *1998 CHF millions* | *1999 CHF millions* | *1998 CHF millions* | *1997 CHF millions* |
| Chiron Corporation, USA | 1,300 | 827 | 342 | 188 | 18 |
| CIMO Compagnie industrielle de Monthey SA, Switzerland | 104 | 85 | — | (17) | (3) |
| Others | 236 | 197 | 41 | 68 | 30 |
| **Total** | **1,640** | **1,109** | **383** | **239** | **45** |

**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 September 30 of each year. 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 non-Ciba 1995 acquisitions which were written off by Chiron in 1995). The difference between the equity interest in the underlying net assets and the carrying value of Chiron is CHF 124 million and CHF 126 million as of September 30, 1999 and 1998, respectively, and primarily relates to goodwill. Novartis' effective shareholding in Chiron was 43.7% at September 30, 1999. This had a market value at December 31, 1999 of CHF 5.3 billion ($3.4 billion).

A significant part of the 1999 and 1998 income statement effect results from Chiron's disposal of discontinued operations.

The Group's associated companies utilize local accounting standards, which are then adjusted to IAS.

## 12. Deferred taxes

| | | *1999* | *1998* |
|---|---|---|---|
| | | *CHF millions* | *CHF millions* |
| Assets associated with | —employee benefit liabilities | 554 | 391 |
| | —restructuring accruals | 537 | 472 |
| | —inventory[1] | 1,360 | 1,208 |
| | —intangible assets | 255 | 242 |
| | —other provisions and accruals | 1,117 | 961 |
| Less: valuation allowance | | (365) | (214) |
| **Deferred tax assets less valuation allowance** | | **3,458** | **3,060** |
| Liabilities associated with | —tangible fixed asset depreciation | 1,106 | 1,172 |
| | —prepaid pensions | 973 | 427 |
| | —other provisions and accruals | 1,567 | 1,238 |
| **Total liabilities** | | **3,646** | **2,837** |
| **Net deferred tax (liability)/asset** | | **(188)** | **223** |

(1) The effect of adopting revised IAS 12 on deferred taxes has resulted in an increase in deferred tax assets at January 1, 1998 of CHF 478 million. This has been credited directly to equity. Adoption of this revised policy has resulted in the deferred tax asset increasing by a further CHF 106 million during 1998. It has not been practical to restate the prior year.

The deferred tax asset less valuation allowance at December 31, 1999 and 1998 comprises CHF 2,409 million and CHF 2,299 million of current assets and CHF 1,049 million and CHF 761 million of non-current assets, respectively. The deferred tax liability at December 31, 1999 and 1998 comprises CHF 1,023 million and CHF 827 million of current and CHF 2,623 million and CHF 2,010 million of non-current liabilities, respectively.

A reversal of the valuation allowance could occur when circumstances result in the realization of deferred tax assets becoming probable. This would result in a decrease in the Group's effective tax rate.

At December 31, 1999 and 1998, unremitted earnings of CHF 26 billion and CHF 28 billion, respectively, have been retained indefinitely 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 would result based on the tax statutes currently in effect.

## 13. Other financial assets

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Long-term loans to associated companies | 113 | 171 |
| Other investments and long-term loans | 797 | 792 |
| Prepaid pension | 3,687 | 1,605 |
| **Total** | **4,597** | **2,568** |

**13. Other financial assets (Continued)**

The principal reason for the increase in the prepaid pensions is due to adoption of IAS 19 (revised) as described in note 3 to the statement of changes in equity and note 25.

**14. Inventories**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Raw material, consumables | 1,773 | 1,386 |
| Finished products | 5,114 | 5,309 |
| **Total** | **6,887** | **6,695** |

At December 31, 1999 and 1998 inventory write-downs of CHF 487 million and CHF 390 million respectively were deducted in arriving at the above amounts.

**15. Trade accounts receivable**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Total | 7,666 | 6,269 |
| Provision for doubtful receivables | (625) | (455) |
| **Total net** | **7,041** | **5,814** |

**16. Other current assets**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Withholding tax recoverable | 1,535 | 696 |
| Gerber Life insurance receivables | 978 | 742 |
| Prepaid expenses —third parties | 172 | 294 |
| —associated companies | 104 | 117 |
| Other receivables —third party | 1,492 | 1,324 |
| —associated companies | 142 | 101 |
| **Total** | **4,423** | **3,274** |

## 17. Details of Share capital movements

| **Share capital (all Shares have a nominal value of CHF 20 each)** | *Number of Shares* | | | | | | |
|---|---|---|---|---|---|---|---|
| | *January 1, 1997* | *Movement In year* | *December 31, 1997* | *Movement In year* | *December 31, 1998* | *Movement in year [1]* | *December 31, 1999* |
| Registered Shares | 64,058,249 | | 64,058,249 | | 64,058,249 | 8,071,868 | 72,130,117 |
| Bearer Shares | 8,071,868 | | 8,071,868 | | 8,071,868 | (8,071,868) | |
| **Total Novartis AG Shares[2]** | **72,130,117** | **—** | **72,130,117** | **—** | **72,130,117** | **—** | **72,130,117** |
| **Treasury Shares** | | | | | | | |
| **Registered Shares** | | | | | | | |
| Reserved for convertible bonds and dividend bearing | 393,541 | (201,045) | 192,496 | (23,749) | 168,747 | (37,625) | 131,122 |
| Other dividend bearing | 3,105,532 | (144,467) | 2,961,065 | (214,995) | 2,746,070 | 957,865 | 3,703,935 |
| Non-dividend bearing | 1,430,000 | | 1,430,000 | | 1,430,000 | 1,246,700 | 2,676,700 |
| **Total treasury registered Shares** | **4,929,073** | **(345,512)** | **4,583,561** | **(238,744)** | **4,344,817** | **2,166,940** | **6,511,757** |
| **Bearer Shares** | | | | | | | |
| Dividend bearing | 270,018 | 1 | 270,019 | (90,056) | 179,963 | (179,963) | |
| Non-dividend bearing | 1,246,700 | | 1,246,700 | | 1,246,700 | (1,246,700) | — |
| **Total treasury bearer Shares** | **1,516,718** | **1** | **1,516,719** | **(90,056)** | **1,426,663** | **(1,426,663)** | |
| **Total treasury Shares** | **6,445,791** | **(345,511)** | **6,100,280** | **(328,800)** | **5,771,480** | **740,277** | **6,511,757** |
| **Outstanding Shares** | | | | | | | |
| Registered Shares | 59,129,176 | 345,512 | 59,474,688 | 238,744 | 59,713,432 | 5,904,928 | 65,618,360 |
| Bearer Shares | 6,555,150 | (1) | 6,555,149 | 90,056 | 6,645,205 | (6,645,205) | |
| **Total outstanding Shares** | **65,684,326** | **345,511** | **66,029,837** | **328,800** | **66,358,637** | **(740,277)** | **65,618,360** |
| | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* |
| Total Share capital | 1,443 | | 1,443 | | 1,443 | | 1,443 |
| Treasury Shares | (129) | 7 | (122) | 7 | (115) | (15) | (130) |
| **Outstanding Share capital** | **1,314** | **7** | **1,321** | **7** | **1,328** | **(15)** | **1,313** |

(1) On April 21, 1999 the Company's Annual General Meeting approved the conversion of all Novartis AG's bearer Shares into an equal number of registered Shares.

(2) All Shares are authorized, issued and fully paid. All Shares are voting Shares and, except as noted in the table, are dividend bearing.

## 18. Long-term financial debts

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Convertible bonds | 1,088 | 933 |
| Straight bonds | 649 | 562 |
| Straight bonds—Euro Medium Term Note Program | 1,035 | 1,309 |
| Liabilities to banks and other financial institutions[1] | 453 | 505 |
| Finance lease obligations | 12 | 12 |
| **Total (including current portion of long-term debt)** | **3,237** | **3,321** |
| Less current portion of long-term debt | (793) | (482) |
| **Total** | **2,444** | **2,839** |
| **Convertible bonds** | | |
| $ 750 million 2.00% convertible bonds 1995/2002 of Novartis Capital Ltd., British Virgin Islands[2] | 1,026 | 857 |
| CHF 750 million 1.25% convertible bonds 1995/2002 of Novartis Capital Ltd., British Virgin Islands[3] | 62 | 76 |
| **Total convertible bonds** | **1,088** | **933** |
| **Straight bonds** | | |
| $ 70 million, weighted average interest 4.3% (1998: 4.8%), pollution control and industrial development revenue bonds 1998/2020 of Novartis Corporation, Summit, New Jersey, USA and subsidiaries | 111 | 97 |
| $ 300 million 6.375% bonds 1993/2000 of Novartis Overseas Finance Ltd., British Virgin Islands | 478 | 413 |
| $ 38 million 9.0% bonds 2006 of Gerber Products, Fremont | 60 | 52 |
| **Total straight bonds** | **649** | **562** |
| **Straight bonds—Euro Medium Term Note Program[4]** | | |
| Max. $ 2.5 billion | | |
| $ 100 million 5.88% Euro-note 1993/2000 of Novartis Corporation, Summit, New Jersey, USA | 159 | 138 |
| $ 300 million 6.625% Euro-note 1995/2005 of Novartis Corporation, Summit, New Jersey, USA | 478 | 413 |
| $ 300 million 6.875% Euro-note 1995/99 of Novartis Corporation, Summit, New Jersey, USA | — | 413 |
| $ 250 million 6.625% Euro-note 1995/2005 of Novartis Corporation, Summit, New Jersey, USA | 398 | 345 |
| **Total straight bonds—EMTN program** | **1,035** | **1,309** |

(1) Average interest rate 3.6% (1998: 4.0%).

(2) The issue price was 81.17%. The difference between the debt value and the maturity value of 100% is being accrued as an additional financing cost over seven years. Each $10,000 principal amount of the bonds may be converted up to September 30, 2002 into 9.366 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 registered 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, 1999 the outstanding hedge with the non-consolidated entities represented 592,596 Shares. An appropriate number of treasury Shares are reserved for the balance. At December 31, 1999 bonds totalling $20,000,000 had been converted.

## 18. Long-term financial debts (Continued)

(3) The issue price was 100% of the principal amount. On October 23, 2000 the bondholders have an option to put the bonds back to the issuer at 106.5%. The difference between the debt value and the put value of 106.5% is being accrued as an additional financing cost over five years. Bonds of CHF 5,000 par value are convertible up to October 9, 2002 into 5 issued and outstanding, fully paid registered Shares of Novartis AG with each converting bondholder receiving an amount of CHF 289.95 per bond in cash. Novartis Capital Ltd. has acquired options from the non-consolidated employee Share participation and employee benefit foundations to cover partly its obligation to deliver registered 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, 1999 the outstanding hedge with the non-consolidated entities represented 19,420 Shares. An appropriate number of treasury Shares are reserved for the balance. At December 31, 1999 bonds totalling CHF 690,580,000 had been converted.

(4) As issued under former Sandoz and Ciba-Geigy EMTN documentation. No new notes can be issued under these programs.

On January 14, 1998 the Group established another multicurrency Euro Medium Term Note Program for a maximum of $ 2.5 billion. At December 31, 1999 and 1998 no notes had been issued under this Program. This Program will lapse during 2000.

| | | *1999* | *1998* |
|---|---|---|---|
| | | *CHF millions* | *CHF millions* |
| Breakdown by maturity | 1999 | | 482 |
| | 2000 | 793 | 678 |
| | 2001 | 1,209 | 1,078 |
| | 2002 | 96 | 73 |
| | 2003 | 107 | 106 |
| | 2004 | 886 | |
| | Thereafter | 146 | 904 |
| **Total** | | **3,237** | **3,321** |
| Breakdown by currency | $ | 2,712 | 2,765 |
| | CHF | 63 | 78 |
| | ATS | | 97 |
| | JPY | 209 | 146 |
| | Others | 253 | 235 |
| **Total** | | **3,237** | **3,321** |

| *Fair value comparison* | *1999 Balance Sheet* | *1999 Fair Values* | *1998 Balance Sheet* | *1998 Fair Values* |
|---|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* |
| Convertible bonds | 1,088 | 1,782 | 933 | 2,092 |
| Straight bonds (including Euro Medium Term Note Program) | 1,684 | 1,661 | 1,871 | 1,938 |
| Others | 465 | 465 | 517 | 517 |
| **Total** | **3,237** | **3,908** | **3,321** | **4,547** |

**18. Long-term financial debts (Continued)**

| *Collateralized long-term debts and pledged assets* | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Total amount of collateralized long-term financial debts | 245 | 230 |
| Total net book value of tangible fixed assets pledged as collateral for long-term financial debts | 415 | 404 |

The financial debts including short-term financial debts, contain only general default covenants. The Group is in compliance with these covenants.

**19. Other long-term liabilities**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Employee benefits—unfunded defined benefit plans | 1,123 | 773 |
| —other long-term employee benefits and deferred compensation | 705 | 436 |
| Other post-retirement benefits | 630 | 831 |
| Potential claims from insurance activities | 711 | 591 |
| Environmental provisions | 332 | 251 |
| Provision for legal and product liability settlements | 496 | 358 |
| Deferred purchase consideration | 231 | 215 |
| Restructuring provision | 67 | 112 |
| Provision for leasehold renovations | 54 | 28 |
| Other provisions | 238 | 374 |
| **Total** | **4,587** | **3,969** |

**20. Short-term financial debts**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Bank and other financial debt (including interest bearing employee accounts) | 4,747 | 4,157 |
| Commercial paper | 1,019 | 1,436 |
| Current portion of long-term financial debts | 793 | 482 |
| Financial obligation for repurchase agreements | 920 | — |
| **Total** | **7,479** | **6,075** |

The above balance sheet values of short-term financial debt, other than the current portion of long-term financial debts, approximates the estimated fair value due to the short-term nature of these instruments.

**20. Short-term financial debts (Continued)**

Bank and other financial debt includes no amounts (1998: CHF 32 million) payable to pension and other employee benefit funds, employee share participation plans and other foundations referred to in note 27.

The weighted average interest rate on the bank and other financial debt was 4.6% and 4.5% as of December 31, 1999 and 1998, respectively.

**21. Other short-term liabilities**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Income and other taxes | 2,784 | 1,629 |
| Restructuring provisions | 493 | 1,224 |
| Accrued expenses | 3,037 | 2,864 |
| Current portion of provision for potential claims from insurance activities | 240 | 229 |
| Social security/pension funds | 203 | 234 |
| Current portion of environmental provisions | 47 | 59 |
| Deferred income relating to government grants | 30 | 24 |
| Provisions for goods returned and commissions | 222 | 146 |
| Other payables | 907 | 969 |
| **Total** | **7,963** | **7,378** |

**22. Restructuring charges**

The Group has experienced significant merger and divestment activity since 1996, when Sandoz and Ciba 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, 11,690 of whom have left the Group as of December 31, 1998. All remaining employees have left the Group in 1999 with the exception of 91 employees who will leave in 2000. All significant actions associated with the plan were essentially completed by December 31, 1999.

In 1997, charges of CHF 74 million were incurred in conjunction with the Gerber restructuring in the US. The charges included employee termination costs of CHF 35 million and asset write downs of CHF 39 million. 600 production, administration and sales employees were identified in the original plan, all of whom have left the Group as of December 31, 1999. All significant actions associated with the Gerber plan are completed.

Charges of CHF 208 million were incurred during 1998 in conjunction with the restructuring of the Consumer Health sector worldwide as well as the Pharmaceutical sector in the US. The charges included employee termination costs of CHF 135 million, other third party costs of CHF 51 million and tangible fixed asset impairments of CHF 22 million. 581 production, administration and sales employees were

**22. Restructuring charges (Continued)**

identified in the original plan, 571 of whom have left the Group as of December 31, 1999. All significant actions associated with these plans are expected to be completed by December 31, 2000.

In June 1999, the Agribusiness sector initiated "Project Focus". The charges of CHF 100 million incurred in conjunction with this project are comprised of employee termination costs of CHF 61 million, other third party cost of CHF 22 million and tangible fixed asset impairments of CHF 17 million. Approximately 1,100 jobs will be eliminated worldwide as a result of this project. In July 1999, the Pharmaceuticals sector initiated a plan to downsize certain of its production facilities mainly in the US and Canada. Charges of CHF 70 million incurred in conjunction with this project are comprised of employee termination costs of CHF 54 million and other third party costs of CHF 16 million. All significant actions associated with these plans are expected to be completed by June 30, 2001. The additions were more than off-set by releases to income during 1999 of CHF 284 million comprised of other third party costs of CHF 193 million, employee termination costs of CHF 89 million and tangible fixed asset impairments of CHF 2 million. The release to income was a result of settlements of liabilities at lower amounts than originally anticipated.

| | *Employee termination costs* | *Tangible fixed asset impairments* | *Other third party costs* | *Total* |
|---|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* |
| **Balance at December 31, 1996** | **1,974** | **759** | **1,393** | **4,126** |
| CSC spin-off | (284) | (150) | (144) | (578) |
| Cash payments | (906) | (42) | (522) | (1,470) |
| Additions | 27 | | 51 | 78 |
| Non-income fixed asset write-offs | | (106) | | (106) |
| Translation gain/(loss), net | (6) | 12 | 9 | 15 |
| **Balance at December 31, 1997** | **805** | **473** | **787** | **2,065** |
| Cash payments | (422) | (90) | (186) | (698) |
| Releases | (59) | (53) | (58) | (170) |
| Additions | 135 | 22 | 51 | 208 |
| Non-income fixed asset write-offs | | (43) | | (43) |
| Translation gain/(loss), net | (4) | (9) | (13) | (26) |
| **Balance at December 31, 1998** | **455** | **300** | **581** | **1,336** |
| Cash payments | (251) | (15) | (222) | (488) |
| Releases | (89) | (2) | (193) | (284) |
| Additions | 115 | 17 | 38 | 170 |
| Non-income fixed asset write-offs | | (278) | | (278) |
| Translation gain/(loss), net | 50 | 20 | 34 | 104 |
| **Balance at December 31, 1999** | **280** | **42** | **238** | **560** |

*Tangible fixed asset impairments*

Based on the review of the carrying values of tangible fixed assets, write-downs were recorded in 1996 for tangible fixed assets impaired or related to activities to be restructured, divested or abandoned. The

**22. Restructuring charges (Continued)**

provision is transferred to accumulated depreciation as the tangible fixed assets are restructured, divested or abandoned.

*Other third party costs*

Other third party costs are mainly associated with lease and other obligations due to the abandonment of certain facilities.

**23. Cash flows arising from changes in working capital excluding restructuring items**

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Change in inventories | 469 | (364) | (747) |
| Change in trade accounts receivable and other net current assets | (1,257) | 32 | (660) |
| Change in trade accounts payable | 294 | (241) | (152) |
| **Total** | **(494)** | **(573)** | **(1,559)** |

## 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:

| | *1999 Acquisitions* | *1999 Divestments* | *1998 Acquisitions* | *1998 Divestments* | *1997 Divestments* |
|---|---|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* | *CHF millions* |
| Tangible fixed assets | (77) | 148 | (70) | 107 | 4,492 |
| Other long-term assets | (42) | 16 | (1) | 141 | 791 |
| Inventories | (56) | 55 | (48) | 82 | 2,157 |
| Trade accounts receivable and other current assets | (163) | 70 | (102) | 248 | 1,189 |
| Net current assets due from CIBA SC | | | | | (838) |
| Advance from CIBA SC | | | | | (526) |
| Marketable securities, cash and short-term deposits | (7) | 13 | (7) | 15 | 516 |
| Long-term and short-term debt to third parties | 106 | (49) | 33 | (14) | (881) |
| Trade accounts payable and other liabilities | 73 | 17 | 62 | (113) | (2,716) |
| **Net assets acquired/divested** | **(166)** | **270** | **(133)** | **466** | **4,184** |
| Less acquired/divested liquidity | 8 | (13) | 7 | (15) | (516) |
| Less decrease in investments in associated companies | 23 | | 122 | | |
| **Sub-total** | **(135)** | **257** | **(4)** | **451** | **3,668** |
| Goodwill | (203) | | (327) | | |
| Reversal of goodwill formerly charged to equity | | | | 77 | |
| Reduction of equity and minority interests | 39 | (7) | | (51) | (4,184) |
| Divestment gains | | 288 | | 89 | |
| **Net Cash Flow** | **(299)** | **538** | **(331)** | **566** | **(516)** |

The significant changes in the companies that have been consolidated are described in note 2. There were no significant acquisitions in 1997. The major divestment in 1997 was the spin-off of CIBA SC with effect from January 1, 1997. All acquisitions and divestments in 1999 and 1998 were for cash.

The following are the cash flows from the discontinuing Agribusiness sector included in the consolidated cash flow statement.

| | *1999* | *1998* | *1997* |
|---|---|---|---|
| | *CHF millions* | *CHF millions* | *CHF millions* |
| Cash flow from operating activities | 829 | 813 | 880 |
| Cash flow from investing activities | (251) | (460) | (1,588) |
| Cash flow from financing activities | (626) | (366) | 832 |

## 25. Employee benefits

*(a) Defined benefit obligation*

The Group has, apart from the legally required social security schemes, numerous independent pension plans. The assets are principally kept externally. 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 yearly and at least every three years the obligations are reassessed 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, 1999 and 1998 using the IAS 19 (revised) actuarial assumptions:

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Funded assets of independent defined benefit pension plans: | 25,454 | 24,456 |
| Defined benefit obligations of active and retired employees | (21,304) | (21,996) |
| **Funded Status** | **4,150** | **2,460** |
| Limitation on recognition of surplus due to uncertainty of obtaining future benefits | (455) | (444) |
| Unrecognized gain | (1,131) | — |
| Surplus in funded plans to be credited to equity at January 1, 1999 as a result of adopting revised IAS 19 | — | (1,184) |
| **Net asset in balance sheet** | **2,564** | **832** |

The net asset in the balance sheet consists of:

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Prepaid pension expense included in financial assets | 3,687 | 1,605 |
| Accrued pension costs included in other long-term liabilities | (1,123) | (773) |
| **Total net asset** | **2,564** | **832** |

**25. Employee benefits (Continued)**

The following are the principal actuarial assumptions, used for calculating the 1999 and 1998 income statement amounts and the above December 31, 1999 and 1998 funded status of the main defined benefit plans:

| | *Income statement* | | | *Funded status* | |
|---|---|---|---|---|---|
| *Weighted average %* | *1999* | *1998* | *1997* | *1999* | *1998* |
| | % | % | % | % | % |
| — discount rate | 3.6 | 4.9 | 5.1 | 4.1 | 4.2 |
| — inflation rate | 2.8 | 4.3 | 3.6 | 2.8 | 4.3 |
| — return on assets | 6.1 | 5.2 | 6.0 | 6.1 | 5.2 |

In some group companies employees are covered by defined contribution plans and other long-term employee benefits. The liability of the Group for these plans is included in other long-term employee benefits and deferred compensation and amounts at December 31, 1999 to CHF 550 million (1998: CHF 321 million). In 1999 contributions charged to the consolidated income statement for these plans were CHF 122 million (1998: CHF 79 million).

The number of Novartis AG Shares held by pension and similar benefit funds at December 31, 1999 was 1.2 million Shares with a market value of CHF 2.8 billion (1998: CHF 1.1 million Shares with a market value of CHF 3.0 billion).

The plan purchased 40,000 Novartis AG Shares during the year ended December 31, 1999. The amount of dividends received on Novartis AG Shares held as plan assets was CHF 34 million for the year ended December 31, 1999.

*(b) Other post-retirement benefits*

The Group's post-retirement healthcare, insurance and other related post-retirement benefits are not funded.

The following are the principal actuarial assumptions used for calculating these post-retirement benefits:

| | *1999 Weighted average* | *1998 Weighted average* | *1997 Weighted average* |
|---|---|---|---|
| | % | % | % |
| — discount rate | 7.7 | 6.8 | 7.0 |
| — healthcare cost trend (initial) | 5.9 | 6.2 | 7.0 |
| — healthcare cost trend (ultimate) | 4.8 | 5.0 | 4.5 |

In 1999 the cost of post-retirement benefits other than pensions totalled CHF 62 million (1998: CHF 27 million; 1997: CHF 53 million).

**25. Employee benefits (Continued)**

The following is a summary of the balance sheet movements and income statement amounts in relation to defined benefit plans and other post-retirement benefits:

| | *Defined benefit pension plans 1999* | *Other post-retirement benefits 1999* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| **Asset/(liability) at beginning of the year** | **832** | **(831)** |
| Additional net assets due to adoption of IAS 19 (revised) | 1,184 | 218 |
| Increase in prepaid pensions | 408 | — |
| Decrease/(increase) in accrued liabilities | 140 | (17) |
| **Asset/(liability) at end of year** | **2,564** | **(630)** |

The amounts recognized in the income statement are as follows:

| | *Defined benefit pension plans 1999* | *Other post-retirement benefits 1999* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Expected return on plan assets | 1,505 | — |
| Current service cost | (508) | (15) |
| Interest cost | (784) | (47) |
| **Income/(expense)** | **213** | **(62)** |

The actual return on plan assets for 1999 was CHF 1,429 million.

**26. Employee share participation plans**

Employee and management share participation plans exist as follows:

*(a) Employee Share Ownership Plans*

In 1998, a Novartis Employee Share Ownership Plan was introduced for all employees of Swiss subsidiaries. This entitles employees after 1 year of service to acquire 3 Shares in Novartis AG every year at a price determined by the Board's compensation committee, which is currently CHF 500 per Share. Employees are immediately required to buy the Shares to which they have become entitled. During the year 38,860 Shares (1998: 40,582 Shares) were distributed under this plan.

*(b) Novartis Stock Option Plan*

Under the current plan options, exercisable after 3 years and terminating after 10 years, are granted annually as part of the remuneration of exective officers and other employees outside the USA selected by the Board's compensation committee entitling them to acquire Novartis AG Shares (1 Share per option) at

**26. Employee share participation plans (Continued)**

a predetermined strike price. The number of options granted depends on the performance of individuals and of the sector in which they work.

| | 1999 | | 1998 | |
|---|---|---|---|---|
| | *Shares* | *Weighted average exercise price* | *Shares* | *Weighted average exercise price* |
| | *(000)* | *CHF* | *(000)* | *CHF* |
| Outstanding at the beginning of the year | 90 | 2,155 | 54 | 1,584 |
| Granted | 45 | 2,757 | 40 | 2,800 |
| Exercised | (1) | 946 | (4) | 816 |
| Outstanding at the end of the year | 134 | 2,372 | 90 | 2,155 |
| Exercisable at the end of the year | 14 | 1,959 | 5 | 1,247 |
| Weighted average fair value of options granted during the year (CHF) | | 676 | | 733 |

All options were granted at an exercise price which was greater than the market price of the Group's Shares at the grant date.

The following table summarizes information about stock options outstanding at December 31, 1999:

| | *Options outstanding* | | | *Options exercisable* | |
|---|---|---|---|---|---|
| *Range of exercise prices* | *Number Outstanding* | *Average remaining contractual life (years)* | *Weighted average exercise price* | *Number Exercisable* | *Weighted average exercise price* |
| | | | *(CHF)* | | *(CHF)* |
| 727 | 474 | 0.4 | 727 | 474 | 727 |
| 1,237–1,887 | 44,458 | 6.7 | 1,678 | 9,143 | 1,590 |
| 2,280–2,800 | 88,878 | 8.5 | 2,777 | 4,751 | 2,792 |
| 727–2,800 | 133,810 | 7.8 | 2,372 | 14,368 | 1,959 |

*(c) Management ADR Appreciation Cash Plan*

In 1999, 1,503,630 options (1998: 1,240,840 options), exercisable after 3 years and terminating after 10 years, were granted as part of the remuneration of eligible Novartis employees in the US entitling them to cash compensation equivalent to the increase in the value of Novartis ADRs compared to the market price of Novartis ADRs on the grant date. Options are granted annually 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 individuals and of the sector in which they work.

*(d)* In 1999 and 1998, the cost of the non-US plans referred to in (a) and (b) above was borne wholly by Novartis employee share participation foundations which are not consolidated. The cost of the US plans referred to in (c) above was hedged by the US subsidiaries and ultimately is also borne wholly by Novartis employee Share participation foundations. These foundations have adequate resources to meet the needs of the above plans for the foreseeable future.

**26. Employee share participation plans (Continued)**

*(e)* Movements in Novartis AG Shares held by the Novartis employee share participation foundations, excluding vested Shares, were as follows:

| | *1999 Number of shares* | *1998 Number of shares* |
|---|---|---|
| | *(000)* | *(000)* |
| **January 1** | **1,717** | **2,060** |
| Shares bought/sold in the market | 565 | (298) |
| Shares distributed to employees | (39) | (45) |
| **December 31** | **2,243** | **1,717** |

The market value of the Novartis AG shares held by these foundations at December 31, 1999 was CHF 5.2 billion (1998: CHF 4.6 billion).

**27. Related parties**

The Group has in the past set up certain foundations with the objects of employee welfare, employee share participation and charitable contributions. The charitable foundations foster health care and social development in rural countries, and conduct agricultural development and research.

These foundations are autonomous, with independent boards responsible for administering the foundations in accordance with the foundations' objects and the law.

The employee share participation foundations have not been consolidated as SIC 12 exempts post-employment and equity compensation plans from its scope. The total assets of these foundations are CHF 4,893 million as of December 31, 1999, including 2,243,520 shares of Novartis AG with a fair value of CHF 5.2 billion.

Furthermore, there are approximately thirty other foundations that were established for charitable purposes that have not been consolidated, as the Group does not receive benefit. As of December 31, 1999 these foundations held approximately 158,000 shares of Novartis AG with a cost of approximately CHF 76 million.

In 1997, the Novartis Group

- received short-term loans totalling CHF 374 million at December 31, 1997 from these foundations.
- sold to these foundations 520,000 Novartis AG Shares at market rates.

In 1998, the Novartis Group sold to these foundations

- marketable securities to cover option obligations of these foundations at market values for a total of CHF 218 million realizing a gain of CHF 160 million.
- 244,000 Novartis AG Shares at market rates.

**27. Related parties (Continued)**

In 1999, the Novartis Group

- granted short-term loans totalling CHF 330 million to these foundations.
- received short-term loans totalling CHF 192 million from these foundations.
- sold to these foundations 277,000 Novartis AG Shares at market rates.

See notes 5, 11, 16, 18, 20, 25, 26 and 28 for disclosure of other related party transactions and balances.

**28. Commitments and contingencies**

| | | *1999* | *1998* |
|---|---|---|---|
| | | *CHF millions* | *CHF millions* |
| **Leasing commitments** | | | |
| Commitments arising from fixed-term operational leases in effect at December 31 are as follows: | 1999 | | 170 |
| | 2000 | 177 | 121 |
| | 2001 | 113 | 87 |
| | 2002 | 78 | 53 |
| | 2003 | 45 | 41 |
| | 2004 | 39 | |
| | Thereafter | 226 | 224 |
| **Total** | | **678** | **696** |
| **Expense of current year** | | **(211)** | **(199)** |

**Chiron** In addition to its investment in Chiron shares, Novartis has agreed to:

- purchase up to $500 million of new Chiron equity, at Chiron's request. This has not been requested to date.
- guarantee up to $703 million of Chiron debt. Utilization of the guarantee in excess of $425 million reduces the equity put amount mentioned above.
- guarantee an additional $200 million of credit facilities to enable repayment of certain convertible debt of Chiron.
- invest at least $265 million over five years for research support. $246 million was invested up to December 31, 1999 and the balance of $19 million will be paid in 2000.

Furthermore, in February 1997, Novartis issued 6 million put options on Chiron shares valued at $45 million with a strike price of $30 and a maturity date of February 25, 2000. Changes from the initial value of the put options are treated as operating income. The adjusted fair value of the option was $4 million and $32 million at December 31, 1999 and 1998, respectively and is recorded in other long-term liabilities.

**28. Commitments and contingencies (Continued)**

The Group has entered into long-term research agreements with various institutions where the Group will fund various research projects and other commitments. The approximate payments to these institutions are as follows:

| | *CHF millions* |
|---|---|
| 2000 | 777 |
| 2001 | 337 |
| 2002 | 214 |
| 2003 | 154 |
| 2004 | 112 |
| Thereafter | 36 |
| Total | 1,630 |

**Contingencies** The 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.

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.

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, results of operations or cash flow.

The material components of the environmental liability consist of a risk assessment based on investigation of the various sites. 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.

**29. Principal currency translation rates**

| | | *1999* | *1998* | *1997* |
|---|---|---|---|---|
| | | *CHF* | *CHF* | *CHF* |
| Year end rates used for the consolidated balance sheets: | | | | |
| | 1 $ | 1.59 | 1.38 | 1.46 |
| | 100 DEM | 81.99 | 82.35 | 81.25 |
| | 100 FRF | 24.45 | 24.55 | 24.27 |
| | 1 GBP | 2.58 | 2.29 | 2.41 |
| | 100 ITL | 0.083 | 0.083 | 0.083 |
| | 100 JPY | 1.56 | 1.21 | 1.12 |
| Average rates of the year used for the consolidated income and cash flow statements: | | | | |
| | 1 $ | 1.50 | 1.45 | 1.45 |
| | 100 DEM | 81.81 | 82.36 | 83.92 |
| | 100 FRF | 24.40 | 24.53 | 24.95 |
| | 1 GBP | 2.43 | 2.40 | 2.37 |
| | 100 ITL | 0.083 | 0.083 | 0.085 |
| | 100 JPY | 1.34 | 1.11 | 1.19 |

**30. Group subsidiaries, joint ventures and associated companies**

As at December 31, 1999

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:* This entity performs research and development activities for the Group.

Please refer to Note 1 "Accounting Policies" for the appropriate accounting method applied to each type of entity.

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Argentina** | | | | | |
| Novartis Argentina S.A., Buenos Aires | ● | | ◆ | ▼ | ▲ |
| **Australia** | | | | | |
| Novartis Australia Pty Ltd., Pendle Hill, NSW | ● | ■ | | | |
| Novartis Pharmaceuticals Australia Pty Ltd., North Ryde, NSW | ● | | ◆ | | ▲ |
| Novartis Crop Protection Australasia Pty Ltd., Pendle Hill, NSW | ● | | ◆ | ▼ | |
| Novartis Animal Health Australasia Pty Ltd., Pendle Hill, NSW | ● | | ◆ | | ▲ |
| Novartis Consumer Health Australasia Pty Ltd., Rowville, Victoria | ● | | ◆ | ▼ | |
| **Austria** | | | | | |
| Novartis Pharma GmbH, Vienna | ● | | ◆ | | |
| Novartis Forschungsinstitut GmbH, Vienna | ● | | | | ▲ |
| Biochemie GmbH, Kundl | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Agro GmbH, Vienna | ● | | ◆ | | |
| Novartis Animal Health GmbH, Kundl | ● | | ◆ | | |
| **Bangladesh** | | | | | |
| Novartis (Bangladesh) Limited., Dhaka | ◗ | | ◆ | ▼ | |
| **Belgium** | | | | | |
| N.V. Novartis Management Services S.A., Brussels | ● | ■ | | | |
| N.V. Novartis Pharma S.A., Brussels | ● | | ◆ | | |
| N.V. CIBA Vision Benelux S.A., Mechelen | ● | | ◆ | | |
| N.V. Novartis Agro S.A., Zaventem | ● | | ◆ | | |
| N.V. Novartis Consumer Health S.A., Brussels | ● | | ◆ | | |

● = Subsidiary; > 90%—fully consolidated
◗= subsidiary; above 50% and up to 90%—fully consolidated
○ = investments in associated companies; above 20% up to 50%—equity method accounting

**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Bermuda** | | | | | |
| Triangle International Reinsurance Ltd., Hamilton | ● | ■ | | | |
| Novartis International Pharmaceutical Ltd., Hamilton | ● | ■ | ◆ | | |
| **Brazil** | | | | | |
| Novartis Biociências S.A., São Paulo | ● | | ◆ | ▼ | |
| Novartis Seeds Ltda., São Paulo | ● | | ◆ | ▼ | ▲ |
| Novartis Saúde Animal Ltda., São Paulo | ● | | ◆ | ▼ | |
| Hiborn do Brasil Produtos Infantis e do Lar S.A., Rio de Janeiro | ● | | ◆ | ▼ | |
| **British Virgin Islands** | | | | | |
| Novartis Overseas Finance Ltd., Road Town, Tortola | ● | ■ | | | |
| Novartis Capital Ltd., Road Town, Tortola | ● | ■ | | | |
| **Canada** | | | | | |
| Novartis Pharmaceuticals Canada Inc., Dorval/ Montreal | ● | | ◆ | ▼ | ▲ |
| CIBA Vision Canada Inc., Mississauga, Ontario | ● | | ◆ | ▼ | |
| Novartis Crop Protection Canada Inc., Guelph, Ontario | ● | | ◆ | | |
| Novartis Seeds Inc., Arva, Ontario | ● | | ◆ | ▼ | ▲ |
| Novartis Consumer Health Canada Inc., Mississauga, Ontario | ● | | ◆ | | |
| **Chile** | | | | | |
| Novartis Chile S.A., Santiago de Chile | ● | | ◆ | ▼ | |
| **China** | | | | | |
| Beijing Novartis Pharma Ltd., Beijing | ◗ | | ◆ | ▼ | |
| Novartis Pharmaceuticals (HK) Limited, Hong Kong | ○ | | ◆ | | |
| Novartis Agro (China) Limited, Hong Kong | ● | | ◆ | | |
| Shanghai Novartis Nutrition Ltd., Shanghai | ◗ | | ◆ | ▼ | |
| **Colombia** | | | | | |
| Novartis de Colombia S.A., Santafé de Bogotá | ● | | ◆ | ▼ | |
| **Costa Rica** | | | | | |
| Productos Gerber de Centroamérica, S.A., San José | ● | | ◆ | ▼ | |

● = Subsidiary; > 90%—fully consolidated
◗= subsidiary; above 50% and up to 90%—fully consolidated
○ = investments in associated companies; above 20% up to 50%—equity method accounting

**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Czech Republic** | | | | | |
| Novartis Czech Republic s.r.o., Prague | ● | | ◆ | | |
| **Denmark** | | | | | |
| Novartis Danmark A/S, Copenhagen | ● | ■ | | | |
| Novartis Healthcare A/S, Copenhagen | ● | | ◆ | | |
| Novartis Agri A/S, Copenhagen | ● | | ◆ | | |
| **Ecuador** | | | | | |
| Novartis Ecuador S.A., Quito | ● | | ◆ | | |
| **Egypt** | | | | | |
| Novartis Pharma S.A.E., Cairo | ● | | ◆ | ▼ | |
| Novartis Agro Egypt S.A.E., Dokki, Giza | ● | | ◆ | | |
| **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 | ● | | ◆ | ▼ | ▲ |
| CIBA Vision S.A., Toulouse | ● | | ◆ | | |
| Novartis Agro S.A., Rueil-Malmaison | ● | | ◆ | ▼ | ▲ |
| Novartis Seeds S.A., Saint-Sauveur/Toulouse | ● | | ◆ | ▼ | ▲ |
| Maïsadour Semences S.A., Haut Mauco | ○ | | ◆ | | ▲ |
| Novartis Santé Animale S.A., Rueil-Malmaison | ● | | ◆ | ▼ | |
| Novartis Santé Familiale S.A., Revel | ● | | ◆ | ▼ | |
| Nutrition et Santé S.A., Revel | ● | ■ | ◆ | ▼ | ▲ |
| **Germany** | | | | | |
| Novartis Deutschland GmbH, Wehr | ● | ■ | | | |
| Novartis Pharma GmbH, Nuremberg | ● | | ◆ | ▼ | ▲ |
| Azupharma GmbH & Co., Gerlingen near Stuttgart | ● | | ◆ | ▼ | |
| BC Biochemie GmbH, Frankfurt am Main | ● | | ◆ | ▼ | |
| CIBA Vision Vertriebs GmbH, Grossostheim/ Aschaffenburg | ● | | ◆ | | |
| CIBA Vision GmbH, Grosswallstadt | ● | | ◆ | ▼ | ▲ |
| Novartis Agro GmbH, Frankfurt am Main | ● | | ◆ | | |
| Novartis Seeds GmbH, Kleve | ● | | ◆ | ▼ | ▲ |
| Novartis Consumer Health GmbH, Munich | ● | | ◆ | ▼ | ▲ |
| Novartis Nutrition GmbH, Celle | ● | | ◆ | ▼ | ▲ |

● = Subsidiary; > 90%—fully consolidated
◗= subsidiary; above 50% and up to 90%—fully consolidated
○ = investments in associated companies; above 20% up to 50%—equity method accounting

**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Great Britain** | | | | | |
| Novartis UK Ltd., Farnborough | ● | ■ | | | |
| Novartis (Financial Services) Ltd., Farnborough | ● | ■ | | | |
| Novartis Grimsby Ltd., Grimsby | ● | | | ▼ | |
| Novartis Pharmaceuticals UK Ltd., Frimley/ Camberley | ● | | ◆ | ▼ | ▲ |
| Imutran Ltd., Cambridge | ● | | | | ▲ |
| CIBA Vision (UK) Ltd., Southampton | ● | | ◆ | | |
| Novartis Crop Protection UK Ltd., Cambridge | ● | | ◆ | | ▲ |
| Novartis Seeds Ltd., Docking | ● | | ◆ | ▼ | ▲ |
| Novartis Animal Health UK Ltd., Cambridge | ● | | ◆ | | ▲ |
| Novartis Consumer Health UK Ltd., Horsham | ● | | ◆ | ▼ | |
| Novartis Nutrition UK Ltd., King's Langley | ● | | | ▼ | ▲ |
| **Greece** | | | | | |
| Novartis (Hellas) S.A.C.I., Athens | | | ◆ | | |
| **Guatemala** | | | | | |
| Novartis Agro, S.A. (ACC), Guatemala City | ● | | ◆ | | |
| **Hungary** | | | | | |
| Novartis Hungary Healthcare and Agribusiness Limited Liability Co., Budapest | ● | | ◆ | | |
| Novartis Seeds Kft., Budapest | ● | | ◆ | ▼ | ▲ |
| **India** | | | | | |
| Novartis India Limited, Mumbai | ◗ | | ◆ | ▼ | |
| Novartis Enterprises 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 Italia S.p.A., Origgio | ● | ■ | | | |
| Novartis Farma S.p.A., Origgio | ● | | ◆ | ▼ | ▲ |
| Biochemie S.p.A., Rovereto | ● | | | ▼ | |
| CIBA Vision S.r.l., Marcon | ● | | ◆ | | |
| Novartis Protezione Piante S.p.A., Origgio | ● | | ◆ | | |
| Novartis Seeds S.p.A., Origgio | ● | | ◆ | ▼ | ▲ |
| Novartis Consumer Health S.p.A., Origgio | ● | | ◆ | | |

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◗= subsidiary; above 50% and up to 90%—fully consolidated
○ = investments in associated companies; above 20% up to 50%—equity method accounting

**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Ivory Coast** | | | | | |
| SOCHIM-Côte d'Ivoire S.A., Abidjan | ● | | ◆ | ▼ | |
| **Japan** | | | | | |
| Novartis Japan K.K., Tokyo | ● | ■ | | | |
| Novartis Pharma K.K., Tokyo | ● | | ◆ | | ▲ |
| Ciba-Geigy Japan Limited, Takarazuka | ● | | | ▼ | |
| CIBA Vision K.K., Tokyo | ● | | ◆ | | |
| Novartis Agro K.K., Tokyo | ● | | ◆ | | |
| Tomono Agrica Co., Ltd., Shizuoka | ◗ | | ◆ | ▼ | ▲ |
| **Malaysia** | | | | | |
| Novartis Corporation (Malaysia) Sdn. Bhd., Shah Alam | ◗ | | ◆ | | |
| **Mexico** | | | | | |
| Novartis de México, S.A. de C.V., Mexico City | ● | ■ | | | |
| Novartis Farmacéutica, S.A. de C.V., Mexico City | ● | | ◆ | ▼ | |
| Novartis Agro, S.A. de C.V., Mexico City | ● | | ◆ | ▼ | ▲ |
| Novartis Nutrition, S.A. de C.V., Mexico City | ● | | ◆ | | |
| Productos Gerber, S.A. de C.V., Querétaro | ● | | ◆ | ▼ | |
| **Netherlands** | | | | | |
| Novartis Netherlands B.V., Enkhuizen | ● | ■ | | | |
| Novartis Pharma B.V., Arnhem | ● | | ◆ | | |
| Multipharma B.V., Weesp | ● | | ◆ | ▼ | |
| Novartis Agro Benelux B.V., Roosendaal | ● | | ◆ | ▼ | |
| Novartis Seeds B.V., Enkhuizen | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Consumer Health B.V., Breda | ● | | ◆ | ▼ | |
| **Netherlands Antilles** | | | | | |
| Novartis Investment N.V., Curação | ● | ■ | | | |
| **New Zealand** | | | | | |
| Novartis New Zealand Ltd., Auckland | ● | | ◆ | | |
| **Norway** | | | | | |
| Novartis Norge AS, Oslo | ● | | ◆ | | |
| **Pakistan** | | | | | |
| Novartis Pharma (Pakistan) Limited, Karachi | ● | | ◆ | ▼ | |
| Novartis (Pakistan) Limited, Karachi | ● | | ◆ | ▼ | |
| **Peru** | | | | | |
| Novartis Biosciences Perú S.A., Lima | ● | | ◆ | | |

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**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Philippines** | | | | | |
| Novartis Healthcare Philippines, Inc., Makati/ Manila | ● | | ◆ | | |
| Novartis Agro Philippines, Inc., Makati/Manila | ● | | ◆ | | |
| Novartis Nutrition Philippines, Inc., Pasig/Manila | ● | | ◆ | ▼ | |
| **Poland** | | | | | |
| Novartis Poland Sp. z o.o., Warsaw | ● | | ◆ | | |
| Alima-Gerber S.A., Warsaw | ● | | ◆ | ▼ | |
| **Portugal** | | | | | |
| Novartis Portugal SGPS Lda., Rio de Mouro | ● | ■ | | | |
| Novartis Farma—Produtos Farmacêuticos S.A., Rio de Mouro | ● | | ◆ | | |
| Novartis Agro Lda., Lisbon | ● | | ◆ | | |
| Novartis Consumer Health—Produtos Farmacêuticos e Nutrição Lda., Lisbon | ● | | ◆ | ▼ | |
| **Puerto Rico** | | | | | |
| Gerber Products Company of Puerto Rico, Inc., Carolina | ● | | ◆ | ▼ | |
| **Singapore** | | | | | |
| CIBA Vision (Singapore) Pte Ltd., Singapore | ● | | ◆ | | |
| Novartis Crop Protection (Singapore) Pte Ltd., Singapore | ● | | ◆ | | |
| **South Africa** | | | | | |
| Novartis South Africa (Pty) Ltd., Spartan/ Johannesburg | ● | ■ | ◆ | ▼ | ▲ |
| **South Korea** | | | | | |
| Novartis Korea Ltd., Seoul | ● | | ◆ | ▼ | |
| Novartis Agro Korea Ltd., Seoul | ● | | ◆ | ▼ | |
| Novartis Seeds Co., Ltd., Seoul | ● | | ◆ | ▼ | ▲ |
| **Spain** | | | | | |
| Novartis Hispania, S.A., Barcelona | ● | ■ | | | |
| Novartis Farmacéutica, S.A., Barcelona | ● | ■ | ◆ | ▼ | |
| Biochemie, S.A., Les Franqueses del Vallés/ Barcelona | ● | | ◆ | ▼ | ▲ |
| CIBA Vision, S.A., Barcelona | ● | | ◆ | | |
| Novartis Agro, S.A., Barcelona | ● | | ◆ | ▼ | |
| Novartis Seeds, S.A., Barcelona | ● | | ◆ | ▼ | |
| Novartis Consumer Health, S.A., Barcelona | ● | | ◆ | ▼ | |

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○ = investments in associated companies; above 20% up to 50%—equity method accounting

**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **Sweden** | | | | | |
| Novartis Sverige Participations AB, Täby/Stockholm | ● | ■ | | | |
| Novartis Sverige AB, Täby/Stockholm | ● | | ◆ | | |
| CIBA Vision Nordic AB, Askim/Göteborg | ● | | ◆ | | |
| Novartis Seeds AB, Landskrona | ● | | ◆ | ▼ | ▲ |
| **Switzerland** | | | | | |
| Novartis International AG, Basel | ● | ■ | | | |
| Novartis Pharma AG, Basel | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Crop Protection AG, Basel | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Seeds AG, Basel | ● | ■ | | | |
| Novartis Animal Health AG, Basel | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Consumer Health S.A., Nyon | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Services AG, Basel | ● | ■ | | | |
| CIMO Compagnie industrielle de Monthey S.A., Monthey | ○ | | | ▼ | |
| Novartis Holding AG, Basel | ● | ■ | | | |
| Novartis Research Foundation, Basel | ● | | | | ▲ |
| Novartis Technology Research Foundation, Zug | ● | | | | ▲ |
| Novartis Foundation for Management Development, Zug | ● | ■ | | | |
| Novartis Pharma Services AG, Basel | ● | | ◆ | | |
| Novartis Pharma Schweizerhalle AG, Schweizerhalle | ● | | | ▼ | |
| Novartis Pharma Stein AG, Stein | ● | | | ▼ | ▲ |
| Novartis Pharma Schweiz AG, Berne | ● | | ◆ | | |
| CIBA Vision AG, Hettlingen | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Agro AG, Dielsdorf | ● | | ◆ | ▼ | ▲ |
| Novartis Crop Protection Schweizerhalle AG, Schweizerhalle | ● | | | ▼ | |
| Novartis Crop Protection Münchwilen AG, Münchwilen | ● | | | ▼ | ▲ |
| Novartis Crop Protection Monthey S.A., Monthey | ● | | | ▼ | |
| Säurefabrik Schweizerhall AG, Schweizerhalle | ◗ | | ◆ | ▼ | |
| Novartis Centre de Recherche Santé Animale S.A., St-Aubin | ● | | | | ▲ |
| Novartis Consumer Health International S.A., Nyon | ● | | ◆ | | |
| Novartis Consumer Health Schweiz AG, Berne | ● | | ◆ | | |
| Novartis Nutrition AG, Berne | ● | ■ | | | |
| Wander AG, Neuenegg | ● | | | ▼ | |

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**30. Group subsidiaries, joint ventures and associated companies (Continued)**

| | *Equity Interest* | *Holding/ Finance* | *Sales* | *Production* | *Research* |
|---|---|---|---|---|---|
| **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 | ● | | ◆ | ▼ | |
| **Uruguay** | | | | | |
| Novartis Uruguay S.A., Montevideo | ● | | ◆ | | |
| **USA** | | | | | |
| Novartis Corporation, Summit, NJ | ● | ■ | | | |
| Novartis Finance Corporation, New York, NY | ● | ■ | | | |
| Novartis Pharmaceuticals Corporation, East Hanover, NJ | ● | | ◆ | ▼ | ▲ |
| Novartis Institute for Functional Genomics, Inc., La Jolla, CA | ● | | | | ▲ |
| Genetic Therapy, Inc., Gaithersburg, MD | ● | | | | ▲ |
| SyStemix, Inc., Palo Alto, CA | ● | | | | ▲ |
| Chiron Corporation, Emeryville, CA | ○ | ■ | ◆ | ▼ | ▲ |
| Geneva Pharmaceuticals, Inc., Broomfield, CO | ● | | ◆ | ▼ | ▲ |
| CIBA Vision Corporation, Duluth, GA | ● | ■ | ◆ | ▼ | ▲ |
| Novartis Agribusiness Biotechnology Research, Inc., Research Triangle Park, NC | ● | | | | ▲ |
| Novartis Crop Protection, Inc., Greensboro, NC | ● | | ◆ | ▼ | ▲ |
| Novartis Seeds, Inc., Golden Valley, MN | ● | | ◆ | ▼ | ▲ |
| Novartis Animal Health US, Inc., Greensboro, NC | ● | | ◆ | ▼ | ▲ |
| Novartis Consumer Health, Inc., Summit, NJ | ● | | ◆ | ▼ | ▲ |
| Novartis Nutrition Corporation, Minneapolis, MN | ● | | ◆ | ▼ | ▲ |
| Gerber Products Company, Fremont, MI | ● | ■ | ◆ | ▼ | ▲ |
| Gerber Life Insurance Company, White Plains, NY | ● | | ◆ | | |
| **Venezuela** | | | | | |
| Novartis de Venezuela SA, Caracas | ● | | ◆ | | |
| Novartis Nutrition de Venezuela SA, Caracas | ● | | ◆ | ▼ | |
| **Vietnam** | | | | | |
| Novartis (Vietnam) Limited, Bien Hoa City | ● | | ◆ | ▼ | |

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◗ = subsidiary; above 50% and up to 90%—fully consolidated
○ = investments in associated companies; above 20% up to 50%—equity method accounting

In addition, the Group is represented by subsidiaries, associated companies or joint ventures in the following countries:

Algeria, Dominican Republic, Kenya, Morocco, Nigeria, Panama, Romania, Russian Federation, Slovenia, Sri Lanka and Ukraine.

## 31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles

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 U.S. GAAP. The effects of the application of U.S. GAAP to net income and equity are set out in the tables below:

| | *Notes* | *1999* | *1999* | *1998* |
|---|---|---|---|---|
| | | *$ millions*[1] | *CHF millions* | *CHF millions* |
| **Net income reported under IAS** | | **4,188** | **6,659** | **6,010** |
| U.S. GAAP adjustments: | | | | |
| Purchase accounting: Ciba-Geigy | a | (287) | (457) | (425) |
| Purchase accounting: other acquisitions | b | (174) | (277) | (252) |
| Restructuring costs | c | (586) | (931) | (228) |
| Available-for-sale securities | d | 87 | 138 | 1 |
| Pension provisions | e | 50 | 79 | (26) |
| Stock-based compensation | f | (26) | (41) | (125) |
| Consolidation of stock-based compensation foundations | g | (3) | (5) | (31) |
| Deferred taxes | h | (16) | (26) | (106) |
| Other | i | (6) | (9) | (44) |
| Deferred tax effect on U.S. GAAP adjustments | | 181 | 289 | 181 |
| **Net income reported under U.S. GAAP** | | **3,408** | **5,419** | **4,955** |
| **Basic income per Share under U.S. GAAP** | | **53** | **84** | **77** |
| **Diluted income per Share under U.S. GAAP** | | **53** | **84** | **77** |

| | *Notes* | *1999* | *1999* | *1998* |
|---|---|---|---|---|
| | | *$ millions*[1] | *CHF millions* | *CHF millions* |
| **Equity reported under IAS** | | **23,406** | **37,216** | **31,396** |
| U.S. GAAP adjustments: | | | | |
| Purchase accounting: Ciba-Geigy | a | 4,540 | 7,219 | 7,676 |
| Purchase accounting: other acquisitions | b | 3,546 | 5,638 | 5,261 |
| Restructuring costs | c | 45 | 72 | 1,003 |
| Available-for-sale securities | d | 288 | 458 | 703 |
| Pension provisions | e | 1,201 | 1,909 | 3,014 |
| Stock-based compensation | f | (14) | (22) | (54) |
| Consolidation of stock-based compensation foundations | g | (158) | (252) | 857 |
| Deferred taxes | h | (383) | (609) | (583) |
| Other | i | (165) | (262) | (30) |
| Deferred tax effect on U.S. GAAP adjustments | | (498) | (792) | (1,420) |
| **Equity reported under U.S. GAAP** | | **31,808** | **50,575** | **47,823** |

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

| | *1999* | *1999* | *1998* |
|---|---|---|---|
| | *$ millions*[1] | *CHF millions* | *CHF millions* |
| Components of equity in accordance with U.S. GAAP | | | |
| Share capital | 908 | 1,443 | 1,443 |
| Treasury Shares, at nominal value | (108) | (172) | (149) |
| Share premium | 191 | 303 | 3,281 |
| Retained earnings | 30,158 | 47,953 | 44,421 |
| Accumulated other comprehensive income: | | | |
| Currency translation adjustment | 532 | 846 | (1,733) |
| Unrealized market value adjustment on securities available for sale (net of taxes of USD 14 million, CHF 23 million and CHF 61 million, respectively) | 127 | 202 | 560 |
| **Total** | **31,808** | **50,575** | **47,823** |

| | *$ millions*[1] | *CHF millions* |
|---|---|---|
| **January 1, 1998 (U.S. GAAP)** | **27,958** | **44,455** |
| Net income for the year under U.S. GAAP | 3,116 | 4,955 |
| Dividends paid | (1,046) | (1,663) |
| Net unrealized market value adjustment | (28) | (45) |
| Increase in Share premium related to stock based compensation | 52 | 83 |
| Increase in Share premium for options written on own stock | 170 | 270 |
| Foreign currency translation adjustment | (601) | (956) |
| Disposal of treasury Shares | 454 | 722 |
| Other changes in shareholders' equity | 1 | 2 |
| **December 31, 1998 (U.S. GAAP)** | **30,076** | **47,823** |
| Net income for the year under U.S. GAAP | 3,408 | 5,419 |
| Dividends paid | (1,217) | (1,935) |
| Net unrealized market value adjustment | (225) | (358) |
| Increase in Share premium related to stock based compensation | 46 | 73 |
| Foreign currency translation adjustment | 1,623 | 2,579 |
| Acquisition of treasury Shares | (1,903) | (3,026) |
| **December 31, 1999 (U.S. GAAP)** | **31,808** | **50,575** |

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.59 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 U.S. GAAP. For IAS purposes the merger was accounted for as a uniting

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

of interests, however, for U.S. 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 U.S. GAAP. The merger was consummated before the effective date of Interpretation 9 of the SIC on accounting for business combinations. Under U.S. 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 U.S. GAAP, the cost of CIBA to Sandoz was approximately CHF 38.1 billion.

The in-process research and development that was acquired in the Ciba-Geigy acquisition was charged to U.S. GAAP net income during 1996 because the acquired research and development at December 20, 1996 had not yet been established and the technology had no alternative future use.

The fair value of net assets acquired of CHF 47.9 billion exceeded the purchase price resulting in negative goodwill of CHF 9.8 billion which has been allocated to the acquired long-term, non-monetary assets. The recording of deferred tax assets and liabilities related to the temporary differences between the assigned fair values of assets and liabilities and their respective tax bases resulted in the allocation of a net deferred tax asset of CHF 4.2 billion.

The fair value of the long-term, non-monetary assets on the date of acquisition have been reduced proportionately by negative goodwill. The final values assigned are as follows:

| | *CHF millions* |
|---|---|
| Intangible assets related to marketed products | 10,967 |
| Tangible fixed assets | 9,680 |
| Other indentifiable intangibles | 851 |
| Investments | 1,371 |
| In-process R&D | 5,192 |
| Other net assets | 14,204 |
| **Total** | **42,265** |

The components of the equity and income statement adjustments related to the U.S. GAAP purchase accounting adjustment for 1999 and 1998 are as follows:

| | *1999 Components to reconcile* | | *1998 Components to reconcile* | |
|---|---|---|---|---|
| *CHF millions* | *Net income* | *Equity* | *Net income* | *Equity* |
| Intangible assets related to marketed products | (548) | 9,323 | (548) | 9,871 |
| Tangible fixed assets | 81 | (1,375) | 81 | (1,456) |
| Inventory | (43) | 980 | — | 1,023 |
| Other identifiable intangibles | (66) | 460 | (66) | 526 |
| Investments | (34) | 236 | (34) | 270 |
| Deferred taxes | 153 | (2,405) | 142 | (2,558) |
| **Total adjustment** | **(457)** | **7,219** | **(425)** | **7,676** |

The intangible assets related to marketed products and other identifiable intangibles are being amortized over 20 and 10 years, respectively.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

**(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 U.S. 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 U.S. 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 U.S. GAAP attributable to Gerber Products was CHF 4,842 million and CHF 4,324 million as of December 31, 1999 and 1998, 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. U.S. GAAP is more prescriptive than IAS; for example, in order to qualify as restructuring costs under U.S. GAAP, it is necessary that employees be informed regarding the key provisions of the restructuring plan prior to the end of the reporting period. Also, there is a rebuttable presumption under U.S. GAAP that an exit plan should be completed and the exit costs incurred within one year from the commitment date. Therefore, certain costs permitted to be accrued under IAS are not allowable under U.S. GAAP.

The following schedule reconciles restructuring accruals under IAS to amounts determined under U.S. GAAP.

| *CHF millions* | *1999* | *1998* |
|---|---|---|
| Total accruals in accordance with IAS | 560 | 1,336 |
| Reclassification of restructuring accruals to tangible fixed assets | (42) | (78) |
| Adjustments in restructuring accruals to accord with U.S. GAAP | (72) | (1,003) |
| **Restructuring accruals in accordance with U.S. GAAP** | **446** | **255** |

| *CHF millions* | *1999* | *1998* |
|---|---|---|
| Employee termination costs | 40 | 259 |
| Other third party costs | 32 | 694 |
| Tangible fixed asset impairments | — | 50 |
| **Adjustments in restructuring accruals to accord with U.S. GAAP** | **72** | **1,003** |

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

Restructuring accruals according to U.S. GAAP are comprised of the following:

| *CHF millions* | *1999* | *1998* |
|---|---|---|
| Employee termination costs | 240 | 167 |
| Other third party costs | 206 | 88 |
| **Restructuring accruals in accordance with U.S. GAAP** | **446** | **255** |

It is estimated that CHF 72 million in restructuring expenses will be recorded for U.S. GAAP purposes during 2000.

**(d) Available-for-sale securities**

In accordance with IAS, investments are 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 are charged to the income statement. U.S. GAAP requires that investments in debt and certain equity securities be 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. For purposes of U.S. GAAP, the losses recognized from the application of the lower of cost or market valuation are credited back to income and considered as unrealized losses in a separate component of equity.

**(e) Pension provisions**

Under IAS, pension costs and similar obligations are accounted for in accordance with IAS 19, "Employee Benefits". For purposes of U.S. 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 be of an average long-term nature, whereas U.S. GAAP requires that the discount rate is based on a rate that the obligations could be currently settled.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

The following is a reconciliation of the balance sheet and income statement amounts recognized for IAS and U.S. GAAP for both pension and post-retirement benefit plans:

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | |
| **Pension benefits:** | | |
| Prepaid asset recognized for IAS | 2,564 | 832 |
| Increase in PBO for SFAS 87 purposes | — | (1,173) |
| Difference in unrecognized amounts | 1,909 | 4,187 |
| **Prepaid asset recognized for U.S. GAAP** | **4,473** | **3,846** |
| Net periodic income recognized for IAS | (213) | (42) |
| Amounts directly recognized to income | — | (19) |
| Amortization of transition asset | (240) | (239) |
| Amortization of actuarial amounts | 8 | — |
| **Net periodic income recognized for U.S. GAAP** | **(445)** | **(300)** |
| **Other post-retirement benefits:** | | |
| Liability recognized for IAS | (630) | (831) |
| Difference in unrecognized amounts | (173) | 114 |
| **Liability recognized for U.S. GAAP** | **(803)** | **(717)** |
| Net periodic benefit recognized for IAS | 62 | 27 |
| Amortization of actuarial amounts | (7) | 9 |
| **Net periodic benefit recognized for U.S. GAAP** | **55** | **36** |

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

**(f) Stock-based compensation**

The Group does not account for stock based compensation, as it is not required under IAS. Under U.S. 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 25, the Group has three plans that are subject to measurement under APB No. 25. These include the Novartis Stock Option Plan, the Management ADR Appreciation Cash Plan and the Employee Share Ownership Plan.

The option plan is considered to be variable under APB No. 25 as the number of Shares to be issued is not known at the date of grant. Compensation expense is recorded at each 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. No compensation expense was recorded for the option plan.

The appreciation 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 32 million for the year ended December 31, 1999. Compensation expense and the accrual recognized under the appreciation plan was CHF 42 million for the year ended December 31, 1998.

The 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. The Group sold 38,690 Shares and 40,852 Shares to employees during the years ended December 31, 1999 and 1998 for CHF 19 million and CHF 20 million, respectively. Compensation expense recognized under the ownership plan was CHF 73 million and CHF 83 million for the years ended December 31, 1999 and 1998, respectively. 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 79% and 80% for the years ended December 31, 1999 and 1998, respectively.

**(g) Consolidation of stock-based compensation foundations**

The Group has certain foundations that settle the obligations of the Group's stock-based compensation plans that are not required to be consolidated for IAS, however, must be consolidated under U.S. GAAP.

The impact of consolidating these foundations is to reduce net income by CHF 5 million and CHF 31 million in 1999 and 1998, respectively. U.S. GAAP equity at December 31, 1999 and 1998 decreases by CHF 252 million and increases by CHF 857 million, respectively.

**(h) Deferred taxes**

Under IAS 12 (revised) and U.S. GAAP, unrealized profits resulting from intercompany transactions are eliminated from the carrying amount of assets, such as inventory. In accordance with IAS 12 (revised) and effective from January 1, 1998, the Group has changed its accounting policy relating to the calculation

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

of the deferred tax effect on the elimination of unrealized intercompany profits. Prior to this date, the tax effect was calculated with reference to the local tax rate of the selling or manufacturing company, where the intercompany profit was generated. Since January 1, 1998, 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, U.S. GAAP requires the tax effect to be calculated with reference to the local tax rate on the seller's or manufacturer's jurisdiction.

**(i) Other**

There are also differences between IAS and U.S. GAAP in relation to (1) recognizing fair value of derivative financial instruments, (2) capitalized interest, (3) other post-retirement benefits, (4) accretion on convertible debentures, (5) LIFO inventory, and (6) in-process research and development. None of these differences are individually significant and they are therefore shown as a combined total.

**(j) Additional U.S. GAAP disclosures**

Financial assets and liabilities

Apart from the following exceptions, the U.S. GAAP carrying value of financial assets and liabilities is equal to the IAS carrying values.

**Cash, cash equivalents and time deposits**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Carrying value of cash, cash equivalents and time deposits under IAS | 6,851 | 7,194 |
| Addition due to consolidation of stock-based compensation foundations under U.S. GAAP | 1 | 857 |
| **Total under U.S. GAAP** | **6,852** | **8,051** |

**Marketable securities**

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Carrying value of marketable securities under IAS (note 10) | 15,750 | 12,484 |
| Unrealized gains not recorded under IAS (note 10) | 458 | 703 |
| Marketable securities in stock-based compensation foundations consolidated under U.S. GAAP | 70 | 68 |
| **Total under U.S. GAAP** | **16,278** | **13,255** |

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

The components of marketable securities under U.S. GAAP at December 31, 1999 and 1998 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, 1999** | | | | |
| *Available-for-sale securities:* | | | | |
| Equity securities | 2,320 | 346 | (136) | 2,530 |
| Debt securities | 6,097 | 139 | (99) | 6,137 |
| **Total** | **8,417** | **485** | **(235)** | **8,667** |
| **As of December 31, 1998** | | | | |
| *Available-for-sale securities:* | | | | |
| Equity securities | 1,682 | 649 | (25) | 2,306 |
| Debt securities | 4,497 | 78 | (72) | 4,503 |
| **Total** | **6,179** | **727** | **(97)** | **6,809** |

Under IAS, unrealized holding gains on available for sale securities are not recorded. Gross unrealized holding losses on available for sale securities are recorded in the other financial expense component of financial income, net. The discount or premium on held to maturity securities is amortized into the other financial expense component of financial income, net.

Under U.S. GAAP, unrealized holding gains and losses on available for sale securities are recorded as a component of other comprehensive income.

The carrying value and estimated fair values of held-to-maturity securities is provided in note 10 to the IAS consolidated financial statements.

Proceeds from sales of available-for-sale securities were CHF 12,300 million and CHF 8,822 million in 1999 and 1998, respectively. Gross realized gains were CHF 1,018 million and CHF 920 million on those sales in 1999 and 1998, respectively. Gross realized losses were CHF 301 million and CHF 406 million on those sales in 1999 and 1998, respectively. The cost used to determine the gain or loss on these sales was determined using the weighted average method.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

The maturities of the available-for-sale debt securities included above at December 31, 1999 are as follows:

| | *1999* |
|---|---|
| | *CHF millions* |
| Within one year | 307 |
| Over one year through five years | 3,528 |
| Over five years through ten years | 1,751 |
| Over ten years | 551 |
| **Total** | **6,137** |

The maturities of the held-to-maturity debt securities are provided in note 10 to the IAS consolidated financial statements.

**Derivative financial instruments**

Under U.S. GAAP, the Group marks all of its derivative financial instruments to fair value on an individual basis through the income statement and thus their carrying value is equal to their fair values. Under IAS, the Group uses the concept of portfolio valuation for derivative financial instruments. As described in note 1, for each portfolio of similar instruments the net unrealized holding gain or loss is determined by netting unrealized holding gains and losses on each instrument in the portfolio. The Group's derivative financial instruments do not qualify for hedge accounting under U.S. GAAP. The estimated fair values of derivative financial instruments is provided in note 10 to the IAS consolidated financial statements.

Derivative financial instruments are held for purposes other than trading.

**Non-derivative financial instruments**

The U.S. GAAP carrying values are equivalent to the IAS carrying values for all non-derivative financial assets and liabilities, except for marketable securities 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 value for 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 is provided in notes 18 and 20 to the IAS consolidated financial statements.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

**Earnings per Share**

As discussed in item (g) above, in the past, the Group established Novartis employee share participation foundations to assist the Group in meeting its obligations under various employee benefit plans and programs. These foundations support existing, previously approved employee benefit plans.

For U.S. GAAP purposes, the Group consolidates the Novartis employee share participation foundations. The cost of Novartis AG Shares held by the foundations is shown as a reduction of Shareholders' equity in the Group's balance sheet. Any dividend transactions between the Group and the foundations are eliminated, and the difference between the fair value of the Shares on the date of contribution to the foundations and the fair values of the Shares at December 31, 1999 is included in consolidated Share premium. Shares held in the foundations are not considered outstanding in the computation of earnings per Share.

The consolidation of those entities has the following impact on basic and diluted EPS:

| | *1999* | *1998* |
|---|---|---|
| Net income attributable to Shareholders (CHF millions) under U.S. GAAP | 5,419 | 4,955 |
| Weighted average number of Shares in issue under IAS | 66,345,501 | 66,172,155 |
| Weighted average treasury Shares due to consolidation of additional foundations under U.S. GAAP | (1,980,181) | (1,890,212) |
| Weighted average number of Shares in issue under U.S. GAAP | 64,365,320 | 64,281,943 |
| Basic earnings per Share (expressed in CHF per Share) under U.S. GAAP | 84 | 77 |

| | *1999* | *1998* |
|---|---|---|
| Net income attributable to Shareholders (CHF millions) under U.S. GAAP | 5,419 | 4,955 |
| Elimination of interest expense on convertible debt (net of tax effect) | 18 | 17 |
| Net income used to determine diluted earnings per Share | 5,437 | 4,972 |
| Weighted average number of Shares in issue under IAS | 66,345,501 | 66,172,155 |
| Adjustment for assumed conversion of convertible debt | 263,850 | 323,945 |
| Adjustment for dilutive stock options | 13,977 | 18,104 |
| Weighted average treasury Shares due to consolidation of additional foundations under U.S. GAAP | (1,980,181) | (1,890,212) |
| Weighted average number of Shares for diluted earnings per Share under U.S. GAAP | 64,643,147 | 64,623,992 |
| Diluted earnings per Share (expressed in CHF per Share) under U.S. GAAP | 84 | 77 |

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

**Pro-forma EPS**

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 stock-based employee compensation. Had the Group accounted for stock options in accordance with SFAS 123, net income and earnings per Share would have been reduced to the pro forma amounts indicated below:

| | *1999* | *1998* |
|---|---|---|
| Net income under U.S. GAAP (CHF in millions): | | |
| As reported | 5,419 | 4,955 |
| Pro forma | 5,396 | 4,933 |
| Earnings per Share (CHF): | | |
| As reported | | |
| Basic | 84 | 77 |
| Diluted | 84 | 77 |
| Pro forma | | |
| Basic | 84 | 77 |
| Diluted | 84 | 77 |

The weighted average assumptions used in determining fair value of option grants were as follows:

| | *1999* | *1998* |
|---|---|---|
| Dividend yield | 1.6% | 1.2% |
| Expected volatility | 23.0% | 24.0% |
| Risk-free interest rate | 3.8% | 3.6% |
| Expected life | 10 yr | 10 yr |

## 31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)

### Employee benefit plans

Presented below are the disclosures required by U.S. GAAP that are different from that provided under IAS. The following provides a reconciliation of benefit obligations, plan assets and funded status of the plans.

| | *Pension benefits* | | *Other post-retirement benefits* | |
|---|---|---|---|---|
| | *1999* | *1998* | *1999* | *1998* |
| | *CHF millions* | | *CHF millions* | |
| **Benefit obligation:** | | | | |
| At beginning of year | 21,926 | 19,546 | 614 | 702 |
| Service cost | 543 | 458 | 13 | 11 |
| Interest cost | 784 | 920 | 42 | 42 |
| Actuarial (gain) loss | (1,300) | 2,193 | (45) | (32) |
| Plan amendments | 3 | | (11) | (22) |
| Foreign currency translation | 532 | (135) | 95 | (39) |
| Employee contributions | 36 | 50 | — | — |
| Benefit payments | (1,220) | (1,106) | (53) | (48) |
| **Benefit obligation at end of year** | **21,304** | **21,926** | **655** | **614** |
| **Plan assets at fair value:** | | | | |
| At beginning of year | 24,456 | 23,673 | | |
| Actual return on plan assets | 1,429 | 1,990 | | |
| Foreign currency translation | 655 | (181) | | |
| Employer contribution | 98 | 30 | | |
| Employee contributions | 36 | 50 | | |
| Benefit payments | (1,220) | (1,106) | | |
| **Plan assets at fair value at end of year** | **25,454** | **24,456** | | |
| Funded status | 4,150 | 2,530 | (655) | (614) |
| Unrecognized transition (asset) | (88) | (327) | | |
| Unrecognized actuarial (gain) loss | 411 | 1,643 | (148) | (103) |
| **Prepaid (accrued) benefit costs** | **4,473** | **3,846** | **(803)** | **(717)** |
| **Amounts recognized in the balance sheet:** | | | | |
| Prepaid benefit costs | 5,362 | 4,746 | | |
| Accrued benefit liability | (889) | (900) | (803) | (717) |
| **Net amount recognized** | **4,473** | **3,846** | **(803)** | **(717)** |

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

| | *Pension benefits* | | *Other post-retirement benefits* | |
|---|---|---|---|---|
| | *1999* | *1998* | *1999* | *1998* |
| | *CHF millions* | | *CHF millions* | |
| **Benefit cost:** | | | | |
| Service cost | 543 | 458 | 13 | 11 |
| Interest cost | 784 | 920 | 42 | 42 |
| Expected return on plan assets | (1,505) | (1,389) | | |
| Employee contributions | (36) | (50) | | |
| Amortization of transition (asset) | (239) | (239) | | |
| Amortization of actuarial (gain) loss | 8 | | | (8) |
| Curtailment (gain) | | | | (9) |
| **Net periodic benefit (income) cost** | **(445)** | **(300)** | **55** | **36** |
| **Weighted-average assumptions as of December 31:** | **%** | **%** | **%** | **%** |
| Discount rate | 4.1 | 3.4 | 7.7 | 6.8 |
| Rate of compensation increase | 2.8 | 4.3 | | |
| Expected return on plan assets | 6.1 | 5.2 | | |

The assumed health care cost trend rate at December 31, 1999 was 6.35% for those under age 65 and 6.50% 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, 1998 was 6.65% for those under age 65 and 5.85% for those over age 65, decreasing to 4.25% in 2005 and thereafter for both groups.

A one-percentage-point change in the assumed health care cost trend rates compared to those used for 1999 would have the following effects:

| | *1% point increase* | *1% point decrease* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Effects on total of service and interest cost components | 5.5 | (4.5) |
| Effect on post-retirement benefit obligations | 51.6 | (43.8) |

**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 on all changes in equity during a period that arise from non-owner sources, such as foreign currency items and

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

unrealized gains and losses on securities available for sale. The additional disclosures required under U.S. GAAP are as follows:

| | *1999* | *1998* |
|---|---|---|
| | *CHF millions* | *CHF millions* |
| Net income under U.S. GAAP | 5,419 | 4,955 |
| Other comprehensive income: | | |
| Foreign currency translation adjustment | 2,579 | (956) |
| Unrealized market value adjustment on securities available for sale (net of taxes of CHF 34 million and CHF 47 million, respectively) | 287 | 418 |
| Reclassification adjustment: | | |
| Net realized gains on sales of securities (net of taxes of CHF 72 million and CHF 51 million, respectively) | (645) | (463) |
| **Comprehensive income under U.S. GAAP** | **7,640** | **3,954** |

**Discontinued operations**

The disposal of the Agribusiness sector does not meet the requirements of a discontinued operation under U.S. GAAP. The disposal of this sector will be treated as a discontinued operation under U.S. GAAP when the shareholders of Novartis approve of the disposal in the year 2000.

**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 U.S. GAAP.

**Effect of New Accounting Pronouncements**

***International Accounting Standards***

IAS 36 "Impairment of Assets" requires that when assets are impaired they should be written down to their recoverable amount, being the higher of net selling price or value in use. The evaluation to determine if assets are impaired is made using discounted cash flow analysis. The Group has not determined the effect, if any, of applying the guidance of this standard. The standard is required to be adopted in 2000. The adoption of this standard may lead to a difference to U.S. GAAP as U.S. GAAP requires the impairment analysis to be done with an undiscounted cash flow analysis.

IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" prescribes, with limited exceptions, the accounting for all provisions, contingent liabilities and contingent assets. This standard is generally more restrictive as to when a liability can be recorded compared to existing International Accounting Standards. The standard is required to be adopted by the year 2000. If there are liabilities that would not be recognized upon the adoption of IAS 37, opening retained earnings would be adjusted and the expense would be recognized in the period stipulated by the new standard.

**31. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (Continued)**

IAS 38 "Intangible Assets" requires that an intangible asset should be recognized if, and only if it is probable that future benefits attributable to the asset will flow to the enterprise and the cost of the asset can be measured reliably. The Group has not determined what, if any, effect this new standard will have on the financial statements. This standard is required to be adopted in 2000.

IAS 39 "Financial Instruments: Recognition and Measurement" requires all financial assets and financial liabilities to be recognized on the balance sheet, including all derivatives. They are initially measured at cost, which is the fair value or whatever was paid or received to acquire the financial asset or liability. Subsequent to initial recognition, all financial assets should be measured to fair value except for certain specified exceptions. After acquisitions most financial liabilities should be measured at original recorded amount less principal repayments and amortization. For those financial assets and liabilities that are remeasured to fair value, the Group can either recognize the adjustment to the income statement or in equity until the asset is sold. The Group has not determined what, if any, effect this new standard will have on the financial statements. This standard is required to be adopted in 2001.

In connection with the aforementioned standards, various revisions have been made to IAS 10 "Contingencies and Events Occurring After the Balance Sheet Date"; IAS 16 "Property, Plant and Equipment"; IAS 22 "Business Combinations"; IAS 28 "Accounting for Investments in Associates"; IAS 31 "Financial Reporting of Interest in Joint Ventures"; and IAS 32 "Financial Instruments: Disclosure and Presentation" in order to make the authoritative literature and underlying accounting guidelines consistent. The revisions to IAS 16, IAS 22, IAS 28, and IAS 31 become effective for periods beginning on or after July 1, 1999, the revisions to IAS 10 become effective for periods beginning on or after January 1, 2000, and the revisions to IAS 32 become effective for periods beginning on or after July 1, 2001. The Group has not determined what, if any, effect these revisions will have on the financial statements.

***U.S. GAAP***

Statement of Financial Accounting Standards No. 133 "Accounting for Derivative Instruments and Hedging Activities", as amended, requires all derivative instruments be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income. The Group has not determined what, if any, effect this new standard will have on the financial statements. This standard will be effective in 2001.

## 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 February 16, 2000, except as to Note 31 which is May 8, 2000, 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 Joseph P. Herron

Basel, February 16, 2000,
except as to Note 31 which is May 8, 2000

**Novartis Group**

**Schedule II—Valuation and qualifying accounts**

**(for the years ended December 31, 1999, 1998 and 1997)**

| CHF millions | Balance at beginning of period | Additions | Deductions (A) | Balance at end of period |
|---|---|---|---|---|
| *Descriptions:* | | | | |
| **Year ended 12/31/99:** | | | | |
| 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)** |
| **Year ended 12/31/98:** | | | | |
| Provision for doubtful receivables | (375) | (284) | 204 | (455) |
| Provision for inventories | (275) | (279) | 164 | (390) |
| Allowance for deferred taxes | (348) | (34) | 168 | (214) |
| | **(998)** | **(597)** | **536** | **(1,059)** |
| **Year ended 12/31/97:** | | | | |
| Provision for doubtful receivables | (501) | (84) | 210 | (375) |
| Provision for inventories | (215) | (177) | 117 | (275) |
| Allowance for deferred taxes | (374) | (89) | 115 | (348) |
| | **(1,090)** | **(350)** | **442** | **(998)** |

(A) Represents amounts used for the purposes for which the accounts were created and reversal of amounts no longer required.

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