STMICROELECTRONICS NV
Form 20-F
May 24, 2002
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As filed with the Securities and Exchange Commission on May 24, 2002

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

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

OR

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2001

OR

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

For the transition period from _____ to _____

Commission file number: 1-13546

STMicroelectronics N.V.

(Exact name of registrant as specified in its charter)

Not Applicable	**The Netherlands**
(Translation of registrant s name into English)	**(Jurisdiction of incorporation or organization)**

Route de Pré-Bois
ICC Bloc A1215
Geneva 15
Switzerland
(Address of principal executive offices)

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

Title of each class:	**Name of each exchange on which registered:**
Common shares, nominal value 1.04 per share	**New York Stock Exchange**
Liquid Yield Option™ Notes due September 22, 2009	**New York Stock Exchange**

Securities registered or to be 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 issued and 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:

889,699,181 common 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 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 ¨

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

Item 17 ¨ Item 18 x

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PRESENTATION OF FINANCIAL AND OTHER INFORMATION

In this annual report, references to we and us are to STMicroelectronics N.V. together with its consolidated subsidiaries, references to EU are to the European Union, references to the and the euro are to the euro currency of the EU, references to the United States and U.S. are to the United States of America and references to $ or to U.S. dollars are to United States dollars.

References in this annual report to published industry data are references to data published by Dataquest-Gartner Group, IC-Insights or i-Supply, and Pathfinder Research, Inc. (Pathfinder), and references to trade association data are references to World Semiconductor Trade Statistics (WSTS). Except as otherwise disclosed herein, all references to our market positions in this annual report are based on 2001 revenues according to published industry data. Certain terms used in this annual report are defined in Certain Terms .

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained in this annual report on Form 20-F that are not historical facts, particularly in Item 4. Information on the Company , are statements of future expectations and other forward-looking statements (within the meaning of Section 27A of the Securities Act) that are based on management s current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those in such statements due to, among other factors:

- General business and economic conditions in the semiconductor and end-user markets as well as in the various countries and geographic regions and the business segments in which we and our customers operate;
- Changes in the operations of our key customers;
- Excess manufacturing capacity in the semiconductor industry;
- Possible disruption in commercial activities occasioned by major events in the world such as armed conflict or terrorism;
- Market demand for our products and changes in customer order patterns and requirements including, but not limited to, order cancellation or rescheduling;
- Reduced end-user purchases relative to our expectations;
- Competitive factors, such as the timely development of new products, as well as new design and process technologies in line with customer requirements;
- Pricing pressures;
- Excess or obsolete inventory;
- Our ability to implement cost reductions in a timely manner and the success of those actions;
- Manufacturing risks and risks resulting from labor unrest caused by political instability;
- Our ability to recruit and retain skilled personnel;
- Our ability to successfully integrate acquisitions;
- Potential future acquisitions which may have a dilutive effect for existing shareholders or may negatively affect our common share price; and
- Currency fluctuations and other risks.

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 thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions. Some of these risk

factors are set forth and are discussed in more detail in Item 3. Key Information Risk Factors . 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 annual report as anticipated, believed or expected. We do not intend, and do not assume any obligation, to update any industry information or forward-looking statements set forth in this annual report to reflect subsequent events or circumstances.

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PART I

Item 1. *Identity of Directors, Senior Management and Advisers*

Not applicable.

Item 2. *Offer Statistics and Expected Timetable*

Not applicable.

Item 3. *Key Information*

Selected Consolidated Financial Data

The table below sets forth our selected consolidated financial data for each of the years in the five-year period ended December 31, 2001. Such data have been derived from our consolidated financial statements. Consolidated audited financial statements for each of the years in the three-year period ended December 31, 2001, including the Notes thereto (collectively, the Consolidated Financial Statements), are included in Item 18 of this annual report on Form 20-F.

The following information should be read in conjunction with Item 5. Operating and Financial Review and Prospects and the Consolidated Financial Statements and the related Notes thereto included elsewhere in this Annual Report.

	Year ended December 31,				
	1997	1998(1)	1999(1)	2000(1)	2001(1)
	(in millions except per share and ratio data)				
Consolidated Statement of Income Data:					
Net sales	$ 3,969.8	$ 4,210.6	$ 5,023.1	$ 7,764.4	$ 6,303.9
Other revenues	49.4	37.2	33.2	48.8	53.0
Net revenues	4,019.2	4,247.8	5,056.3	7,813.2	6,356.9
Cost of sales	(2,457.4)	(2,623.0)	(3,054.5)	(4,216.9)	(4,047.0)
Gross profit	1,561.8	1,624.8	2,001.8	3,596.3	2,309.9
Operating expenses:					
Selling, general and administrative	(454.3)	(488.1)	(534.2)	(703.7)	(641.4)
Research and development(2)	(610.9)	(689.8)	(836.0)	(1,026.3)	(977.9)
Other income and expenses(2)	23.2	76.5	39.9	(83.6)	(6.1)
Impairment and restructuring charges					(345.5)
Total operating expenses	(1,042.0)	(1,101.4)	(1,330.3)	(1,813.6)	(1,970.9)
Operating income	519.8	523.4	671.5	1,782.7	339.0
Net interest income (expense)	(2.6)	8.7	35.6	46.7	(13.0)
Equity in loss of joint ventures					(4.8)
Income before income taxes and minority interests	517.2	532.1	707.1	1,829.4	321.2
Income tax expense	(113.0)	(120.4)	(157.2)	(375.1)	(61.1)
Income before minority interests	404.2	411.7	549.9	1,454.3	260.1
Minority interests	2.4	(0.6)	(2.6)	(2.2)	(3.0)
Net income	$ 406.6	$ 411.1	$ 547.3	$ 1,452.1	$ 257.1

Earnings per share (basic)(3)	$ 0.49	$ 0.49	$ 0.64	$ 1.64	$ 0.29
Earnings per share (diluted)(3)	$ 0.48	$ 0.48	$ 0.62	$ 1.58	$ 0.29
Number of shares used in calculating earnings per share (basic)	834.6	845.1	859.1	885.7	893.3
Number of shares used in calculating earnings per share (diluted)	839.1	864.3	901.2	936.1	902.0
Ratio of earnings to fixed charges(4)	13.4	12.7	16.3	29.3	3.8
Dividends per share(3)	$	$	$ 0.03	$ 0.03	$ 0.04

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Consolidated Balance Sheet Data (end of period):					
Cash, cash equivalents and marketable securities(1)	$ 702.2	$ 1,100.7	$ 1,823.1	$ 2,330.9	$ 2,444.2
Working capital(5)	443.5	855.1	398.5	372.5	555.4
Total assets	5,445.7	6,434.0	7,930.3	11,880.5	10,797.5
Short-term debt (including current portion of long-term debt)	424.6	191.2	123.2	141.6	129.3
Long-term debt (excluding current portion)(1)	356.4	755.8	1,348.5	2,700.5	2,771.5
Shareholders equity(1)	3,307.4	4,083.3	4,563.9	6,124.6	6,074.7
Capital stock(6)	2,004.9	2,232.3	2,508.0	2,823.6	2,978.3
Consolidated Operating Data:					
Capital expenditures(7)	$ 1,035.4	$ 947.3	$ 1,347.5	$ 3,327.5	$ 1,699.8
Net cash provided by operating activities	983.8	1,012.5	1,469.3	2,422.8	2,052.0
Depreciation and amortization(7)	608.1	704.0	806.8	1,108.2	1,320.2

(1) On November 16, 2000, we issued $1,480.0 million initial aggregate principal amount of zero-coupon unsubordinated convertible notes, due 2010, for net proceeds of $1,457.8 million. On September 22, 1999, we completed an equity offering of 8,970,000 shares of capital stock at $24.88 per share (adjusted for the 3-for-1 stock split) for net proceeds of $216.8 million. On September 22, 1999, we also completed a debt offering of $720.9 million initial aggregate principal amount of zero-coupon convertible Liquid Yield Option Notes, due 2009, for net proceeds of $708.3 million. On June 10, 1998, we completed an equity offering of 18,000,000 shares of capital stock at $12.03 per share (adjusted for the 2-for-1 stock split in June 1999 and 3-for-1 stock split in May 2000) for net proceeds of $208.8 million. On June 10, 1998, we also completed a debt offering of $431.7 million initial aggregate principal amount of zero-coupon convertible Liquid Yield Option Notes (LYONs), due 2008, for net proceeds of $421.8 million. On April 27, 2001, we issued a redemption notice for the remaining outstanding LYONs, due 2008, which were redeemed and converted into common shares in May and June 2001; the residual aggregate principal amount converted into common shares was $51.7 million. In 2001, we repurchased 9,400,000 common shares for $233.3 million and we have reflected these purchases at cost as a reduction of shareholders equity. The repurchased shares have been designated to fund our most recent employee stock option plan.

(2) Other income and expenses includes, among other things, funds received through government agencies for research and development expenses, the cost of new plant start-ups, foreign currency gains and losses, gains on sales of marketable securities, the costs of certain activities relating to intellectual property and goodwill amortization. Our reported research and development expenses do not include design center, process engineering, pre-production or industrialization costs.

(3) All share information has been adjusted to reflect the 2-for-1 stock split effected in June 1999 and the 3-for-1 stock split effected in May 2000. See Notes 2.10, 2.20 and 13 to the Consolidated Financial Statements.

(4) For purposes of calculating the ratio of earnings to fixed charges, earnings consist of income before income taxes and minority interests, plus fixed charges. Fixed charges consist of interest expenses.

(5) Working capital is calculated as current assets (excluding cash, cash equivalents and marketable securities) less current liabilities (excluding bank overdrafts and current portion of long-term debt).

(6) Capital stock consists of common stock and capital surplus.

(7) Capital expenditures are net of certain funds received through government agencies, the effect of which is to decrease depreciation.

RISK FACTORS

Risks related to the semiconductor industry

The semiconductor industry is highly cyclical, and severe downturns have had a negative impact on our results of operations

The semiconductor industry is highly cyclical and has been subject to significant economic downturns at various times. In 2001, the industry experienced the most severe downturn in its history. These downturns are typically characterized by production overcapacity, accelerated erosion of average selling prices and reduced revenues. When these downturns occur, such as in 1991 and 1996 through 1998, as well as during the current downturn, which started in the third quarter of 2000, our results of operations are adversely affected. In addition, the markets for semiconductors and electronic systems that use semiconductor products are characterized by rapid technological change, leading to more complex and powerful products, evolving industry standards, intense competition, and fluctuations in end-user demand.

Overall, the semiconductor market expanded significantly from 1983 through 2000. According to trade association data, annual worldwide sales of all semiconductor products, referred to as the total available market, or TAM, grew from 1983 through 2000 at an average compound annual growth rate of approximately 15.4%. During the upward industry cycle in the first half of the 1990s, the semiconductor industry experienced significantly increased demand and production capacity constraints, with the TAM growth rate reaching over 40% in 1995. Reflecting the current downturn in the industry, the TAM decreased by approximately 32.0% in 2001 compared to 2000 following an increase of approximately 36.8% in 2000 compared to 1999. In addition, the serviceable

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available market, or SAM (redefined in 2001 to cover approximately 56% of total TAM and excluding PC motherboard major devices such as microprocessors and their peripherals, random access memories (RAMs), read-only memories (ROMs) and semicustom ICs and discrete segments such as the small signal transistor market and optoelectronics devices) decreased by approximately 24% over 2000 following an increase in 2000 of 44.5% compared with 1999. In the face of weakening economic conditions, the addition of new capacity and excess inventory held by end-users has given rise to overcapacity and competitive pricing which affected margins. We cannot guarantee that the current downturn will not continue to be severe or that it will not be followed by one or more future downturns or that any future downturns will not also have an even more severe material adverse effect on our results of operations.

Changes in industry capacity have led to overcapacity and have exacerbated the current industry downturn and may exacerbate future downturns

In the last ten years, many companies invested in building or improving semiconductor manufacturing capacity. According to published industry data and other industry sources, investment in worldwide semiconductor fabrication capacity totaled approximately $38 billion in 1997, $28 billion in 1998, $33 billion in 1999, $59 billion in 2000 and $35 billion in 2001 or approximately 28%, 22%, 22%, 29% and 25%, respectively, of the total available market for such years. In addition to international semiconductor companies, companies specializing in operating semiconductor foundries (companies providing outsourcing capacity on a third party basis) such as Chartered, TSMC or UMC have added significant capacity, particularly in Asia. These capacity additions contributed to an increase of supply over demand during 1997, 1998 and 2001 and to declines in average selling prices and the downturn in the industry during these periods. Recent investments in 2000 and 2001 further increased overcapacity in 2001 and contributed to inventory surpluses, which exacerbated the current downturn. There has also been a shift in existing industry capacity to production of products that compete with our products. We believe that future fluctuations in the rate of industry capacity additions relative to the growth rate in demand for semiconductor products or the transformation of manufacturing facilities to produce products that compete with our products could continue to contribute to fluctuations in average selling prices and affect our results of operations.

During industry downturns, our high fixed costs adversely impact our results

In less favorable industry environments, we are driven to reduce prices in response to competitive pressures and we are also faced with a decline in the utilization rates of our manufacturing facilities due to decreases in product demand. Since the semiconductor industry is characterized by high fixed costs, we are not always able to reduce our total costs in line with revenue declines. Reduced average selling prices for our products therefore adversely affect our results of operations. Furthermore, in periods of reduced customer demand for our products, such as in 2001, our fabrication facilities, or fabs, do not operate at full capacity, thereby increasing our fixed costs. Our gross profit margin declined from 38.9% in 1997 to 38.3% in 1998 during difficult market conditions. Our gross profit margin was 39.6% in 1999, 46.0% in 2000 and 36.3% in 2001. In the difficult market conditions encountered during 2001, our gross profit margin was 44.5% in the first quarter, 33.6% in the second quarter, 33.0% in the third quarter and 31.7% in the fourth quarter. Gross profit margin for the first quarter of 2002 was 33.4%, 170 basis points above fourth quarter 2001, but well below the comparable first quarter 2001 period. We cannot guarantee that the current downturn will not continue to affect the loading of our fabs, particularly our more mature plants and consequently our future gross margins. We cannot guarantee that increased competition in our core product markets will not lead to further price erosion, lower revenue growth rates and lower margins in the future.

Competitive factors in our industry make the competitive environment intense

We compete on the basis of a variety of factors, and our success depends on our ability to compete successfully in all of the relevant areas. We compete in different product lines to various degrees on the following bases:

price

technical performance

product features

product system compatibility

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- product design
- availability
- quality
- sales and technical support.

Our ability to compete successfully also depends on factors partially outside of our control, including:

- successful and timely development of new products and manufacturing processes
- manufacturing yields
- product availability
- industry and general economic trends
- performance of our key customers in the markets they serve.

Our results may be adversely impacted by worldwide economic downturns

Our results are increasingly linked to worldwide economic trends, especially in the United States, the European Union, Japan and Asia. The economic situation in Asia in 1998 had a negative effect on the worldwide semiconductor market and made semiconductor and end-user market requirements more difficult to predict. The deteriorated economic conditions in the United States, the recession in Japan and the slow-down in other markets in which we operate, linked to a declining GDP growth rate and to inventory build-ups by certain customers for semiconductor products, negatively impacted the semiconductor market in 2001 which, following growth of 36.8% in 2000, declined by over 32% in 2001, according to industry sources. We believe that these market conditions have created additional pressures on unit demand and on semiconductor prices in general. The current economic uncertainties have caused our customers to experience reduced demand for their products that include our products and our results of operations have been adversely affected.

Because we operate in an industry where technology changes rapidly, our products may become obsolete and we may not be able to develop new ones in a timely manner

The market for our products is characterized by rapidly changing technology. Therefore, our success is highly dependent upon our ability to develop and manufacture increasingly complex new products on a cost-effective basis, to introduce them in the marketplace on a timely basis, and to have them selected for design into future products of leading systems manufacturers. We have committed and intend to continue to commit substantial resources to the development of new products. Because new product development commitments must be made well in advance of sales, however, our new product decisions must anticipate both future demand and the technology that will be available to supply such demand. Delays in developing new products with anticipated technological advances, failure to win new design projects for customers or in commencing volume shipments of new products, may have an adverse effect on our business. In addition, there can be no assurance that new products, if introduced, will gain market acceptance or will not be adversely affected by new technological changes or new product announcements by others.

Our future success depends in part upon our ability to develop and implement new design and process technologies

Semiconductor design and process technologies are subject to rapid technological change and require large expenditures for capital investment and research and development. We are developing advanced and standardized design tools for our processes as well as libraries of macrofunctions and megafunctions for many of our products. We are also focusing on improving our concurrent engineering practices to better coordinate design activities and reduce overall time-to-market. If we experience substantial delays in developing new design or process technologies or inefficiently implement production increases or transitions, our results of operations could be adversely affected.

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Loss of key employees could hurt our competitive position

As is common in the semiconductor industry, success depends to a significant extent upon our key senior executives and research and development, engineering, marketing, sales, manufacturing, support and other personnel. Our success also depends upon our ability to continue to attract, retain and motivate qualified personnel. The competition for such employees is intense, and the loss of the services of any of these key personnel without adequate replacement or the inability to attract new qualified personnel could have a material adverse effect on us. Mr. Pasquale Pistorio, age 66, has been the sole member of our Managing Board and our president and chief executive officer since our formation in 1987. Mr. Pistorio was reappointed at our 2002 annual shareholders meeting for a three-year term expiring at our annual general meeting to be held in 2005. We do not maintain insurance with respect to the loss of any of our key personnel.

Some of our production processes and materials are environmentally sensitive, which could lead to increased costs due to environmental regulations or to damage to the environment

We are subject to a variety of governmental regulations relating to the use, storage, discharge and disposal of chemicals, gases and other hazardous substances used in our manufacturing processes. We have established proactive environmental policies with respect to the handling of chemicals, gases, emissions and waste disposals from our manufacturing operations, and we have not suffered material environmental claims in the past. We believe that our activities comply with presently applicable environmental regulations in all material respects. All of our facilities have been approved as being in compliance with the EU Eco-Management and Audit Scheme regulations, and have also obtained ISO 14001 certification. We are participating in various working groups set up by the European Commission to propose new legislation regarding the collection, recovery and disposal of electronic equipment, as well as banning the use of lead and some flame retardants in manufacturing electronic components. We intend to proactively implement such new legislation when enacted, in line with our commitment towards environmental protection.

The implementation of any such legislation could adversely affect our manufacturing costs or product sales by requiring us to acquire costly equipment or materials, or to incur other significant expenses in adapting our manufacturing processes or waste and emission disposal processes. Furthermore, environmental claims or our failure to comply with present or future regulations could result in the assessment of damages or imposition of fines against us, suspension of production or a cessation of operations and, as with other companies engaged in similar activities, any failure by us to control the use of, or adequately restrict the discharge of hazardous substances could subject us to future liabilities.

Because we depend on a limited number of suppliers for raw materials, we may experience supply disruptions or pricing pressure

Our manufacturing operations depend upon obtaining adequate supplies of quality raw materials on a timely basis. Thus, our results of operations would be adversely affected if we were unable to obtain adequate supplies of raw materials in a timely manner or if there were significant increases in the costs of raw materials or problems with the quality of these raw materials. A number of materials are available only from a limited number of suppliers, or only from a limited number of suppliers in a particular region. In addition, we purchase raw materials such as silicon wafers, lead frames, mold compounds, ceramic packages and chemicals and gases from a number of suppliers on a just-in-time basis. Although supplies for the raw materials we use are currently adequate, shortages could occur in various essential materials due to interruption of supply or increased demand in the industry. In addition, suppliers may extend lead times, limit our supply or increase prices due to capacity constraints or other factors. Any such supply limitations or price increases could adversely affect our quarterly or annual results of operations.

Risk factors related to our operations

Our operating results may vary significantly from quarter to quarter and annually

Our operating results are affected by a wide variety of factors that could materially and adversely affect revenues and profitability or lead to significant variability of operating results. These factors include, among others, the cyclicality of the semiconductor and electronic systems industries, capital requirements, inventory management and the availability of funding, competition, new product development and technological change, and manufacturing problems. In addition, a number of other factors could lead to fluctuations in quarterly and annual operating results,

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including:

- order cancellations or reschedulings by customers
- excess inventory held by customers leading to reduced bookings or product returns by key customers
- manufacturing capacity and utilization rates
- restructuring and impairment charges
- changes in distribution and sales arrangements
- intellectual property developments
- failure to win new design projects
- problems with product quality
- litigation
- possible acquisitions
- problems in obtaining adequate raw materials on a timely basis
- the loss of key personnel
- inability to secure sufficient insurance coverage at acceptable terms, in light of current conditions on the insurance market.

Unfavorable changes in the above and other factors have in the past and may in the future adversely affect our operating results. In addition, during periods of industry overcapacity and declining selling prices, customer orders are not generally made as far in advance of the scheduled shipment date as during periods of capacity constraints, and we have experienced an increasing reliance on orders placed and shipped within the same month. During the current industry downturn, as in those in the past, we are experiencing lower levels of backlog, which in turn reduce our management s ability to forecast production levels, revenues and margins.

We face intense competition in our core product lines as well as in emerging applications from both large integrated manufacturers and smaller niche companies

The semiconductor industry is intensely competitive and we face significant competition in each of our product lines. Some of our competitors are large integrated manufacturing groups that compete with us in most of our product lines. A few of these large companies have substantially greater financial and other resources than we do. As a result, these companies may be able to invest more than us in research and development, in the construction of large-scale, advanced, cost-effective manufacturing plants and in the marketing of products, and this may adversely affect our ability to take advantage of potentially profitable business opportunities. Such large competitors include:

- Advanced Micro Devices
- Agere Systems
- Analog Devices
- Atmel
- Broadcom
- Fairchild

Fujitsu

Hitachi

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IBM

Infineon Technologies

Intel

LSI Logic

Matsushita

Mitsubishi Electric Corporation

Motorola

National Semiconductor

Nippon Electric Company

ON Semiconductor

Philips Semiconductors

Samsung

Texas Instruments

Toshiba

In addition, we are facing increased competition from some of the above companies as well as from smaller niche companies, especially design companies, that specialize in certain product lines and may decide to invest more than we do in research and development and marketing of selected products. These competitors may also use semiconductor foundry companies that produce high volume products and may offer competitive pricing. Such foundry companies such as Chartered, TSMC and UMC have expanded significantly in recent years, particularly in Asia. Other smaller niche competitors include manufacturers of standard semiconductors, integrated circuits for specific applications and fully customized integrated circuits, including both chip and board-level products. In addition, some of our customers have developed their own integrated circuit products and foundry operations.

Certain of our competitors have increased their focus on products that compete with our products

In recent years, some of our competitors have redirected their research and development activities, marketing focus and manufacturing capacity toward products that compete with our products. We believe increased focus by our competitors in our core product markets is generating greater pricing pressure, increased competition for market share in the serviceable available market, and a generally more challenging market environment for us. In addition, as new products are developed, we will face significant competition in each of these markets. We may not be able to establish or maintain a strong market position in all of our product markets.

Because we have our own manufacturing facilities, our capital needs are high compared to competitors who do not produce their own products, and they remain high during industry downturns

As a result of our strategic choice to maintain control of our advanced proprietary manufacturing technologies to serve our customer base and develop our strategic alliances, we require significant amounts of capital to build, expand, modernize and maintain our facilities. Some of our competitors, however, do not manufacture their own products, and therefore do not require significant capital expenditures for their facilities. Our capital expenditures totaled $0.9 billion in 1998, $1.3 billion in 1999 and $3.3 billion in 2000. Due to market conditions, we reduced our capital expenditure for 2001 from an initial plan of $2.5 billion to $1.7 billion. For 2002, we forecast capital expenditures to total approximately $1.2 billion. We seek to modulate such investments in line with market requirements although we may continue to invest significantly in the coming years as the requirements of new

technologies increase the cost of production equipment. We will continue to monitor our level of capital spending taking into consideration factors such as trends in the semiconductor market and capacity utilization.

The semiconductor industry also requires heavy commitments of funds for research and development necessary to keep up with the rapid pace of technological change and to consistently develop innovative, well performing

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and cost-effective products. We intend to continue to increase research and development expenditures in the future, although not necessarily as a percentage of net revenues.

Our research and development efforts in the field of CMOS process development are dependant on alliances and our business, results of operations and prospects could be materially adversely affected by the failure of such alliances in developing new process technologies in line with market requirements

On April 12, 2002, we announced that Motorola s semiconductor unit had signed a memorandum of understanding proposing to join a comprehensive research and development alliance among us and Philips to provide 90-namometer to 32-namometer chip technologies on 300mm wafers in our Crolles, France research and development center. This announcement followed a previous announcement in March 2002 of an agreement among us, Philips and TSMC which completed an existing agreement between Philips and us concerning joint research and development and the operation of a 300mm pilot line in Crolles. Joint investment is intended to reach $1.4 billion by 2005 with the stated goal of accelerating the development of future technologies and their proliferation throughout the semiconductor industry. See Item 4. Information on the Company Research and Development . We expect to finalize the terms of this new alliance with Motorola shortly. However, there can be no assurance that we will be able to achieve this objective on satisfactory terms, that our alliances with Philips, Motorola and/or TSMC will enable us to effectively develop new technologies which meet customer demands, or that our operations will not be adversely affected by unforeseen events and the sizeable risks related to the development of new technologies, including unforeseen extra costs, which could materially adversely affect our business, results of operations and prospects.

We could need additional funding in the coming years

At December 31, 2001, we had a negative net financial position (total debt net of cash, cash equivalents and marketable securities) of $456.6 million. The cost of new manufacturing facilities is increasing due to the requirements of advanced sub-micron facilities and technologies as well as the migration from 200mm wafer to the new, more complex 300mm wafer manufacturing equipment. In addition, if we proceed with acquisitions, we may incur additional indebtedness, which could increase our interest costs and adversely affect our results. In such circumstances, we may need to issue additional debt or equity, or both.

Our manufacturing processes are highly complex, costly and potentially vulnerable to impurities and disruptions that can significantly increase our costs and delay product shipments to our customers

Our manufacturing processes are highly complex, require advanced and increasingly costly equipment and are continuously being modified in an effort to improve yields and product performance. Impurities or other difficulties in the manufacturing process can lower yields, interrupt production or result in losses of products in process. As system complexity has increased and sub-micron technology has become more advanced, manufacturing tolerances have been reduced and requirements for precision have become even more demanding. Although in the past few years we have significantly enhanced our manufacturing capability in terms of efficiency, precision and capacity, we have from time to time experienced production difficulties that have caused delivery delays and quality control problems, as is common in the semiconductor industry. We cannot guarantee that we will be able to increase the capacity, efficiency or precision of our manufacturing capabilities in the future to the same extent as in the past. We might also experience production difficulties in the future. In addition, during past periods of high revenue growth for us, our manufacturing facilities have operated at high capacity, which has led to production constraints.

As is common in the semiconductor industry, we have, from time to time, experienced difficulty in ramping up production at new facilities or effecting transitions to new manufacturing processes. As a result, we have suffered delays in product deliveries or reduced yields. In the future, we might face:

construction delays

delays in ramping up production at our new facilities or on our new lines, in upgrading or expanding our existing facilities, or in changing our process technologies

interruptions in production

delivery delays

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manufacturing problems in achieving acceptable yields

capacity constraints

contamination or fires, storms, earthquakes or other acts of nature, for which we may be unable to obtain sufficient insurance coverage on acceptable terms and conditions,

the impact of which is exacerbated during a period of industry constraint.

In addition, our development of fabrication facilities that include 200mm or 300mm capabilities, or which require advanced technologies, has increased the potential for losses associated with production difficulties, imperfections, or other causes of defects. If production is interrupted at a manufacturing facility, we may not be able to shift production to other facilities on a timely basis or customers may decide to purchase products from another supplier. In either case the loss of revenues and impact on our relationships with our customers could be significant. Our operating results could also be adversely affected by the increase in fixed costs and operating expenses related to increases in production capacity if revenues do not increase commensurately.

We may face overcapacity and obsolescence in some of our older fabrication facilities that may lead to plant closures, impairments and inventory write-offs

In a period of market downturn, we may face overcapacity issues, particularly in our older fabrication facilities that use mature process technologies. Like other semiconductor manufacturers, we could have mature fabrication facility capacity being only partially used, which may affect our cost of operations. These considerations led us to record an asset impairment and restructuring charge of $296.3 million in the second quarter 2001, with respect to certain of our more mature 150mm wafer fabs as well as to announce and complete the closing in 2001 of our wafer fab manufacturing facility in Ottawa, Canada. During the third quarter of 2001, we also initiated a plan for the closure of our plant in Rancho Bernado, California, which was completed in April 2002, resulting in an additional asset impairment charge of $23.3 million recorded in 2001. We are continuously reviewing our strategy with respect to our more mature 150mm wafer fabs in order to maintain flexibility and efficiency through difficult market conditions. We announced on January 22, 2002 that without the expected pickup in demand and/or pricing during 2002, we could incur further impairment and restructuring charges with respect to our more mature 150mm fabs in 2002. Further actions may include the sale, wafer production curtailment or closure of other similar facilities. In addition, in the second quarter 2001, we recorded a special inventory charge for obsolescence of $70.7 million in cost of sales due to significant cancellations of customer orders that resulted in unuseable quantities of work in process and finished goods inventories. If we are unable to simultaneously and proportionately cut our manufacturing costs, or make other necessary savings in due time, our cost of operations could be adversely affected in the future.

If our outside wafer suppliers fail to perform, this could adversely affect our ability to exploit growth opportunities

In order to meet anticipated requirements for high-speed complementary metal-oxide silicon (HCMOS) wafers, we have used outside suppliers, or foundries, for the supply of up to 15% of our requirements for these wafers. We do not intend to increase our reliance on front-end manufacturing through external foundries beyond this level. In fact, in 2001, in a period of market downturn, our reliance on such suppliers significantly decreased. However, when our markets grow, we may face capacity constraints and we expect to continue to rely on third-party wafer suppliers without having the same degree of management control and supervision over their operations as we do over our own. If these suppliers experience manufacturing difficulties, delays, or reduced yields, our results of operations and ability to satisfy customer demand could suffer. In addition, purchasing rather than manufacturing these products may adversely affect our gross profit margin if the purchase costs of these products are higher than our own manufacturing costs.

Our common share price and operating results may be negatively affected by potential acquisitions

Our growth to date has primarily been organic. In 1999, however, we made three acquisitions: the Peripheral Technology Solutions group from Adaptec for a purchase price of approximately $72 million, Vision Group plc for a purchase price of approximately $41 million and Arithmos for a purchase price of approximately $42 million. In 2000, we acquired from Nortel Networks its semiconductor business including a 150mm manufacturing facility located in Ottawa, Canada, for a purchase price of approximately $60 million. In May 2001,

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we announced the closure of this facility, which was completed by the end of 2001. In September 2000, we acquired the assets and business of Waferscale Integration, Inc. for approximately $78 million. In December 2000, we acquired Portland Group Inc. (PGI), a vendor of compilers and software development tools to the high-performance parallel computing market, for approximately $18 million. In March 2001, we acquired Ravisent s consumer electronics business for approximately $56 million. In July 2001, we closed the purchase of a software design center in Prague, Czech Republic from Veridicom Inc., involving the acquisition and licensing of intellectual property for fingerprint biometric security products, for approximately $4 million. On April 15, 2002, we announced the acquisition of Alcatel Microelectronics SA, an affiliate of Alcatel SA, for approximately 390 million (approximately $351 million) and a cooperation agreement for the joint development of DSL chip-sets that will also be made available on the open markets. The acquisition announcement was followed by the announcement of an agreement with AMI Semiconductors Inc. (AMIS) for the sale by us to AMIS of Alcatel Microelectronics mixed-signal business for approximately 70 million (approximately $63 million). Both transactions remain subject to regulatory approvals and customary conditions to closing of corporate transactions. As a result of the adoption of a new statement by the Financial Accounting Standards Board regarding the accounting to be applied to goodwill and intangible assets subsequent to their initial recognition (FAS 142), to become effective for fiscal years beginning after December 15, 2001, goodwill resulting from certain of these acquisitions may no longer be amortized but may be subject to annual impairment tests to determine their appropriate carrying value.

We may, from time to time, consider making selected additional acquisitions that we believe would complement or expand our existing business. We may pay for these acquisitions with cash, our common shares or both. These acquisitions, if they occur, may have a dilutive effect for existing shareholders and, whether they are paid for in cash or common shares, may negatively affect our common share price. Announcements concerning potential acquisitions could be made at any time.

Acquisitions involve a number of risks that could adversely affect our operating results, including:

- the diversion of management s attention
- the assimilation of the operations and personnel of the acquired companies
- the assumption of potential liabilities, disclosed or undisclosed, associated with the business acquired, which liabilities may exceed the amount of indemnification available from the seller
- the risk that the financial and accounting systems utilized by the business acquired will not meet our standards
- the risk that the businesses acquired will not maintain the quality of products and services that we have historically provided
- the inability to attract and retain qualified management for the acquired business
- our inability to retain customers of the acquired entity
- the risk of goodwill impairment.

There can be no assurance that (a) we will be able to consummate future acquisitions on satisfactory terms, if at all, (b) adequate financing will be available for future acquisitions on terms acceptable to us, if at all, or (c) any operations acquired will be successfully integrated or that such operations will ultimately have a positive impact on our business.

Our business can be adversely affected by changes in the value of the U.S. dollar

A material variation in the value of the U.S. dollar against the principal European and Asian currencies which have a material impact on us could result in a favorable impact on our net income in the case of an appreciation of the U.S. dollar, or a negative impact on our net income if the U.S. dollar depreciates relative to these currencies. For example, the appreciation registered by the U.S. dollar in 2000 and 2001 against the principal European and Asian currencies (excluding the Japanese yen, which appreciated compared to the U.S. dollar) resulted in a negative impact on revenues and a favorable impact on operating income for 2001, because of the favorable impact on cost of sales and operating expenses which exceeded the negative impact on net revenues. Isn

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addition, the balance sheet impact of translation adjustments has been, and may be expected to continue to be, material from period to period. Our policy is to monitor and cover a portion of our exchange rate exposure, and we manage our operations to mitigate, but not eliminate, the positive or negative impact of exchange rate fluctuations.

Our controlling shareholders interests may conflict with investors interests

ST Microelectronics Holding II B.V. (ST Holding II), a wholly owned subsidiary of STMicroelectronics Holding N.V. (ST Holding), currently owns approximately 36.2% of our issued and outstanding common shares and is effectively in a position to control actions that require shareholder approval, including corporate actions, the election of our Supervisory Board and our Managing Board and the issuance of new shares or other securities. As permitted by our articles of association, the Supervisory Board has specified further selected actions by the Managing Board that require the approval of the Supervisory Board.

ST Holding is currently jointly and directly owned by a French shareholder that is indirectly controlled by the French government and an Italian shareholder in whom the Italian government holds approximately 34.2% of the share capital and retains special powers to approve or determine certain corporate actions. The French shareholder, FT1CI, is a holding company for two of our indirect shareholders, Areva Group and France Telecom, each of which are ultimately controlled by the French government. Finmeccanica is an Italian holding company owned by both the Italian Ministry of Treasury, which controls important actions of Finmeccanica due to its significant holding in it, Istituto per la Ricostruzione Industriale-IRI S.p.A. *in liquidazione* (I.R.I. , the holding company for Italian state-owned industrial and commercial interests) and the public. The Italian Ministry of Treasury has appointed a majority of the members of Finmeccanica s Board of Directors and pursuant to the provisions of its articles of association and Italian law, retains veto rights over certain major transactions involving Finmeccanica. These French and Italian shareholder groups of ST Holding have entered into a shareholders agreement which enables each of them to designate three members of the Supervisory Board and includes provisions requiring the approval of the Supervisory Board of ST Holding for actions by ST Holding, us and our subsidiaries. In December 2001, the French and Italian shareholder groups of ST Holding (Areva Group, Finmeccanica S.p.A. and France Telecom) signed a new shareholders agreement to facilitate the offering of our common shares by France Telecom and Finmeccanica as well as the offering by France Telecom of exchangeable notes, exchangeable into our common shares. The new shareholders agreement provides that for a two-year period, FT1CI (the holding company for the two indirect French shareholders of ST Holding) and Finmeccanica will share equal voting rights with respect to ST Holding and us despite their difference in indirect economic interest in us resulting from the December 2001 common share offering by France Telecom and Finmeccanica and exchangeable note offering by France Telecom. See Item 7. Major Shareholders and Related Party Transactions Shareholders Agreements New Shareholders Agreement .

Furthermore, the new shareholders agreement provides, among other things, that France Telecom intends to dispose of its entire interest in our common shares following the expiration of a 180-day lock-up period which expires in May 2002. It also provides that Areva has both the freedom to dispose of its stake after a 24-month period following the agreement, as well as the possibility of rebalancing its stake to equal Finmeccanica s stake. Finmeccanica sold certain amounts of common shares held, initially at the same time as France Telecom, and has the right to have additional common shares sold during such 24-month period so that it may sell a total number of common shares equal to the amount sold during such 24-month period by France Telecom.

Finally, the new ST Holding shareholders agreement continues the requirement that unanimous approval of the ST Holding shareholders be obtained before the Supervisory Board members can take certain actions notwithstanding the reduction in their indirect ownership interest in us. The actions covered by these provisions include, among other things, any alteration in our authorized share capital, any new issue of shares by us, any merger, acquisition or joint venture agreement to which we are to be a party, and any items on the agenda for our general shareholders meeting. In addition, as is the case with other companies controlled by the French government, certain ministries of the Republic of France may veto any decision taken by the board of directors of FT1CI.

France Telecom and Areva, the shareholders of FT1CI, are parties to a separate shareholders agreement that requires the approval of the board of directors of each such company before members of the Supervisory Board appointed by the group of French shareholders may approve specified actions to be taken by ST Holding, ST Holding II, us or our subsidiaries. See Item 7. Major Shareholders and Related Party Transactions Shareholders Agreements New Shareholders Agreement .

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These various requirements for the prior approval of various actions to be taken by us and our subsidiaries may give rise to a conflict of interest between our interests and investors interests, on the one hand, and the interests of the individual shareholders approving such actions, on the other, and may result in a delay in the ability of our Managing Board to respond as quickly as may be necessary in the rapidly changing environment of the semiconductor industry. In particular, our ability to issue new shares or other securities may be limited by the existing shareholders desire to maintain their proportionate shareholding, and aggregate shareholding level, at a certain minimum level, such as the 30% percentage threshold that applies to the option agreement relating to preference shares discussed below. Such approval process is, however, subject to the provisions of Dutch law requiring members of our Supervisory Board to act independently in supervising our management.

In addition, France Telecom issued exchangeable notes redeemable by way of exchange for our common shares after January 2, 2004, representing 3.37% of our issued and outstanding common shares in December 2001. The interests of France Telecom as the issuer of the exchangeable notes may not necessarily coincide with our interests.

We may also have contractual and other business relationships with our indirect shareholders and/or their affiliates and may engage in significant transactions from time to time. Although it is anticipated that any such transactions and agreements will be on terms no less favorable to us than we could obtain in comparable contracts with unaffiliated third parties, conflicts of interest may arise between us and our indirect shareholders and their affiliates in a number of circumstances.

Our shareholder structure and our preference shares may deter a change of control

On May 31, 1999, our shareholders at the annual general meeting approved the creation of up to 180,000,000 preference shares. Pursuant to the 3-for-1 stock split effected in May 2000, the number of such preference shares has increased to 540,000,000. These preference shares entitle a holder to full voting rights at any meeting of shareholders and to a preferential right to dividends and distributions upon liquidation. On May 31, 1999, in order to protect ourselves from a hostile takeover or other similar action, we entered into an option agreement with ST Holding II, which provides that (taking into account the 3-for-1 stock split of May 2000) up to 540,000,000 preference shares shall be issued to ST Holding II upon its request and subject to the adoption of a resolution of our Supervisory Board giving our consent to the exercise of the option and upon payment of at least 25% of the par value of the preference shares to be issued. Following the most recent decision of our Supervisory Board, the option is contingent upon ST Holding II retaining at least 30% of our issued share capital at the time of exercise. No preference shares have been issued to date. The preference shares, if issued, would have priority with respect to dividends and distributions upon liquidation over the common shares. The effect of the preference shares may be to deter potential acquirers from effecting an unsolicited acquisition resulting in a change of control. In addition, any issuance of additional capital within the limits of our authorized share capital, as approved by our shareholders, is subject to the approval of our Supervisory Board and of the Supervisory Board of ST Holding.

Substantial sales of our common shares into the market could cause the market price of our common shares to drop significantly

As of December 31, 2001, 889,699,181 of our common shares were issued and outstanding, not including (i) common shares issuable under our various employee stock option plans or employee share purchase plans, (ii) common shares issuable upon conversion of our outstanding convertible debt securities and (iii) 9.4 million shares repurchased in 2001. Substantial sales of existing shares of our common shares or securities exchangeable into our existing shares, or newly issued shares or convertible debt securities by us, could cause the market price of our common shares to drop significantly. The timing and size of any future primary or secondary offerings will depend upon market conditions as well as a variety of factors.

The shareholders of ST Holding signed a new shareholders agreement on December 10, 2001 that states that France Telecom intends to dispose as soon as possible of its indirect interest in our common shares, while Areva has obtained its freedom to dispose of its stake after a 24-month period from the date of such agreement, as well as the possibility of rebalancing its stake to equal Finmeccanica s stake. The new shareholders agreement provides that Finmeccanica will have the right to sell additional common shares during such 24-month period so that it may sell a total number of shares equal to the amount sold by France Telecom. For a description of these provisions, see Item 7. Major Shareholders and Related Party Transactions Shareholders Agreements New Shareholders Agreement Disposals of Our Common Shares . Under the new shareholders agreement, sales of additional amounts of our

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common shares by ST Holding II on behalf of its indirect shareholders will not necessarily affect its relative voting rights as shareholders. It is highly likely that additional sales of our common shares will occur. Any such transaction, or publicity concerning such a potential transaction, could negatively affect the market price of our common shares. See Item 7. Major Shareholders and Related Party Transactions Shareholders Agreements New Shareholders Agreement Disposals of Our Common Shares .

Disruptions in our relationships with any one of our key customers could adversely affect our results of operations

We have several large customers, some of whom have entered into strategic alliances with us. As of December 31, 2001, our largest customer was Nokia, which accounted for 19.3% of net revenues, and our top ten customers accounted for approximately 50% of net revenues. We cannot guarantee that our largest customers will continue to book the same level of sales with us that they have in the past. Many of our key customers operate in cyclical businesses that are also highly competitive, and their own demands and market positions may vary considerably. Our customers have in the past, and may in the future, vary order levels significantly from period to period. In addition, approximately 16% of our net revenues were made through distributors in 2001 compared to 18% in each of 2000 and 1999. We cannot guarantee that distributors, or any other customers, will continue to place orders with us in the future at the same levels as in prior periods. If we were to lose one or more of our customers or distributors, or if any other key customer were to reduce its bookings, increase its product returns or fail to meet its payment obligations, our operating results could be adversely affected. If orders are cancelled, we may not be able to resell products previously made or require the customers who have ordered these products to pay for them.

We depend on patents to protect our rights to our technology

We depend in part on patents and other intellectual property rights covering our products and their design and manufacturing processes. We intend to continue to seek patents on our inventions relating to product designs and manufacturing processes. The process of seeking patent protection can be long and expensive, however, and we cannot guarantee that we will receive patents from currently pending or future applications. Even if patents are issued, they may not be of sufficient scope or strength to provide meaningful protection or any commercial advantage. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in some countries. Competitors may also develop technologies that are protected by patents and other intellectual property and therefore either be unavailable to us or be made available to us subject to adverse terms and conditions. We may not be able to obtain licenses or other rights to necessary intellectual property on acceptable terms.

Because patent and other intellectual property litigation is costly and unpredictable, our attempts to protect our rights or to defend ourselves against claims made by others could impose high costs and risks on our business

Litigation that could demand financial and management resources may be necessary to enforce our patents or other intellectual property rights. Also, we may become involved in costly litigation brought against us regarding patents, mask works, copyrights, trademarks or trade secrets. If we cannot obtain licenses or other intellectual property rights, or if we have litigation expenses or judgments that are contrary to us, our results of operations or financial condition could be hurt. We have from time to time received, and may in the future receive, communications alleging possible infringement of patents and other intellectual property rights of others. We have in the past negotiated broad patent cross-licenses with many of our competitors enabling us to design, manufacture and sell semiconductor products, without fear of infringing patents held by such competitors. As our sales increase compared to those of our competitors, the strength of our patent portfolio may not be sufficient to guarantee the conclusion or renewal of broad patent cross-licenses on terms which do not affect our results of operations. Furthermore, regardless of the validity or the successful assertion of any third-party patent or other intellectual property claims, we could incur significant costs with respect to the defense thereof that could have a material adverse affect our results of operations or financial condition.

We have benefited from state funding in France and Italy which might become unavailable, and as a result our costs could increase

Like many other semiconductor manufacturers operating in Europe, we have had the benefit of governmental funding for research and development expenses, industrialization costs (which include some of the costs incurred to bring prototype products to the production stage) and capital investment as well as low-interest financing. As a result of our history, our research and development facilities and manufacturing activities are

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concentrated mainly in France and Italy, and the substantial majority of our state funding has been derived from national and European Union programs in these countries. We have entered into funding agreements with France and Italy, which set forth the parameters for state support to us under selected national programs. These funding agreements require compliance with European Union (EU) regulations and approval by EU authorities and annual and project-by-project reviews and approvals.

The EU adopted guidelines in 1995 seeking to limit state aid for research and development activities routinely performed in the normal course of business. We cannot guarantee that we will continue to benefit from state aid for research and development, that such aid will not be revoked or discontinued, or that material aid granted by a government for research and development will not be reviewed or challenged by the EU.

We rely on receiving funds allocated by state governments on a timely basis. However, funding of programs in France and Italy is subject to annual appropriation. If these governments were unable to provide anticipated funding on a timely basis or if existing government-funded programs were curtailed or discontinued, this could have a material adverse effect on our business, operating results and financial condition. From time to time we have experienced delays in the receipt of funding under these programs. As the availability and timing of such funding are substantially outside its control, we may not continue to benefit from such government support, and funding may be delayed from time to time, or sufficient alternative funding may not be available if necessary or any such alternative funding may not be provided on terms as favorable to us as those previously provided. In addition, funding granted to us may be revoked or challenged or discontinued in whole or in part by any competent state or European authority, or competent administrative or judicial body, until the legal time period for challenging or revoking such funding has elapsed.

Because we are a Dutch company subject to the corporate law of The Netherlands, investors might have difficulty protecting their interests in a court of law or otherwise

Our corporate affairs are governed by our articles of association and by the laws governing corporations incorporated in The Netherlands. The corporate affairs of each of our consolidated subsidiaries are governed by the articles of association and by the laws governing such corporations in the jurisdiction in which such consolidated subsidiary is incorporated. The rights of the investors and the responsibilities of members of our Supervisory Board and Managing Board under Dutch law are not as clearly established as under the rules of some U.S. jurisdictions. Therefore, investors may have more difficulty in protecting their interests in the face of actions by our management, members of our Supervisory Board or our controlling shareholders than investors would have if we were incorporated in the United States. Under our articles of association, when our annual accounts are adopted by the general meeting of shareholders, the members of our Managing Board and Supervisory Board are discharged from liability for their actions during the financial year concerned, unless an express reservation is made by the general meeting of shareholders. This is without prejudice to the provisions of Dutch law, including provisions relating to liability of members of Supervisory Boards and Managing Boards upon bankruptcy of a company pursuant to articles 2:138 and 2:149 of the Dutch Civil Code. Notwithstanding the language in our articles of association, effective the financial year commencing on January 1, 2002, Dutch law no longer allows the automatic discharge of the members of our Supervisory Board and of our Managing Board when our annual accounts are adopted by our shareholders. Therefore, for the financial year commencing on January 1, 2002 and for subsequent financial years, in order to obtain such a discharge, the discharge will be introduced as a separate item on the agenda for our annual general meetings of shareholders.

Our executive offices and a substantial portion of our assets are located outside the United States. In addition, ST Holding II and most members of our Managing and Supervisory Boards are residents of jurisdictions other than the United States and Canada. As a result, it may be difficult or impossible for shareholders to effect service within the United States or Canada upon us, ST Holding II, or members of our Managing or Supervisory Boards. It may also be difficult or impossible for shareholders to enforce outside the United States or Canada judgments obtained against such persons in U.S. or Canadian courts, or to enforce in U.S. or Canadian courts judgments obtained against such persons in courts in jurisdictions outside the United States or Canada. This could be true in any legal action, including actions predicated upon the civil liability provisions of the U.S. securities laws. In addition, it may be difficult for shareholders to enforce, in original actions brought in courts in jurisdictions located outside the United States, rights predicated upon the U.S. securities laws.

We have been advised by our Dutch counsel, De Brauw Blackstone Westbroek N.V., that the United States and The Netherlands do not currently have a treaty providing for reciprocal recognition and enforcement of

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judgments (other than arbitration awards) in civil and commercial matters. As a consequence, a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the federal securities laws of the United States, would not be directly enforceable in The Netherlands. However, if the party in whose favor such final judgment is rendered brings a new suit in a competent court in The Netherlands, such party may submit to The Netherlands court the final judgment that has been rendered in the United States. If The Netherlands court finds that the jurisdiction of the federal or state court in the United States has been based on grounds that are internationally acceptable and that proper legal procedures have been observed, the court in The Netherlands would, under current practice, give binding effect to the final judgment that has been rendered in the United States unless such judgment contravenes The Netherlands public policy.

Removal of our common shares from the CAC 40 on Euronext Paris or the MIB 30 on the Borsa Italiana could cause the market price of our common shares to drop significantly

Our common shares have been included in the CAC 40 index on Euronext Paris since November 12, 1997 and the MIB 30 on the Borsa Italiana since March 18, 2002. However, our common shares could be removed from the CAC 40 or the MIB 30 at any time, and the exclusion or the announcement thereof could cause the market price of our common shares to drop significantly.

Item 4. *Information on the Company*

History and Development of the Company

STMicroelectronics N.V. was formed in 1987 under the name of SGS-Thomson Microelectronics N.V. and resulted from the combination of the semiconductor business of SGS Microelettronica (then owned by Società Finanziaria Telefonica (S.T.E.T.), an Italian corporation) and the non-military business of Thomson Semiconducteurs (then owned by the former Thomson-CSF, now Thales, a French corporation). We were incorporated in 1987, and our length of life is indefinite. We are organized under the laws of The Netherlands, have our corporate legal seat in Amsterdam and our holding company executive offices at De Run 4222, 5503LL Veldhoven, The Netherlands, near Eindhoven, The Netherlands. Our telephone number there is (31-49) 955-0634. Our headquarters and operational offices are located in the vicinity of Geneva Airport at Route de Pré-Bois 20, ICC Bloc A, 1215 Geneva 15, Switzerland. Our main telephone number is (41-22) 929-2929. We also maintain an administrative center at Technoparc du Pays de Gex B.P. 112, 165, rue Edouard Branly, 01637 Saint-Genis Pouilly, France; telephone number (33-4) 5040-2640. Our agent for service of process in the United States is STMicroelectronics, Inc., 1310 Electronics Drive, Carrollton, Texas, 75006-5039; telephone: +1 (972) 466-6000. STMicroelectronics N.V. is our parent company and we also conduct our operations through our consolidated subsidiaries.

For information on our principal capital expenditures and divestitures, see Item 5. Operating and Financial Review and Prospects .

Business Overview

We are a global independent semiconductor company that designs, develops, manufactures and markets a broad range of semiconductor integrated circuits (ICs), discrete and optoelectronic devices used in a wide variety of microelectronic applications, including automotive products, computer peripherals, telecommunications systems, consumer products, industrial automation and control systems. According to final rankings published by Dataquest-Gartner Group in March 2002, we are the third-largest semiconductor company based on 2001 sales, rising from sixth-largest in 2000. On the same basis, iSupply ranked us second-largest and IC-Insights third-largest in 2001. Based on our 2001 sales, Dataquest-Gartner Group ranked us as the world s third-largest semiconductor supplier in combined revenues from general purpose and application specific semiconductors for all communications system use and total automotive applications. According to iSupply and Databeans Inc., based on 2001 sales, we are the world s largest supplier of Analog ICs. According to Dataquest-Gartner Group, we are the world s leading supplier of EPROM memory and thyristors and the second leading supplier of EEPROM memory and power diodes. We currently offer more than 3,000 main types of products to approximately 800 direct customers. Major customers include Alcatel, Bosch, DaimlerChrysler, Delco, Echostar, Ericsson, Gemplus, Hewlett-Packard, Marelli, Matsushita, Nokia, Nortel Networks, Pace, Philips, Pioneer, Samsung, Schlumberger, Scientific Atlanta, Seagate Technology, Siemens, Sony, Thomson Multimedia and Western Digital. We also sell standard products through global distributors, including Arrow Electronics, Avnet Inc. and Eurodis.

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We offer a diversified product portfolio and develop products for a wide range of market applications to reduce our dependence on any single product, application or end market. Within our diversified portfolio, we have focused on developing products that leverage our technological strengths in creating customized, system-level solutions with high-growth digital and mixed-signal content. Products include differentiated ICs (which we define as being our dedicated products, semicustom devices and microcontrollers) and analog ICs (including mixed-signal ICs), the majority of which are also differentiated ICs, as well as certain Flash products which are sold for specific applications and to particular customers. As a leading provider of differentiated ICs, we have developed close relationships with customers, resulting in early knowledge of their evolving requirements enabling us to increase the penetration of our standard products. Differentiated ICs, which are less vulnerable to market cycles than standard commodity products, accounted for approximately 66% of our net revenues in 2001 compared to approximately 63% in each of 1999 and 2000. We also target applications that require substantial analog and mixed-signal content and can exploit our system-level expertise. Analog ICs accounted for approximately 51% of our 2001 net revenues compared to approximately 49% in 2000 and 51% in 1999, while discrete devices accounted for approximately 10% of our net revenues in 2001 compared to approximately 10% in 2000 and 12% in 1999.

Our products are manufactured and designed using a broad range of manufacturing processes and proprietary design methods. We use all of the prevalent function-oriented process technologies, including complementary metal oxide silicon (CMOS), bipolar and nonvolatile memory technologies. In addition, by combining basic processes, we have developed advanced systems-oriented technologies that enable us to produce differentiated and application-specific products, including BiCMOS technologies (bipolar and CMOS) for mixed-signal applications, BCD technologies (bipolar, CMOS and diffused metal oxide silicon (DMOS)) for intelligent power applications and embedded memory technologies. This broad technology portfolio, a cornerstone of our strategy for many years, enables us to meet the increasing demand for system-on-a-chip solutions. Complementing this depth and diversity of process and design technology is our broad intellectual property portfolio that we also use to enter into important patent cross-licensing agreements with other major semiconductor companies.

Our products are organized into the following principal groups:

Telecommunications, Peripherals and Automotive

Consumer and Microcontroller

Memory Products

Discrete and Standard ICs.

We also have a New Ventures Group that identifies and develops new business opportunities to complement our existing businesses, and a Subsystems Product Group that produces subsystems for industrial and other applications.

The tables below set forth information on our net revenues by product group and by geographic region:

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	Year ended December 31,				
	1997	1998	1999	2000	2001
	(in millions)				
Net Revenues by Product Group:(1)					
Telecommunications, Peripherals and Automotive(1)	$ 1,606.9	$ 1,855.2	$ 2,305.5	$ 3,481.7	$ 3,031.4
Discrete and Standard ICs(1)	839.5	816.7	927.9	1,213.1	942.5
Memory Products	708.6	659.6	835.9	1,552.9	1,381.5
Consumer and Microcontrollers(1)(4)	738.8	806.3	886.4	1,466.3	895.7
New Ventures Group and Others(2)(4)	125.4	110.0	100.6	99.2	105.8
Total	**$ 4,019.2**	**$ 4,247.8**	**$ 5,056.3**	**$ 7,813.2**	**$ 6,356.9**
Net Revenues by Geographic Region:(3)					
Europe	$ 1,753.3	$ 1,768.9	$ 1,833.6	$ 2,629.2	$ 2,169.0
North America	899.1	937.3	1,156.1	1,843.0	1,160.7
Asia Pacific	1,065.8	1,247.9	1,658.2	2,614.7	2,301.8
Japan	214.5	180.7	239.7	402.4	331.4
Emerging Markets(3)	86.5	113.0	168.7	323.9	394.0
Total	**$ 4,019.2**	**$ 4,247.8**	**$ 5,056.3**	**$ 7,813.2**	**$ 6,356.9**
	(as a percentage of net revenues)				
Net Revenues by Product Group:(1)					
Telecommunications, Peripherals and Automotive(1)	40.0%	43.6%	45.6%	44.6%	47.7%
Discrete and Standard ICs(1)	20.9	19.2	18.4	15.5	14.8
Memory Products	17.6	15.5	16.5	19.9	21.7
Consumer and Microcontrollers(1)(4)	18.4	19.0	17.5	18.8	14.1
New Ventures Group and Others(2)(4)	3.1	2.7	2.0	1.2	1.7
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Net Revenues by Geographic Region:(3)					
Europe	43.6%	41.6%	36.3%	33.6%	34.1%
North America	22.4	22.1	22.9	23.6	18.3
Asia Pacific	26.5	29.4	32.8	33.5	36.2
Japan	5.3	4.3	4.7	5.2	5.2
Emerging Markets(3)	2.2	2.6	3.3	4.1	6.2
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

(1) In January 1999, we implemented organizational changes to better orient our product groups to end-use applications. As a result, net revenues have been restated for prior periods to reflect these changes. In addition, the former Dedicated Products Group has become the Telecommunications, Peripherals and Automotive Groups, while the former Programmable Products Group has become the Consumer and Microcontrollers Groups.

(2) Includes revenues from sales of subsystems and other products and from the New Ventures Group, which was created in May 1994 to act as a center for our new business opportunities.

(3) Revenues are classified by location of customer invoiced. For example, products ordered by U.S.-based companies to be invoiced to Asia Pacific affiliates are classified as Asia Pacific revenues. Net revenues by geographic region have been reclassified to reflect the creation of Region Five in January 1998 which includes emerging markets such as South America, Africa, Eastern Europe, the Middle East and India. Prior years have been restated to reflect this reclassification. In the fourth

quarter of 2000, Region Five changed its name to become the Emerging Markets region.

(4) In 2001, we implemented organizational changes to better orient our product groups to end-user applications. These changes affected the Consumer and Microcontrollers Groups and the New Ventures Group and Others. As a result, net revenues have been restated for prior periods to reflect these changes.

Strategy

The key elements of the strategy that guide our performance are set forth below.

Market share gains driven primarily by organic growth. Based upon 2001 sales, we have for the first time in our history been ranked third-largest global semiconductor company worldwide. In 1994, when we first became a publicly listed company, Dataquest-Gartner Group ranked us only twelfth among the largest global semiconductor companies worldwide. Our ascendance in the rankings, driven primarily by organic growth, has allowed us to achieve an increased market share of 4.5% in 2001, while at the same time maintaining profitability during the period, strengthening our balance sheet and generating net operating cashflows. In the past, we have, however, made certain targeted acquisitions of assets and intellectual property aimed at enhancing our expertise and presence in our strategic areas of priority. We may, from time to time, continue to make selected acquisitions or targeted

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equity investments in companies that we believe would complement or expand our existing business. For example, in May 2002, we announced the acquisition of Alcatel Microelectronics for 390 million (approximately $351 million) in cash. Furthermore, we may seek to participate in or benefit from the semiconductor industry consolidation that we expect to occur over the next several years. Announcements concerning potential acquisitions may be made at any time. Acquisitions involve a number of risks that could adversely affect our operating results. See Item 3. Key Information Risk Factors Risk factors related to our operations Our common share price and operating results may be negatively affected by potential acquisitions .

Broad product portfolio. We offer a diversified product portfolio and develop products for a wide range of market applications to reduce our dependence on any single product, application or end market. Within our diversified portfolio, we have focused on developing products that leverage our technological strengths in creating customized, system-level solutions for high-growth digital and mixed-signal applications. Such products include differentiated ICs (which we define as being our dedicated products, semicustom devices and microcontrollers, as well as certain Flash products which are sold for specific applications and to particular customers) and analog ICs (including mixed-signal ICs), the majority of which are also differentiated ICs. As a leading provider of differentiated ICs, we have developed close relationships with customers, resulting in early knowledge of their evolving requirements enabling us to increase the penetration of our standard products. Differentiated ICs, which are less vulnerable to market cycles than standard commodity products, accounted for approximately 66% of our net revenues in 2001, and 63% in each of 2000 and 1999.

Differentiated ICs help drive our strategic alliances with customers, and in general command greater stability of margins across the semiconductor cycles than standard products. Standard products (including nonvolatile memories, discrete devices, Smartcard ICs, all standard logical and linear ICs and standard flash memories) represented approximately 33% of our net revenues in 2001. Our standard products families (with the exception of flash memories) require less capital investment thereby offering an opportunity to improve our cash flow, and extend the life cycle of our equipment and facilities, since they can continue to use equipment no longer suitable for leading edge products. We consider that this balance between differentiated and standard products represents a strategic contribution to cost effective manufacturing.

Broad range of process and design technologies. We intend to continue to utilize our expertise and experience with a wide range of process and design technologies to further develop our capabilities. We are committed to maintaining and, in certain areas increasing, expenditures on core research and development projects in the future as well as continuing to develop alliances with other semiconductor companies and suppliers of software development tools. Technological advances in the areas of transistor performance and interconnection technologies are being developed through our CMOS logic products and semicustom devices. We work, on an ongoing basis, with key suppliers to develop advanced and standardized design methodologies for our CMOS, mixed signals and nonvolatile memory processes as well as libraries of macrofunctions and megafunctions for many of our products, and are focusing on improving our concurrent engineering practices to better coordinate design activities and reduce overall time-to-market. We are also working closely with many of our key suppliers to develop easy-to-use design tools for specific applications. Furthermore, we recently entered into a strategic alliance with a leading manufacturer of photomasks for the development and supply of leading-edge and high-end photomasks in Europe to ensure rapid turn-around of these critical components. Alliances with other semiconductor manufacturers are generally designed both to permit the sharing of the increasing costs and technological risks involved in the research and development of state of the art processes, product architectures and digital cores and to enable a shorter time to market.

Leading global customer base with focus on strategic alliances. We work with our key customers to identify evolving needs and new applications and to develop innovative products and product features. We also seek to use our access to key customers as a supplier of application-specific products to expand our position as a supplier across a broad range of products. These alliances allow us and our customers to share certain of the product development risks and give our customers access to our process technologies and manufacturing infrastructure. We have established alliances in each of our key targeted applications, telecommunications, automotive, consumer and computers with customers such as Alcatel, Bosch, Hewlett-Packard, Marelli, Nokia, Nortel Networks, Pioneer, Seagate Technology, Siemens VDO, Thomson Multimedia and Western Digital, among others. In establishing these alliances, we have also sought to maintain a presence in key geographical markets. Our strategic alliances with key customers have been a major growth driver for us over the last few years with sales to those key partners growing at a rate faster than our average rate. In 2001, sales to strategic customers represented close to 47% of total revenues.

Integrated presence in key regional markets. We have consistently sought to develop a competitive advantage by building an integrated presence in each of the world s three major economic zones: Europe, Asia and

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North America. An integrated presence means having manufacturing, design, sales and marketing capabilities in each region, in order to ensure that we are well positioned to anticipate and respond to our customers business requirements in local markets. Therefore, we have 200mm front-end manufacturing facilities in Europe (Agrate and Catania, Italy; and Crolles and Rousset, France), in the United States (Phoenix, Arizona) and in Asia (Singapore); the more labor-intensive back-end facilities have been located in Malaysia, Malta, Morocco, Singapore and China, enabling us to take advantage of favorable production costs (particularly labor costs). With major design centers and local sales and marketing groups within close proximity of key customers in each region, we believe we can maintain strong relationships with our customers. We intend to continue to build our integrated local presence in each region where we compete, as part of our efforts to better serve our customers, and to develop an early presence in potential high growth markets such as China, where we have both a back-end facility and a design center, and India, where we have a design center.

Balanced sales by application in high growth market segments. We maintain a geographically diverse customer base across a broad range of market applications. We have developed a strong product portfolio serving major application markets including computer peripherals, wireless communications, digital consumer electronics, Smartcards, automotive and power management. While we are consolidating our position in our established high volume businesses (including switching, engine management, car safety, traditional analog TVs, VCRs, monitors and displays, computer peripherals, power and industrial and consumer appliances), we have also been investing research and development and design resources to develop the next generation of high growth applications, such as Smartcards for security telephone, banking and user ID markets, portable computing, digital consumer (DVD, new generations of set-top boxes, digital TV, digital cameras and MP3 digital music players), wireless communications (digital cellular phones), data transport (fiber optic ICs and voice over IP, known as VoIP), Internet (xDSL), new automotive products (car radio multimedia) and new generations of mass storage devices.

Pioneer in System-on-Chip and application convergence. Since our inception, we have leveraged our know-how of a broad range of industries to integrate different system functions on a single chip, pioneering the trend towards system evolutions on silicon and superintegration. A modular approach is being utilized to develop options to the main manufacturing processes and blocks of intellectual property; strategic partnerships are the main lever for acquiring the system know-how to be embedded on the chip. We currently supply highly integrated products in all our main applications, and particularly in high volume domains such as hard-disk drives (disk controllers), set-top boxes and digital video drives (DVD).

We believe that application convergence built around mobility, connectivity, multimedia, storage and security will be a further significant growth driver for new system on chip products relating to different applications on a single chip. We plan to use our broad range of capabilities, including technology, system know-how, strategic alliances and intellectual property portfolio to continue to address this rapidly developing market and to both innovate and respond to the new end market demand.

Pervasive TQEM culture. We are fostering a corporate-wide TQEM culture that defines a common set of objectives and performance measurements for employees in all geographic regions, at every stage of product design, development, production and consignment for all product lines. TQEM in our company is based on five key principles: management commitment, employee empowerment, continuous improvement, management by fact and customer focus. TQEM has become an integral part of our culture and is designed to develop a self-directed work force with a common set of values, objectives and problem-solving processes. Since 1987, we have continually improved average AIQ (electrical) status levels. Most of our manufacturing facilities have been certified to conform to ISO international quality standards and Eco Management and Audit Scheme (EMAS). Several major customers, including Bosch, DaimlerChrysler, Hewlett-Packard, Nokia, Sanyo, Sharp and Sony have recognized our commitment to quality and have honored us with quality awards. Also in recent years, several prestigious awards have been accorded to our regional subsidiaries, underscoring our long-standing commitment to business excellence: the prestigious Malcolm Baldrige National Quality Award in the U.S., the Singapore Quality Award, the Moroccan National Quality Award, the EPA Climate Protection Award, the Malaysian Prime Minister Quality Award, and the Malta Quality Award. In 1997 the European Quality Award for Business Excellence in the category of large businesses was awarded to us by the European Foundation for Quality Management. Most recently, we received the EPA Climate Protection Award 2002. These awards illustrate the success of our unified Total Quality and Environmental Management philosophy on four continents.

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Products and Technology

We design, develop, manufacture and market a broad range of products used in a wide variety of microelectronic applications, including telecommunications systems, computer systems, consumer goods, automotive products and industrial automation and control systems. Our products include standard commodity components, full custom devices, semicustom devices and ASSPs for analog, digital and mixed-signal applications. Historically, we have not produced dynamic random access memory (DRAMs) or x86 microprocessors, despite having the necessary IP (intellectual property) to use them as components in System-on-Chip (SoC).

In 2001, we had four principal products groups, Telecommunications Peripherals and Automotive, Consumer and Microcontroller, Memory Products and, also, Discrete and Standard ICs. As part of our activities outside the principal product groups, we also have a New Ventures Group, which identifies and develops new business opportunities to complement our existing businesses, and a Subsystem Product Group, which produces subsystems for industrial and other applications. For a breakdown of net revenues by product group and geographic region each of the five years ended December 31, 2001, see Business Overview .

Telecommunications, Peripherals and Automotive Groups

The Telecommunications, Peripherals and Automotive Groups (TPA) are responsible for the design, development and manufacture of application-specific products using advanced bipolar, CMOS, BiCMOS mixed-signal and power technologies as well as mixed analog/digital semicustom-devices and Micro-Electro-Mechanical System (MEMS) products. The Groups offer complete system solutions to customers in several application markets. All products are application-specific standard products (ASSPs), full-custom or semicustom devices that may also include digital signal processor (DSP) and micro-controller cores.

The Telecommunications, Peripherals and Automotive Groups work closely with customers to develop application-specific products using our technologies, IP (intellectual property), and manufacturing capabilities. The breadth of our customer and application base provides us with a source of stability in the cyclical semiconductor market. The Telecommunications, Peripherals and Automotive Groups particularly emphasize dedicated ICs for automotive, computer peripherals and industrial application segments, as well as for communication, computing and networking application segments.

The Telecommunications Group has three application divisions, and the Peripherals and Automotive Group has four divisions. The Groups also share two support divisions: (i) digital signal processing and microcontrollers cores and (ii) digital and mixed analog/digital semicustom.

The Telecommunications Group has two long-established divisions and recently created a third:

(i) *Wireless Telecommunications Products.* In wireless telecommunications, we focus our product offerings on cellular phones serving the major original-equipment manufacturers, or OEMs , with differentiated ICs. In this market, we have key positioning in energy management, audio CODEC and radio frequency ICs. In addition to our existing product applications, a leading cellphone maker recently chose us to supply a radio frequency solution for dual-mode terminals, using 0.35-micron SiGe technology. We also announced an agreement with TTPCom for the development of GSM and GPRS (2.5G) baseband platform chips for the next generation of mobile handsets and mobile Internet devices based on our ST100 DSP core. In February 2002, we announced a new cooperation agreement with Alcatel for the development of future GSM/GPRS chipsets for mobile phones and other wireless connectivity applications. Under the terms of the agreement, Alcatel has transferred to us its team of mobile phone integrated-circuit designers. We will get access to the know-how and intellectual property developed by this Group and related to GSM/GPRS. The resulting chipsets will be available for the open market. This cooperation also includes a multi-year supply agreement associated with 2.5G chipsets.

(ii) Wireline Telecommunications Products. Our wireline telecommunications products are used in telephone sets, modems, subscriber line interface cards (SLICs) for digital central-office switching equipment and high-speed electronic and optical communications networks. In 2001, we signed an agreement with Huawei Technologies, China s number one telecom equipment manufacturer to jointly develop a key silicon chip for Huawei s SLICs. We also had important design wins, for high-speed (10 Gbit/sec) chips built in our cost-optimized silicon-germanium (SiGe) technology.

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In the area of broadband access, we offered a new asymmetrical digital subscriber line (ADSL) modem chipset aimed at both desktop and laptop computers that was the first on the market to employ a controller-less design with USB or PCI interface. Pursuing our efforts to support the DMT (Discrete Multi Tone) modulation technique as a worldwide standard for very high-bit rate digital subscriber line or VDSL, we demonstrated working prototypes of our Zipper-DMT VDSL modem technology that combines the very high bandwidth of VDSL with ADSL spectrum compatibility.

In February 2002, we signed an agreement to acquire the intellectual property and product range of Tioga Technologies for Digital Subscriber Line (xDSL) chipsets. These xDSL products include an integrated Asymmetric DSL (ADSL) multi-channel processor for central office applications. When used together with our existing line of advanced analog front-end and power-efficient line drivers, this chipset provides a competitive, compact and power-efficient solution.

In April 2002, as part of our agreement with Alcatel to acquire Alcatel Microelectronics, we announced our intention to enter into a cooperation agreement with Alcatel for the joint development of DSL chip sets that will also be made available to the open market. The new agreement calls for us to become a preferred supplier of Alcatel, thus expanding our long-standing strategic alliance.

(iii) *Wireless Communications Infrastructure Products.* In February 2002, we announced the formation of a new Wireless Communications Infrastructure Products business unit that will develop dedicated infrastructure chip solutions for GSM/GPRS, CDMA and new third-generation telecom standards. We have already developed all of the technologies required for the wireless infrastructure application specific IC (ASIC) market due to our many years of experience in this field. For the digital baseband chips that handle complex digital processing tasks, we have developed the ST100 family of digital signal processor cores. We have already developed other key technologies radio frequency and mixed signal for the demanding wireless terminal market, both areas where our expertise is widely recognized.

The Peripherals and Automotive Group has four divisions:

(i) *Data Storage and Computer Peripherals.* We produce ICs for several data storage applications, specializing in disk drives with advanced solutions for read and write digital channels, controllers, host interfaces, digital power processing and micromachinery. We are actively working on super-integrating these macro-functions into System-on-Chip (SoC) solutions.

In addition to delivering first samples of a 0.18-micron-technology hard-disk controller with embedded DRAM and gaining important new design wins for hard-disk drive (HDD) preamplifiers and dedicated power devices for high-end and mobile disk drives, we were selected by Quantum Technologies to supply a SoC solution for a new hard-disk drive. Based on our new Super10 DSP enhanced microcontroller core, the new device will also incorporate a hard disk controller, 4Mbits of embedded dynamic random access memory (DRAM) and interface functions. We will supply the complete system solution, including firmware. During the fourth quarter 2001, we also achieved three design wins for SoC devices with major hard-disk drive customers.

During the third quarter 2001, we introduced a high-performance MEMS-based (Micro-Electro-Mechanical System) rotational accelerometer for PC and consumer HDD applications. The device makes the drive more resistant to vibration, thereby improving overall read/write speed and disk density.

(ii) *Printers.* We are focusing on inkjet printer components and are an important supplier of pen chips, motor drivers, head drivers, high-performance photo-quality applications and digital color copiers. We are an important partner of Hewlett-Packard for technology development and manufacturing and are currently developing printer SoC platforms. Other notable successes in the printer field included contracts with two other leading printer manufacturers to develop SoC solutions with embedded DRAM for the digital printer engines used in inkjet printers. With these

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new contracts, we are now the chosen supplier at three out of the four leading manufacturers. In the fourth quarter 2001, we confirmed major design wins with two of the world s leading printer manufacturers, including two designs for CMOS-based digital engines, the processing heart of a printer, and one for a printer-head driver chip, which will be manufactured in our mixed-signal bipolar, CMOS, and DMOS (BCD) process.

(iii) *Audio and Automotive Products.* Our audio products include audio power amplifiers, audio processors and graphic-equalizer ICs. Our automotive products include alternator regulators, airbag controls, antiskid braking systems, ignition circuits, injection circuits, multiplex wiring kits and products for body and chassis electronics, engine management, instrumentation systems and car multimedia. We are currently developing solutions for global positioning systems (GPS) and multimedia in the car.

In 2001, our leading position in the automotive arena was reinforced by the introduction of a new 16-bit automotive-grade microcontroller chip with embedded Flash memory whose performance is guaranteed over the entire automotive temperature range, making it ideal for fast-growing applications such as engine control. In addition, our microcontroller built using 0.18-micron embedded Flash technology was selected by Siemens for a next-generation airbag system. In November 2001, we announced our intention to cooperate on the design and development of new smart power IC products for automotive applications with Delphi Systems. The agreement insures that Delphi will have access to our new BCD process developments.

In the audio field, we achieved a major technical milestone with XM Satellite Radio, the satellite radio broadcaster. By the end of 2001, we had shipped over 200,000 chipsets to manufacturers for the XM radio service in the United States. We announced the development of DSP-based decoder chips for Coding Technologies mp3PRO standard. We also started production of a new family of advanced amplifiers for car radios. A major design win has already been achieved at Visteon for the car radio for the new Fiat Stilo.

(iv) *Industrial and Power Supplies.* We design and manufacture products for industrial automation systems, lighting applications (lamp ballast), battery chargers and switch mode power supplies (SMPS). Our key products are power ICs for motor controllers and read/write amplifiers, intelligent power ICs for spindle motor control and head positioning in computer disk drives and battery chargers for portable electronic systems, particularly mobile telephone sets.

The Group also has two support divisions: (i) digital signal processing and microcontroller cores; and (ii) digital and mixed analog/digital semicustom. These two divisions are centers of excellence to develop key competences in the field of semicustom (digital and analog) as well as in DSP and microcontrollers cores. We are currently developing superintegrated solutions using our broad range of technologies (CMOS, BiCMOS, BCD) and our expertise in microcontrollers/DSP cores, dedicated IC megacells and embedded memory capability.

Consumer and Microcontroller Groups

The Consumer and Microcontroller Groups (CMG) are responsible for the design, development and manufacture of microcontrollers, graphics accelerators and application-specific standard products (ASSP) targeted at high-growth digital consumer applications, including digital set-top boxes, Digital Versatile Disk (DVD) players, digital cameras and digital TV.

Through year-end 2000, CMG was organized by system partitionings, with front-end ICs (reception and demodulation of the video signal), back-end ICs (decompression and control of the video signal) and micro cores. In the first quarter 2001, CMG was reorganized by application and it combined the front-end, the back-end and the micro cores activities of each application. Two new divisions have been created: the set-top-box division and the DVD division. CMG also comprises the TV, the Imaging and Display, the Graphics Products and the Microcontroller divisions.

The Consumer and Microcontroller Groups are divided into the Consumer Group and the Microcontroller Group. The Consumer Group is further divided into five divisions: set-top boxes, DVD, TV, Imaging and Display and the Graphics Products.

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Consumer Group

We consolidated our leadership in digital consumer applications on the basis of shipments in 2001, particularly for set-top boxes, DVDs and digital TVs, and we shipped more than 27 million MPEG2 decoder ICs in 2001. In January 2002, we signed a five-year technology agreement with Thomson Multimedia (TMM) to expand our strategic partnership in the field of System-on-Chip (SoC) for digital consumer applications to bring cost-effective and innovative solutions quickly to market. We have been successfully partnering for a decade in the development of state-of-the-art SoCs and intellectual property for TV, set-top box and DVD products. During the term of the initial agreement, we and TMM pioneered the development of MPEG video decoding. After enabling the launch of the world s first MPEG2 satellite TV service (DirectTV in 1994), both we and TMM have secured a leadership position in our respective markets. According to Dataquest-Gartner Group, we have been the world s largest supplier of MPEG decoder chips for the last three consecutive years and are also the world s largest supplier of differentiated ICs for consumer electronics products such as set-top boxes, TV sets, DVD players and digital cameras.

(i) *The Set-top Box Division.* We continued to expand our product and customer base introducing solutions for set-top boxes with web-browsing and video recording and time-shifting capabilities in 2001. We reinforced the market leadership of our STi5500 (OMEGA) family of set-top box back-end decoders with the introduction of the STi5514. The new device is backward software compatible with the highly successful STi5512, of which more than eight million units have been shipped, while integrating new peripherals and features that further reduce system cost in sophisticated high-volume applications. The STi5514 also allows hard-disk drive (HDD) capability to be easily added to STB designs, paving the way for low-cost PVR (Personal Video Recorder) equipment and similar emerging convergence products that offer features such as pausing and time-shifting of live TV streams and the ability to view one program while recording another. We also announced that the ST40GX1, the 32-bit microprocessor with 2D graphics and audio processing, is fully supported by Microsoft Windows CE 3.0. Windows CE support for the ST40GX1 enables OEMs to build high performance digital set-top boxes and other consumer devices. Coupled with our STi5514 set-top box decoder, the ST40GX1 processor provides an ideal platform for future product development.

We entered into new agreements for expanding our leadership position in digital consumer applications on the basis of sales. Along with Alenia Spazio, a global supplier of satellite systems, we demonstrated a working prototype of a jointly developed technology that will greatly enhance the way consumers receive and enjoy interactive TV and other multimedia services in the home. The technology that we are developing allows consumers to obtain interactive TV, video recording and playback, high-speed Internet, video conferencing and other multimedia services via a single satellite dish and a highly sophisticated but low-cost set-top box. In the cable segment, we announced plans with Microtune to jointly develop set-top box reference designs that feature their complementary digital and radio-frequency silicon technologies. Targeted for worldwide markets, the reference designs are engineered to accelerate the deployment of next-generation cable set-top boxes and residential gateways , while offering customers significant time-to-market, competitive and price/performance advantages.

We signed a collaboration agreement with Philips to develop solutions for applying MHP technology in set-top boxes and digital television sets. We will develop and market pre-integrated solutions of the Philips MHP 1.0x Software Platform and our OMEGA family of single-chip digital set-top box decoder platforms. These turnkey solutions for building advanced digital set-top boxes and integrated digital televisions are aimed to dramatically cut back development and production times for consumer electronics manufacturers seeking to build MHP-compliant digital TV receivers.

(ii) The DVD Division. In 2001, following several years of successful cooperation combining Ravisent s DVD software and our OMEGA family of DVD decoder processors, we expanded our ability to provide complete DVD system solutions by acquiring the Consumer Electronics business of Ravisent Technologies. We introduced two System-on-Chip (SoC) devices to address the growing mainstream DVD (Digital Versatile Disk) and emerging Audio/DVD markets

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for highly integrated audio features and processing capability. The STi5580, an enhanced version of the STi5508 announced in year 2000, and the lower-cost STi5519 integrate advanced audio functions such as a new stereo channel and a strengthened decoding capability for digital home theater systems, including DTS (Digital Theatre System) format. We introduced the L6315, which uses leading-edge 0.18-micron CMOS production technology to integrate all of the functions required in the front end of DVD players, including analog preprocessing, servo control, channel decoding and error correction. Optimized for use with our OMEGA (STi55xx) DVD back-end decoders, the new chip sets allow us to offer a highly-integrated solution for DVD players.

(iii) *The TV Division.* We address both the analog and digital television markets with a wide range of highly integrated ASSPs and application-specific microcontrollers. We introduced the STi7020, the world s most advanced HDTV (high-definition television) decoder IC. The STi7020 brings an unprecedented level of integration, containing multiple-stream MPEG HD/SD video decoding, audio decoding, a powerful 2D/3D graphics subsystem and numerous ancillary functions. We introduced the STV0360, a single-chip COFDM (Coded Orthogonal Frequency-Division Multiplexing) demodulator that includes an integrated high-performance A/D Converter and performs all of the demodulation functions required to extract the MPEG transport stream from the tuner IF output and connects seamlessly to our OMEGA back-end chips. We also introduced a new hardware and software platform that bridges the gap between conventional analog TV and the forthcoming digital TV technology. Called CTV100, the initial platform comprises a two-chip kit (STV2310 and STV3500) and associated software that provides a highly integrated and cost-effective solution for 2H (100Hz or Progressive scan) TV manufacturers. The CTV100 platform leverages the worldwide success of our family of set-top box and DVD chips and paves the way for future families of optimized IDTV (Integrated Digital TV) solutions.

(iv) *Imaging and Display Division.* Our Imaging and Display Division focuses on video camera recorders, monitors and flat-panel displays and image capturing and transmission. In 2001, we introduced a highly integrated digital color microcamera suited for the next generation of cellular telephones, personal digital assistants and other portable communication devices. We announced a new generation of Display-Engine ICs aimed at the rapidly growing markets based on fixed-resolution flat-panel displays. Key applications are desktop LCD monitors and smart panels, LCD projectors, plasma and rear-projection televisions. We announced an agreement to develop driver devices for light-emitting polymer (LEP) displays with Cambridge Display Technology (CDT). CDT has licensed to us certain know-how for the design and development of display driver devices that will be offered to LEP display manufacturers. We signed a letter of intent with Imagination Technologies for the co-development of a mobile multimedia entertainment platform. Our Pocket Multimedia (PMM) platform targets handheld entertainment applications such as audio and video playback and 3D gaming with stringent power-consumption requirements. This platform is conceived to enable OEMs to design cost-effective devices based on a proven set of IP for battery-powered applications and to secure short time-to-volume production.

(v) *Graphic Products Division.* In February 2002, we announced that we are withdrawing from the PC Graphics Accelerator IC market, which accounted for approximately $15 million of our 2001 revenues.

Microcontroller Group.

This group provides competitive, high-volume 8- and 16- bit microcontrollers for all major application segments. This family of products has been developed with a wide portfolio of processes capable of embedding nonvolatile memories such as EPROM, EEPROM and Flash memories. In 2001, we announced the launch of a new embedded-controller platform, known as FIVE, that seamlessly integrates all the benefits of microcontrollers, together with a dedicated architecture, the Decision Processor , oriented to high-level algorithms and a visual programming approach. The new family of Intelligent Controller Units (ICU) provides unprecedented price/performance benefits at low voltage while simultaneously supporting fast time-to-market and easy product enhancement and differentiation in battery-powered devices, domestic appliances, industrial control systems and similar markets that require cost-effective embedded microcontrollers.

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Expanding on our cooperation with Hitachi on advanced SuperH reduced instruction set computing (RISC) cores, we formed a jointly controlled independent company, SuperH, Inc. In addition to licensing SuperH cores on the open market, SuperH will complete the final development of the 64-bit SH-5 core and take over development of the SH-6 and SH-7 cores. SuperH launched commercial operations in the third quarter 2001. We announced that a microprocessor based on the SuperH™ SH-4 32-bit core is now available in volume. The ST40RA166 runs Windows CE 3.0, Microsoft s real-time embedded operating system for 32-bit connected mobile devices that demand rich applications and services. Windows CE 3.0 offers embedded developers a broad set of capabilities including rich multimedia and connectivity options as well as a comprehensive toolset for quickly and easily developing smart mobile devices.

Memory Products Group

The Memory Products Group (MPG) designs, develops and manufactures a broad range of semiconductor memory products but does not produce DRAMs.

Our Memory Products Group is organized into the following divisions: (i) Flash memories; (ii) Smartcard products; (iii) EPROMs; (iv) EEPROMs; (v) NVRAM and dedicated memories; (vi) SRAM and (vii) Programmable Systems Memories (PSM).

(i) *Flash Memories*. According to published industry data, in 2001, the TAM (total available market) for Flash memories decreased by 28.6% after having doubled in 2000. Our Flash sales increased 5% in 2001 compared to 2000 after having tripled in 2000. According to WSTS, in the fourth quarter 2001, our market share in Flash memories exceeded 10%. This is due to advanced process technologies, partnerships with new customers, new product development and state-of-the-art manufacturing facilities. Flash memories must have many capabilities because they are used in a wide variety of applications, each with different requirements and thus are more comparable to dedicated products than pure standard products. We offer a broad variety of Flash memories, which we sell to customers in different fields, such as wireless telephony, digital consumer, automotive and computer products. For example, we currently supply single voltage (down to 1.8 volt) NOR cell structure Flash memory products up to 64 Mbit to the mobile phone market, and we are now successfully using multi-bit/cell technology. In 2001, we began sampling 64-Mbit devices built in 0.15 micron technology and optimized for cellular phone usage and are currently ramping up volume production. In 2002, we are also beginning to sample 64 Mbit devices built in 0.13 micron technology. In addition, we began ramping up production of our dedicated Flash memories for Firmware Hub BIOS applications, which are now qualified at most PC desktop and notebook manufacturers. Manufacturers and customers also received samples of a new 8-Mbit device for PC Bios applications and 16-Mbit automotive products.

(ii) *Smartcard Products*. Smartcards are card devices containing integrated circuits that store data and provide an array of security capabilities. They are used in a wide and growing variety of applications, including public pay telephone systems, cellular telephone systems and bank cards (primarily in Europe), as well as pay television systems (primarily in the United States, United Kingdom and France). Other applications include medical record applications, card-access security systems, toll-payment secure transactions over the Internet and ID/passport cards applications. In 2001, we introduced a chipset that simplifies the design of contactless Smartcard readers, stimulating growth of new contactless Smartcard applications such as access control, ticketing systems, E-purse and ID cards. In the third quarter 2001, we introduced three new products, including a device that combines large on-chip memory, high-powered cryptographic processing with a contactless communications interface. We have also received the first volume production orders for this device for a Japanese governmental card, one of the world s first uses of smart cards for this type of application. We have also been deeply involved in VISA s initiative to promote Smartcard solutions through the $1 card initiative.

We are currently developing biometric solutions based on fingerprint recognition. We announced that we are supplying our TouchChip™ biometric hardware for a new laptop computer developed by Samsung. The laptop will contain an integrated TouchChip™ fingerprint sensor and our Protector Suite™ original equipment manufacturer (OEM) software, which offers sophisticated and easy-to-

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use tools for securing computers and protecting private data through the use of robust biometric technology.

We announced another milestone in the security field with Hyundai Smart Technologies for the world s first VSDC (VISA Smart Debit/Credit) Technology Level 3 approved dual-interface multi-application Smartcard. This card is expected to accelerate the migration to chip-based EMV (Eurocard Mastercard Visa) compliant cards with the addition of a contactless interface for new applications, while maintaining an extremely high security level that is recognized worldwide.

(iii) *EPROMs*. We produce a broad range of EPROMs, from 16 Kbit to 32 Mbit. The EPROM market is relatively mature. We have succeeded in reinforcing our market leadership because of our EPROM technology, which has allowed us to build one of the broadest product portfolios currently offered in the market. At the same time, this technology has permitted continuous improvement of manufacturing yields and reduction of die size, giving us an advantageous cost position. Efficient manufacturing in our Singapore assembly plant, together with our sales and distribution channels, has contributed to the exploitation of our technological advantage.

(iv) *EEPROMs*. We offer serial EEPROMs up to 512 Kbit. Serial EEPROMs are the most popular type of EEPROMs and are popular in computer, automotive and consumer applications. Building on our technical prowess and manufacturing know-how, we continue to build on our advantages and intend to work closely with our key customers and strategic allies to identify and develop added-value application-specific memories.

(v) *NVRAM and Dedicated Memories*. We are producing a wide range of nonvolatile RAMs (battery backed-up SRAM) used in computers, industrial and telecommunications equipment. We are also extending our range with new Real Time Clock (RTO) and static random access memory (SRAM) supervisors families.

(vi) *SRAM*. We have introduced a range of low power SRAM-products from 256k to 8-Mbit in various voltages. These are aimed primarily at satisfying the memory requirements of wireless applications, as a complement of our Flash offerings, specifically to stack them together with Flash in the same multi-chip package.

(vii) *Programmable System Memories (PSM)*. Our strategy of developing innovative, differentiated and value-added products allows us to offer configurable memory systems, integrating multiple memory types and control logic.

Discrete and Standard ICs Group

The Discrete and Standard ICs Group (DSG) designs, develops and manufactures discrete power devices, power transistors, standard linear and logic ICs, and radio frequency products.

Our discrete and standard products are manufactured using mature technology processes. Although such products are less capital-intensive than our other principal products, we are continuously improving product performance and developing new product features. We have a diverse customer base, and a large percentage of our discrete and standard products are sold through distributors.

(i) *Discrete Power Devices*. We manufacture and sell a variety of discrete power devices, including rectifiers, protection devices and thyristors (SCRs and triacs). Our devices are used in various applications, including telecommunications systems (telephone sets, modems and line cards), household appliances and industrial systems (motor control and power control devices). More specifically, rectifiers are used in voltage converters and voltage regulators, protection devices to protect electronic equipment from power supply spikes or surges, and thyristors vary current flows through a variety of electrical devices, including lamps and household appliances. We offer a highly successful range of standard products built with our proprietary Application Specific Discretes (ASD™) technology, which allows a variety of discrete structures to be merged into a single device optimized for specific applications such as EMI filtering for cellular phones. We have recently started development of electronic devices integrating both passive and active components on the same chip (IPAD: Integrated Passive and Active Devices).

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(ii) *Power Transistors*. We design, manufacture and sell power transistors, which (like our discrete power devices) operate at high current and voltage levels in a variety of switching and pulse-mode systems. We have three power transistor divisions: bipolar transistors, power MOSFETs (metal-oxide-silicon field effect transistors) and new power transistors such as insulated gate bipolar transistors (IGBTs).

Our bipolar power transistors are used in a variety of high-speed, high-voltage applications, including SMPS (switch-mode power supply) systems, television/monitor deflection circuits and lighting systems.

We also offer a family of VIPower (vertical integration power) products, as well as omnifets and application-specific devices. VIPower products exhibit the operating characteristics of power transistors while incorporating full thermal, short-circuit and overcurrent protection and allowing logic-level input. VIPower products are used in consumer goods (lamp ballasts) and automotive products (ignition circuits, central locking systems and transmission circuits). Omnifets are power MOSFETs with fully integrated protection devices for a variety of sophisticated automotive and industrial applications. Application-specific devices are semicustom ICs that integrate diodes, rectifiers and thyristors on the same chip, thereby providing cost-effective and space-saving components with a short design time.

(iii) *Standard Logic and Linear ICs*. We produce a variety of bipolar and HCMOS (high-speed complimentary metal oxide silicon) logic devices, including clocks, registers, gates and latches. Such devices are used in a wide variety of applications, including increasingly in portable computers, computer networks and telecommunications systems. We also offer standard linear ICs covering a variety of applications, including amplifiers, comparators, decoders, detectors, filters, modulators, multipliers and voltage regulators.

(iv) *Radio Frequency Products*. We supply components for radio frequency (RF) transmission systems used in television broadcasting equipment, radar systems, telecommunications systems and avionic equipment. We are targeting new applications for our RF products, including two-way wireless communications systems (in particular, cellular telephone systems) and commercial radio communication networks for business and government applications.

Strategic Alliances

We believe that strategic alliances are critical to success in the semiconductor industry, and we have entered into strategic alliances with customers, other semiconductor manufacturers and major suppliers of design software. We have entered into several strategic customer alliances, including alliances with Alcatel, Bosch, Hewlett-Packard, Marelli, Nokia, Nortel Networks, Pioneer, Seagate Technology, Siemens VDO, Thomson Multimedia and Western Digital, among others. Customer alliances provide us with valuable systems and application know-how and access to markets for key products, while allowing our customers to share some of the risks of product development with us and to gain access to our process technologies and manufacturing infrastructure.

Alliances with other semiconductor manufacturers permit costly research and development and manufacturing resources to be shared to mutual advantage for joint technology development. We have been collaborating with Philips Semiconductors for the joint development of CMOS process technologies in Crolles, France, since 1992. We recently announced the signature of a memorandum of understanding relating to the future participation of Motorola in our research and development cooperation with Philips Semiconductors in Crolles, France, for the joint development of CMOS process technology to provide 90 nanometer to 32 namometer chip technologies on 300mm wafers, as well as the building and operations of a 300mm wafer pilot line fab in Crolles, France. This announcement followed an earlier joint announcement with Philips Semiconductors in March 2002 regarding the participation of TSMC in our joint research and development effort in Crolles, France.

We have recently entered into a strategic alliance with Dai Nippon Printing Co, Ltd., a leading manufacturer of photomasks, for the development and supply of leading-edge and high-end photomasks which are critical components in the manufacture of silicon integrated circuits. As part of this agreement, a new company named DNP Photomask Europe will build and operate a photomask production facility close to our site in Agrate, Italy. The new plant is expected to start operations in mid-2003, and capital investment by the new company is expected to be approximately $150 million over three years. We will have an equity interest of less than 20% in the new company. The close proximity of the planned site to our existing research and development and manufacturing centers in Crolles, France and Agrate, Italy, which are dedicated to complex System-on-Chip and Flash memory chips, coupled with barrier-free exchange of information on wafer and photomask processes, are expected to ensure rapid turn-around of new photomasks for products built using the most advanced technologies, from 130 and 90 nanometers and beyond.

We have established joint development programs with leading suppliers such as Air Liquide, Applied Materials, ASM Lithography, Canon, Hewlett-Packard, KLA-Tencor, LAM Research, MEMC, Schlumberger, Teradyne and Wacker and with computer-aided design (CAD) tool producers, including Cadence, Co Ware and Synopsys. We are a participant in Sematech I 300I for the

development of 300mm wafer manufacturing processes.

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We are active in joint European research efforts such as the MEDEA program, and also cooperate with major research institutions and universities.

Customers and Applications

We design, develop, manufacture and market over 3,000 main types of products that we sell to approximately 800 direct customers. We also sell our products through distributors. Major customers include Alcatel, Bosch, DaimlerChrysler, Delta, Delphi, Ericsson, Gemplus, Hewlett-Packard, Kenwood, Marelli, Matsushita, Motorola, Nokia, Nortel Networks, Philips, Pioneer, Samsung, Schlumberger, Scientific Atlanta, Seagate Technology, Siemens, Sony, Thomson Multimedia and Western Digital. To many of our key customers we provide a wide range of products, including dedicated products, discrete devices, memory products and programmable products. Our position as a strategic supplier of application-specific products to certain customers fosters close relationships that provide us with opportunities to supply such customers requirements for other products, including discrete devices, programmable products and memory products.

The following table sets forth certain of our significant customers and certain applications for our products:

Telecommunications				
Customers:	Alcatel	Lucent Technologies	Motorola	Philips
	Ericsson	Marconi	Nokia	Sagem
	Italtel	Matsushita	Nortel Networks	Siemens
Applications:	Central office switching systems		Telephone terminals (wireline and wireless)	
	Digital cellular telephones		Internet access (xDSL)	
	Wireless networking (Bluetooth)		Data transport (routing, switching for electronic and optical networks)	
Computer Systems				
Customers:	Acer	Delta	Logitech	Seagate
	Agilent	Hewlett-Packard	Maxtor	Sun Microsystems
	Creative Technology	IBM	Samsung	Western Digital
Applications:	Data storage		Webcams	
	Monitors and displays		Printers	
	Graphics		Imaging	
			Power management	
Automotive				
Customers:	Bosch	Denso	Motorola	Valeo
	DaimlerChrysler	Lear	Pioneer	VDO
	Delphi	Marelli	Siemens	Visteon
Applications:	Airbags		Engine management systems (ignition and injection)	
	Antiskid braking systems		Multiplex wiring kits	
	Car radio		Global positioning systems	
	Body and chassis electronics		Car multimedia	
Consumer Products				
Customers:	Agilent Technologies	Hughes	Philips	Scientific Atlanta
	Bose Corporation	Kenwood	Pioneer	Sony
	Echostar	Matsushita	Samsung	Thomson Multimedia
	Grundig	Pace		
Applications:	Audio processing (CD, DVD, Hi-Fi)		DVDs	
	Digital cameras		Set-top boxes	

	Digital music players		Analog TVs	
	Digital TVs		VCRs	
Industrial and Other Applications				
Customers:	Astec	Gemplus	Nagra	Schlumberger
	Autostrade	Giesecke & Devrient	Oberthur	Siemens
	Bull	IBM	Orga	
	Delta	Litton	Philips	
Applications:	Battery chargers		Lighting systems (lamp ballasts)	
	Smartcards ICs		Motor controllers	
	Industrial automation and control systems		Power supplies	
	Intelligent power switches		Switch mode power supplies	

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In 2001, our largest customer, Nokia, represented 19.3% of our net revenues. No other single customer accounted for more than 10% of our net revenues. Sales to our top ten customers accounted for approximately 50% of our net revenues in 2001 (47% in 2000). We have several large customers, certain of whom have entered into strategic alliances with us. Many of our key customers operate in cyclical businesses and have in the past, and may in the future, vary order levels significantly from period to period. In addition, approximately 16% of our net revenues in 2001 were made through distributors, compared to 18% in 2000 and 1999. There can be no assurance that such customers or distributors, or any other customers, will continue to place orders with us in the future at the same levels as in prior periods. The loss of one or more of our customers or distributors, reduced bookings or product returns by our key customers or distributors, could adversely affect our operating results. In addition, in a declining market, we have been in the past and may in the future be driven to lower prices in response to competitive pressures and may expect a higher number of order cancellations, particularly by distributors and for commodity products.

Sales, Marketing and Distribution

We operate regional sales organizations in Europe, North America, Asia Pacific, Japan and, since January 1, 1998, in Emerging Markets which include South America, Africa, Eastern Europe, the Middle East and India. For a breakdown of net revenues by product group and geographic region for each of the five years ended December 31, 2001, see Business Overview .

The European region is divided into five businesses units: automotive, commodities, consumer and computers, industrial and Smartcards, six geographically configured units to cover mid-sized OEM customers and distributors (France and the Benelux, Central Europe, Northern Europe, Southern Europe, Scandinavia and Finland).

In the North America region, the sales and marketing team is organized into five business units that are located near major centers of activity for either a particular application or geographic region: automotive (Detroit, Michigan), industrial and consumer (Chicago, Illinois), computer and peripheral equipment (San Jose, California and Longmont, Colorado), communications (Dallas, Texas) and distribution (Boston, Massachusetts). Each regional business unit has a sales force that specializes in the relevant business sector, providing local customer service, market development and specialized application support for differentiated system-oriented products. This structure allows us to monitor emerging applications, to provide local design support, and to identify new products for development in conjunction with the various product divisions as well as to develop new markets and applications with our current product portfolio. A central product marketing operation in Boston provides product support and training for standard products for the North America region, while a logistics center in Phoenix supports just-in-time delivery throughout North America. In addition, a comprehensive distribution business unit provides product and sales support for the nationwide distribution network.

In the Asia Pacific region, sales and marketing is organized by country and is managed from our regional sales headquarters in Singapore. We have sales offices in Taiwan, Korea, China, Hong Kong, Malaysia, Thailand and Australia. The Singapore sales organization provides central marketing, customer service, technical support, logistics, application laboratory and design services for the entire region. In addition, there are design centers in Taiwan, Korea, Hong Kong and Shenzhen.

In Japan, the large majority of our sales are made through distributors, as is typical for foreign suppliers to the Japanese market. However, our sales and marketing engineers in Japan work directly with customers as well as with the distributors to meet customers needs. We provide marketing and technical support services to customers through sales offices in Tokyo and Osaka. In addition, we have established a design center and application laboratory in Tokyo. The design center designs custom ICs for Japanese clients, while the application laboratory allows Japanese customers to test our products in specific applications

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The Emerging Markets region (designated as Region Five until January 1, 2001) was created as of January 1, 1998 and includes South America, Africa, Eastern Europe, the Middle East and India. Prior to that time, these markets had been covered, where appropriate, by the other existing sales and marketing organizations. Emerging Markets also includes the design and software development center in India, which employs approximately 800 people in a wide range of activities. We intend to increase our focus on this region to enhance our presence in these new markets.

The sales and marketing activities carried out by our regional sales organizations are supported by the product marketing that is carried out by each product division, which also include product development functions. This matrix system reinforces our sales and marketing activities and our broader strategic objectives.

We are pursuing the Gold Standard program, a long-term commitment to excellence in standard products. The program consists of manufacturing and offering standard products at the same price level as the market but with a superior level of quality, service and lead time. The related initiatives included worldwide advertising, promotional task forces in all regions, special distribution initiatives and worldwide training of salespeople and marketing personnel.

Each of the five regional sales organizations operates dedicated distribution organizations. To support the distribution network, we operate logistic centers in Saint Genis, France; Phoenix, Arizona; and Singapore, and have made considerable investments in warehouse computerization and logistics support.

We also use distributors and representatives to distribute our products around the world. Typically, distributors handle a wide variety of products, including products that compete with our products, and fill orders for many customers. Most of our sales to distributors are made under agreements allowing for price protection and/or the right of return on unsold merchandise. We recognize revenues upon transfer of ownership of the goods at shipment. Sales representatives generally do not offer products that compete directly with our products, but may carry complementary items manufactured by others. Representatives do not maintain a product inventory; instead, their customers place large quantity orders directly with us and are referred to distributors for smaller orders.

At the request of certain of our customers, we are also selling and delivering our products to Electronic Manufacturing Suppliers (EMS) which, on a contractual basis with our customers, incorporate our products into the dedicated products which they manufacture for our customers.

Research and Development

We believe that research and development is critical to our success and we are committed to increasing research and development expenditures in the future. In periods of industry downturn, such as in 2001, 1998 and 1997, we continue to invest strongly in R&D, while reducing our other general expenses. In 2001, we spent $978 million on research and development, which represented a 4.7% decrease from $1,026 million in 2000. The table below sets forth information with respect to our research and development spending since 1997 (not including design center, process engineering, pre-production or industrialization costs):

	Year ended December 31,				
	1997	1998	1999	2000	2001
	(in millions, except percentages)				
Expenditures	$ 610.9	$ 689.8	$ 836.0	$ 1,026.3	$ 977.9
As a percentage of net revenues	15.2%	16.2%	16.5%	13.1%	15.4%

Approximately 80% of our research and development expenses in 2001 were incurred in Europe, primarily in France and Italy. See Public Funding . As of December 31, 2001, approximately 6,850 employees were employed in research and development activities.

Our policy in the field of research and development is market driven, focused on leading edge products and technologies and carried out by over 6,850 employees worldwide in close collaboration with strategic alliance partners, leading universities and research institutes, key customers and blue chip equipment manufacturers working at the cutting edge of their own markets. We invest in a variety of research and development projects ranging from long term advanced research for the acceleration, in line with industry requirements and roadmaps, of our broad

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range of process technologies including BICMOS, bipolar, CMOS, and DMOS (BCD), High Performance Logic, stand-alone and embedded Flash and other nonvolatile memories, to the continued expansion of our system level design expertise and IP creation for advanced architecture for System-on-Chip integration, as well as new products for many key applications in the field of digital consumer wireless communications and networking, computer peripherals, Smartcards and car multimedia among others.

Our research and development activities focus on the very large scale integration (VLSI) technology platform, new system architectures, new product developments and emerging technologies in microsystems and photonics. The development of the technology platform (VLSI technologies and design tools) is conducted by Central Research and Development (CRD) while new systems architectures are studied in the Advanced System Technology (AST) units. New product research and development is conducted within each product group in conjunction with customers. The highest concentration of our CRD activities is located in the two main VLSI facilities of Crolles, France and Agrate, Italy. Other CRD activities are located in Catania, Italy; Rousset, France; Carrollton, Texas; Berkeley, California; Ottawa, Canada and Noida, India. We also have an important research and development facility for process technology development in Castelletto, Italy.

The central research and development units participate in several strategic partnerships. Our manufacturing facility at Crolles, France houses a research and development center that is operated in the legal form of a French *Groupement d intérêt économique* (GIE) named Centre Commun de Microelectronique de Crolles , whose members are us, France Telecom R&D and Laboratoire d Electronique de Technologie d Instrumentation (LETI), a research laboratory of Areva Group (formerly known as CEA-Industrie). The tripartite cooperation is intended to last until the end of 2002. We also cooperate with Philips Semiconductors to jointly develop sub-micron CMOS logic processes in Crolles, France as well as to build and operate an advanced 300mm wafer pilot line in Crolles, France. During 2001, the shell building has been built. We expect to complete this building and facilities during 2002. In April 2002, we announced that Motorola had signed a memorandum of understanding proposing to join a comprehensive alliance with us, Philips Semiconductors and TSMC to provide 90-namometer to 32-namometer chip technologies on 300mm wafers in our Crolles, France research and development center. This followed a previous announcement in March 2002 of an agreement among us, Philips and TSMC. Joint investment is intended to reach $1.4 billion by 2005, with the stated goal of accelerating the development of future technologies and their proliferation throughout the semiconductor industry. However, there can be no assurance that we will be able to achieve this objective on satisfactory terms, that the alliance will enable us to effectively partner to meet customer demands, or that its operations will not be adversely affected by unforeseen events and the sizeable risks related to the development of new technologies, which could materially adversely affect our business, results of operations and prospects. See Item 3. Key Information Risk Factors Risk factors related to our operations Our research and development efforts in the field of CMOS process development are dependant on alliances and our business, results of operations and prospects could be materially adversely affected by the failure of such alliances in developing new process technologies in line with market requirements.

The CRD activities performed in our 200mm facility of Agrate, Italy, are focused on the development of new generation sub 0.13 micron Flash memories from which other nonvolatile memory products are derived, such as embedded memories, EEPROM and one-time programmable (OTP) memories. Current Flash developments, which are one of our technology drivers, are targeting very high density multilevel memories and the introduction of innovative materials for nonvolatile applications.

A technical center in Noida, India, develops design software and CAD (computer-aided design (CAD)) libraries and tools. We have developed a wide network of cooperation with several universities in the United Kingdom (Bristol and Newcastle), Italy (Bologna, Catania, Milan, Pavia and Turin), France (Grenoble, Marseille, Toulouse and Tours), the United States (Carnegie Mellon, Stanford, Berkeley and UCLA) and Singapore for basic research projects on design and process development.

We are a member of International Sematech, a non-profit technology development consortium of 13 semiconductor manufacturers, funded by dues from the member companies. International Sematech works with members, equipment and materials suppliers, international labs and institutes, academia, and other consortia to accelerate the development of advanced precompetitive semiconductor manufacturing processes, materials and equipment for their member companies.

In addition to central research and development, each operating division also conducts independent research and development activities on specific processes and products focusing on developing an advanced range of the key technological building blocks required by targeted applications. These building blocks include (i) motion picture experts group (MPEG2) decoder ICs, (ii) a family of 16-bit (ST10, super 10), 32-bit (ST20) and 64-bit

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(ST50) microcontrollers, (iii) a family of general purpose DSP cores for embedded applications based on the current D950 solution and the ST100 as well as several dedicated DSP cores (MMDSP, SAFIRE, EMIRALDA) for specific applications, and (iv) embedded volatile (DRAM and SRAM) and nonvolatile (EPROM, EEPROM and Flash) memories. Applying our broad range of technologies and our expertise in diverse application domains, we are currently embedding dedicated, semicustom circuits and these advanced building blocks on the same chip, in addition to the many dedicated and semicustom ICs developed using power analog, digital and mixed signal technologies.

Intellectual Property

Intellectual property rights that apply to our various products include patents, copyrights, trade secrets, trademarks and maskwork rights. We own more than 20,000 patents or pending patent applications corresponding to more than 11,000 original inventions, most of which have been registered in several countries around the world. In 2001, we filed 636 new patent applications around the world. Management believes that our intellectual property represents valuable property and intends to protect our investment in technology by enforcing all of our intellectual property rights. We have entered into several patent cross-licenses with several major semiconductor companies.

Our success depends in part on our ability to obtain patents, licenses and other intellectual property rights covering our products and their design and manufacturing processes. To that end, we have acquired certain patents and patent licenses and intend to continue to seek patents on our inventions and manufacturing processes. In addition, we have in the past negotiated broad patent cross-licenses with many of our competitors enabling us to design, manufacture and sell semiconductor products, without fear of infringing patents held by such competitors. The process of seeking patent protection can be long and expensive, and there can be no assurance that patents will issue from currently pending or future applications or that, if patents are issued, they will be of sufficient scope or strength to provide meaningful protection or any commercial advantage to us. In addition, effective copyright and trade secret protection may be unavailable or limited in certain countries. Competitors may also develop technologies that are protected by patents and other intellectual property rights and therefore such technologies may be unavailable to us or available to us subject to adverse terms and conditions. As our sales increase compared to those of our competitors, the strength of our patent portfolio may not be sufficient to guarantee the conclusion or renewal of broad patent cross-licenses on terms which do not affect our results of operations. Furthermore, litigation, which could demand financial and management resources, may be necessary to enforce our patents or other intellectual property rights.

Also, there can be no assurance that litigation will not be commenced in the future against us regarding patents, maskworks, copyrights, trademarks or trade secrets, or that any licenses or other rights to necessary intellectual property could be obtained on acceptable terms. The failure to obtain licenses or other intellectual property rights, as well as the expense or outcome of litigation, could adversely affect our results of operations or financial condition. We have from time to time received, and we may in the future receive, communications alleging possible infringement of certain patents and other intellectual property rights of others. Regardless of the validity or the successful assertion of such claims, we could incur significant costs with respect to the defense thereof, which could have a material adverse effect on our results of operations or financial condition.

Backlog

Our sales are made primarily pursuant to standard purchase orders that are generally booked from one to twelve months in advance of delivery. Quantities actually purchased by customers, as well as prices, are subject to variations between booking and delivery to reflect changes in customer needs or industry conditions. During periods of economic slowdown and/or industry overcapacity and/or declining selling prices, customer orders are not generally made far in advance of the scheduled shipment date. Such reduced lead time can reduce management s ability to forecast production levels and revenues. During periods of capacity constraints, customer demand can exceed our manufacturing capacity.

Our backlog decreased steadily in 2001 reflecting the industry downturn while registering an increase in the first part of 2002. In industry downturns, customers tend to order products for immediate delivery, which leads us to build up inventory of key products in anticipation of orders and lowers our backlog.

We also sell certain products to key customers pursuant to frame contracts. Frame contracts are annual contracts with customers setting forth quantities and prices on specific products that may be ordered in the future.

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These contracts allow us to schedule production capacity in advance and allow customers to manage their inventory levels consistent with just-in-time principles while shortening the cycle times required to produce ordered products. Orders under frame contracts are also subject to risks of price reduction, order cancellation and modifications as to quantities actually ordered.

Furthermore, the semiconductor industry is becoming increasingly characterized by new forms of supply, which requires us to build inventory on consignment close to our customers manufacturing facilities, so that our customers can pick the products as and when they are required.

Competition

Markets for our products are intensely competitive. While only a few companies compete with us in all of our product lines, we face significant competition in each of our product lines. We compete with major international semiconductor companies, some of which have substantially greater financial and other resources than us with which to pursue engineering, manufacturing, marketing and distribution of their products. Smaller niche companies are also increasing their participation in the semiconductor market, and semiconductor foundry companies have expanded significantly, particularly in Asia. Competitors include manufacturers of standard semiconductors, application-specific ICs and fully customized ICs, including both chip and board-level products, as well as customers who develop their own integrated circuit products and foundry operations. Some of our competitors are also our customers.

According to final rankings estimates published by Dataquest-Gartner Group in March 2002, we were the third largest global semiconductor company in 2001 based on sales, rising from sixth-largest in 2000. On the same basis, iSupply ranked us second-largest and IC-Insights third-largest in 2001. Based on our 2001 sales, Dataquest-Gartner Group ranked us as the world s third-largest semiconductor supplier in combined revenues from general purpose and application specific semiconductors for all communications system use and total automotive applications. According to iSupply and Databeans Inc., based on 2001 sales, we are the world s largest supplier of Analog ICs. According to Dataquest-Gartner Group, we are the world s leading supplier of EPROM memory and thyristors and the second leading supplier of EEPROM memory and power diodes.

The primary international semiconductor companies, which compete with us include Advanced Micro Devices, Agere Systems, Broadcom, Hitachi, IBM, Infineon Technologies, Intel, Mitsubishi Electric, Motorola, National Semiconductor, Nippon Electric Company, Philips Semiconductors, Samsung, Texas Instruments and Toshiba.

According to published industry data and other industry sources, investment in worldwide semiconductor fabrication capacity totaled approximately $33 billion in 1999, $59 billion in 2000 and $35 billion in 2001, or approximately 22%, 29% and 25% respectively, of the total available market (TAM) for such years. Such capacity investment is made not only by international semiconductor companies, but also companies specializing in operating semiconductor foundries, particularly in Asia such as Chartered Semiconductors, TSMC and UMC.

We compete in different product lines to various degrees on the basis of price, technical performance, product features, product system compatibility, customized design, availability, quality and sales and technical support. In particular, standard products may involve greater risk of competitive pricing, inventory imbalances and severe market fluctuations than differentiated products. Our ability to compete successfully depends on elements both within and outside of our control, including successful and timely development of new products and manufacturing processes, product performance and quality, manufacturing yields and product availability, customer service, pricing, industry trends and general economic trends.

Organizational Structure

We are a multinational group of companies that designs, develops, manufactures and markets a broad range of products used in a wide variety of microelectronic applications, including telecommunications systems, computer systems, consumer goods, automotive products and industrial automation and control systems. We are organized in a matrix structure with geographical regions interacting with product divisions, bringing all levels of management closer to the customer and facilitating communication among research and development, production, marketing and sales organizations. STMicroelectronics N.V. owns directly or indirectly 100% of all of our significant operating subsidiaries which have their own organization and management bodies, and are operated independently in compliance with the laws of their country of incorporation. For a list of our subsidiaries, see note 3 to our consolidated financial statements.

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Property, Plants and Equipment

We currently operate 17 main manufacturing sites around the world. The 150mm semiconductor manufacturing facility which we acquired in June 2000 from Nortel Networks in Ottawa, Canada was closed at the end of 2001 and our Rancho Bernardo facility in California was also closed at the end of April 2002. The table below sets forth certain information with respect to our current manufacturing facilities, products and technologies. Front-end manufacturing facilities are wafer fabrication plants (known as fabs) and back-end facilities are assembly, packaging and final testing plants.

Location	Products	Technologies	Gross floor area size (including clean room, facilities and production offices) (in square meters)
Front-end facilities			
Crolles, France	Semicustom devices, microcontrollers and dedicated products	Fab: 200mm 0.35/0.18-micron CMOS and 0.7/0.25-micron BiCMOS; R&D on VLSI sub-micron technologies in conjunction with France Telecom R&D and Philips Semiconductors	51,600
Phoenix, Arizona	Dedicated products	Fab: 200mm 0.5/0.35-micron CMOS, 0.5/0.35-micron BiCMOS	46,400
Agrate, Italy	Nonvolatile memories, microcontrollers and dedicated products	Fab 1: 150mm 2.0/0.35-micron BCD, nonvolatile memories	47,500
		Fab 2: 200mm 0.35/0.15-micron Flash, embedded Flash, R&D on nonvolatile memories	32,800
Rousset, France	Microcontrollers, nonvolatile memories and Smartcard ICs and dedicated products	Fab 1: 150mm 0.8/0.4-micron CMOS, Smartcard	32,000
		Fab 2: 200mm 0.35/0.15-micron CMOS, Flash, Smartcard	66,500
Catania, Italy	Power transistors, smart power ICs and nonvolatile memories	Fab 1: 150mm 4/1-micron MOS power, BCD	22,500
		Fab 2: 150mm 4/1-micron MOS power and pilot line RF	10,000
		Fab 3: 200mm 0.35/0.15-micron, Flash, Smartcard	45,000
Rennes, France	Dedicated and power products	Fab: 150mm 3/2-micron BiCMOS, BCD and bipolar	17,500
Castelletto, Italy	Smart power BCD	Fab: 150mm 4.0/0.8-micron BCD and MEMS pilot line	12,500
Tours, France	Protection thyristors, diodes and application-specific discrete-power transistors	Fab: 125mm and 150mm discrete	36,500

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Location	Products	Technologies	Gross floor area size (including clean room, facilities and production offices) (in square meters)
Ang Mo Kio, Singapore	Dedicated products, microcontrollers, power transistors, commodity products; nonvolatile memories and dedicated products	Fab 1: 125mm 4/1.5-micron, power MOS, bipolar transistor, bipolar ICs, standard linear CMOS	61,500
		Fab 2: 150mm 2.5/1.5-micron bipolar, power MOS and BCD	16,900
		Fab 3: 200mm 0.35/0.18-micron BiCMOS, Flash (volume production planned in Q1 2002)	61,000
Carrollton, Texas	Memories, microcontrollers, dedicated products; and semicustom devices	Fab: 150mm 1.5/0.6-micron BiCMOS, BCD and CMOS	41,500
Back-end facilities			
Muar, Malaysia	Dedicated and standard products, microcontrollers		63,050
Kirkop, Malta	Dedicated products, microcontrollers, semicustom devices		27,200
Tuas, Singapore	Dedicated products and nonvolatile memories		12,400
Toa Payoh, Singapore	Nonvolatile memories and power ICs		17,150
Ain Sebaa, Morocco	Discrete and standard products		30,000
Bouskoura, Morocco	Nonvolatile memories, discrete and standard products, micromodules, RF and subsystems		60,000
Shenzhen, China(1)	Nonvolatile memories, discrete and standard products		40,000

(1) Jointly operated with SHIC, a subsidiary of Shenzhen Electronics Group.

At the end of 2001, our front-end facilities had total capacity of approximately 170,000, 150mm equivalent wafer starts per week. The number of wafer starts per week varies from facility to facility and from period to period as a result of changes in product mix. We have six 200mm wafer production facilities currently in operation. Of these, three (at Crolles, France, Catania, Italy and Phoenix, Arizona) have full capacity installed at December 31, 2001; two (in Rousset, France and Agrate, Italy) have roughly half of the ultimate capacity installed at the same date; one (in Singapore) started production in the fourth quarter of 2001.

We have completed the construction of the building shell for an advanced 300mm wafer pilot-line fabrication facility in Crolles (France) and have proceeded with our partner Philips Semiconductors with the commencement of the facilities. The pilot line is initially designed to produce up to 1,000 wafers per week, with

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potential to ramp up to 2,000 wafers per week. The first 300mm wafers are expected to be processed at the end of 2002. On April 12, 2002, we announced that Motorola had signed a memorandum of understanding proposing to join the research and development alliance among us, Philips and TSMC to provide 90-namometer to 32-namometer chip technologies on 300mm wafers in the Crolles, France research and development center. We are currently finalizing the terms of our agreements involving Motorola.

We have completed preparation of the ground and the piling for the future 300mm fabrication facility at Catania (Italy). The facility is currently expected to start production in 2004.

We have historically subcontracted approximately 15% of total volumes for back-end operations to external suppliers. In 2000, we significantly increased our use of external foundries for front-end manufacturing, to reach approximately 15% of our wafer needs. In periods of high demand, we intend to maintain this level of external foundry subcontracting, reducing it as needed to meet market conditions, like in 2001, when due to reduced customer demand, the average level of front-end subcontracting was significantly lower.

During 2001, we limited our capital investment, allocating it to strategic projects such as the evolution of the production capability to lower geometries in the 200mm facilities; the development of advanced manufacturing processes (0.13 micron); the relentless improvement in the quality of our operations; the start-up of the new 200mm production facility in Singapore; the continuation of the two 300mm projects (Crolles, France, for pilot-line, Catania, Italy, for volume manufacturing); the ramp up to volume manufacturing of the new Bouskoura, Morocco back-end facility; and the completion of the extension of the back-end Shenzhen (China) facility. We have also increased overall installed front-end capacity, as a result of the completion of the expansion projects started in year 2000.

According to present visibility, we currently expect that capital spending for full year 2002 will be in the range of $1.2 billion (below the 2001 level of $1.7 billion), one-half of which is related to maintenance and optimization of existing plants and with the majority of the expenditures planned for the second part of the year. This investment will primarily be used for the start-up of production at the Crolles (France) 300mm facility; the construction of the building shell at the 300mm facility of Catania (Italy); pursuing R&D effort towards most advanced processes (0.10 micron); continuing the upgrade of the manufacturing capability of our 200mm facilities to finer geometries (0.15/0.13 micron); expanding the capacity installed in the 200mm facility of Singapore; continuing the improvement of the quality of our operations; and adapting the back-end and testing capacities to the production mix requested in the market. As of December 31, 2001, we had commitments of approximately $342 million for equipment purchases. We will continue to monitor our level of capital spending, taking into consideration factors such as trends in the semiconductors market, capacity utilization and announced additions.

Although each fabrication plant is dedicated to specific processes, our strategy is to develop local presences, better serve customers and mitigate manufacturing risks by having key processes operated in different manufacturing plants. In certain countries, we have been granted tax incentives by local authorities in line with local regulations, being recognized as an important contributor to the economies where our plants are located. In 2000, we sought to take advantage of industry capacity limitations by purchasing from subcontractors both wafer foundry and back-end services and thereby minimizing our capital expenditure needs. In 2001, our plants, particularly our 150mm plants, were underutilized, and we reduced our dependency on outside subcontractors.

Our manufacturing processes are highly complex, require advanced and costly equipment and are continuously being modified in an effort to improve yields and product performance. Impurities or other difficulties in the manufacturing process can lower yields, interrupt production or result in losses of products in process. As system complexity has increased and sub-micron technology has become more advanced, manufacturing tolerances have been reduced and requirements for precision have become even more demanding. Although our increased manufacturing efficiency has been an important factor in our improved results of operations, we have from time to time experienced production difficulties that have caused delivery delays and quality control problems, as is common in the semiconductor industry. No assurance can be given that we will be able to increase manufacturing efficiency in the future to the same extent as in the past or that we will not experience production difficulties in the future.

As is common in the semiconductor industry, we have from time to time experienced difficulty in ramping up production at new facilities or effecting transitions to new manufacturing processes and, consequently, have

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suffered delays in product deliveries or reduced yields. There can be no assurance that we will not experience manufacturing problems in achieving acceptable yields, product delivery delays or interruptions in production in the future as a result of, among other things, capacity constraints, construction delays, ramping up production at new facilities, upgrading or expanding existing facilities, changing our process technologies, or contamination or fires, storms, earthquakes or other acts of nature, any of which could result in a loss of future revenues. In addition, the development of larger fabrication facilities that require state-of-the-art sub-micron technology and larger-sized wafers has increased the potential for losses associated with production difficulties, imperfections, or other causes of defects. In the event of an incident leading to an interruption of production at a fab, we may not be able to shift production to other facilities on a timely basis or the customer may decide to purchase products from other suppliers, and in either case the loss of revenues and impact on our relationship with our customers could be significant. Our operating results could also be adversely affected by the increase in fixed costs and operating expenses related to increases in production capacity if revenues do not increase commensurately. Finally, in periods of high demand, we increase our reliance on external contractors for foundry and back-end service. Any failure to perform by such subcontractors could impact our relationship with our customers and could materially affect our results of operations.

Public Funding

We participate in certain programs established by the European Commission and individual countries in Europe (France and Italy), which provide public funding for research and development and capital investment in compliance with local laws. The pan-European programs are generally open to eligible companies operating and investing in Europe and cover a period of several years. In Italy, both electronics and economic development programs are open to eligible companies regardless of their ownership or country of incorporation.

The main European programs for research and development in which we are involved include: (i) the Micro-Electronics Development for European Application (MEDEA+) cooperative research and development program, (ii) European Union research and development projects with FWP5 for Information Technology; and (iii) national programs for research and development and industrialization in the electronics industries. We also participate in investment incentive programs for the economic development of certain regions.

The MEDEA+ cooperative research and development program was launched in June 2000 by the Eureka Conference and is designed to bring together many of Europe s top researchers in a 12,000 man-year program that will cover the period 2000-2008. The MEDEA+ program replaced the joint European research program called MEDEA, which was a European cooperative project in microelectronics among several countries that covered the period 1996 through 2000 and involved more than 80 companies. In Italy, the *Programma Nazionale per la Bioelettronica* has more than 10 participants, and various programs for intervention in the *Mezzogiorno* (southern Italy) are open to eligible companies, including non-European companies, operating in the region and regulated by specific laws. Italian programs often cover several years, but funding is typically subject to annual budget appropriation. In France, support for microelectronics is provided to over 30 companies manufacturing or using semiconductors. The amount of support under French programs is decided annually and subject to budget appropriation.

We have also entered into funding agreements with France and Italy which set forth the parameters of state support under certain national programs and require, among other things, compliance with European Commission (EC) regulations and approval by EU authorities and annual and project-by-project reviews and approvals.

Funding of programs in France and Italy is subject to annual appropriation, and if such governments were unable to provide anticipated funding on a timely basis or if existing government-funded programs were curtailed or discontinued, such an occurrence could have a material adverse effect on our business, operating results and financial condition. From time to time, we have experienced delays in the receipt of funding under these programs. As the availability and timing of such funding are substantially outside our control, there can be no assurance that we will continue to benefit from such government support, that funding will not be delayed from time to time, that sufficient alternative funding would be available if necessary or that any such alternative funding would be provided on terms favorable to us as those previously provided.

Public authority funding for research and development is reported in Other Income and Expenses in our consolidated statements of income. See Note 18 to the Consolidated Financial Statements. Such funding has totaled $60.4 million, $42.1 million and $57.5 million in the years 1999, 2000 and 2001, respectively. Government support

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for capital expenditures funding has totaled $53.4 million, $95.2 million and $77.1 million in the years 1999, 2000 and 2001, respectively. Such funding has been used to support our capital investment; while receipt of these funds is not directly reflected in our results of operations, the resulting lower amounts recorded in property, plant and equipment reduce the level of depreciation recognized by us.

Low interest financing has been made available (principally in Italy) under programs such as the Italian Republic s Fund for Applied Research, established in 1968 for the purpose of supporting Italian research projects meeting specified program criteria. At year-end 1999, 2000 and 2001, we had $48.8 million, $31.3 million and $57.8 million, respectively, of indebtedness outstanding under state-assisted financing programs at an average interest cost of 1.6%, 1.4% and 1.2%, respectively.

Due to changes in legislation and/or review by the competent administrative or judicial bodies, there can be no assurance that government funding granted to us may not be revoked or challenged or discontinued in whole or in part, by any competent state or European authority, until the legal time period for challenging or revoking such funding has fully lapsed.

Suppliers

The quality and technology of equipment used in the integrated circuit (IC) manufacturing process defines the limits of our technology. Demand for increasingly smaller chip structures means that semiconductor producers must quickly incorporate the latest advances in process technology to remain competitive. Advances in process technology cannot be brought about without commensurate advances in equipment technology, and equipment costs tend to increase as the equipment becomes more sophisticated.

In the front-end process we use steppers, scanners, track equipment, strippers, chemo-mechanical polishing equipment, cleaners, inspection equipment, etchers, physical and chemical vapor-deposition equipment, implanters, furnaces, testers, probers and other specialized equipment. The manufacturing tools that we use in the back-end process include bonders, burn-in ovens, testers and other specialized equipment.

Our manufacturing processes use many raw materials, including silicon wafers, lead frame, mold compound, ceramic packages and chemicals and gases. The prices of many of these raw materials are volatile. We obtain our raw materials and supplies from diverse sources on a just-in-time basis. Although supplies for the raw materials used by us are currently adequate, shortages could occur in various essential materials due to interruption of supply or increased demand in the industry.

Environmental Matters

Our manufacturing operations use many chemicals, gases and other hazardous substances, and we are subject to a variety of governmental regulations related to the use, storage, discharge and disposal of such chemicals and gases and other hazardous substances, emissions and wastes. Consistent with our TQEM principles, we have established proactive environmental policies with respect to the handling of such chemicals and gases and emissions and waste disposals from our manufacturing operations. We have engaged outside consultants to audit our environmental activities and have created environmental management teams, information systems, education and training programs, and environmental assessment procedures for new processes and suppliers. All of our plants are validated for the Eco-Management and Audit Scheme (EMAS) and have also obtained ISO 14001 certification. We are also participating in various working groups set up by the European Commission to propose new legislation regarding the collection, recovery and disposal of electronic equipment, as well as banning the use of lead and some flame retardants in manufacturing electronic components. We intend to proactively implement such new legislation when enacted in line with our commitment towards environmental protection.

Although we have not suffered material environmental claims in the past and believe that our activities conform to presently applicable environmental regulations in all material respects, environmental claims or the failure to comply with present or future regulations could result in the assessment of damages or imposition of fines against us, suspension of production or a cessation of operations, and as with other companies engaged in similar activities, any failure by us to control the use of or adequately restrict the discharge of hazardous substances, emissions or wastes could subject us to future liabilities.

Because we have manufacturing facilities located in southern Italy (Catania, Sicily), we face the risk that an earthquake could damage these facilities, which would cause a reduction in our revenue and profitability. Any

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disruption in our product development capability or our manufacturing capability arising from earthquakes could cause significant delays in the production or shipment of our products until we are able to shift development or production to different facilities or arrange for third parties to manufacture our products. We may not be able to obtain alternate capacity on favorable terms or at all. The risk of earthquakes to our manufacturing facilities in southern Italy (Catania, Sicily) is significant due to the proximity of major earthquake fault lines to these manufacturing facilities. In addition, some of our suppliers are located in regions where there is a risk of earthquake.

Industry Background

The Semiconductor Market

Semiconductors are the basic building blocks used to create an increasing variety of electronic products and systems. Since the invention of the transistor in 1948, continuous improvements in semiconductor process and design technologies have led to smaller, more complex and more reliable devices at a lower cost per function. As performance has increased and size and cost have decreased, semiconductors have expanded beyond their original primary applications (military applications and computer systems) to applications such as telecommunications systems, consumer goods, automotive products and industrial automation and control systems. In addition, system users and designers have demanded systems with more functionality, higher levels of performance, greater reliability and shorter design cycle times, all in smaller packages at lower costs. These demands have resulted in increased semiconductor content as a percentage of system cost. Calculated on the basis of the total available market (the TAM), which includes all semiconductor products, as a percentage of worldwide revenues from production of electronic equipment according to published industry data, semiconductor content has increased from approximately 9% in 1991 to approximately 21% in 2000. In 2001, the semiconductor content is estimated at 15% due to the severe market downturn of chips. The demand for electronic systems has also expanded geographically with the emergence of new markets, particularly in the Asia Pacific region.

Semiconductor sales have increased significantly over the long term but have experienced significant cyclical variations in growth rates. According to trade association data, the TAM increased from $17.8 billion in 1983 to $139.0 billion in 2001 (growing at a compound annual rate of approximately 12.0%). The serviceable available market (the SAM) consisted of the TAM without DRAMs and optoelectronic products through 1995 to the end of 2000. From 2001, to better reflect our current product offering, the SAM was redefined to exclude microprocessors and peripherals, RAM/ROM memories, some semicustom integrated circuits (ICs) and small signal transistors. The SAM increased from approximately $6.0 billion in 1985 to $78.0 billion in 2001, growing at a compound annual rate of approximately 15.3%, based upon the 2001 SAM definition revision. In 2001, the TAM decreased by 32%. Based on trade association data, the TAM decreased in the first quarter 2001 compared to the fourth quarter 2000 by 19.3%. In the second quarter 2001, the TAM decreased by 19.7% over the first quarter 2001, and in the third quarter 2001, the TAM decreased by 19.7% over the second quarter 2001, and during the fourth quarter 2001, the TAM remained flat compared to the third quarter 2001. The SAM decreased by 24% in 2001 compared to 2000. In 2001, approximately 23% of all semiconductors were shipped to the Americas, 22% to Japan, 29% to Europe, and 26% to the Asia Pacific region.

According to trade association data, during the first quarter of 2002, the TAM increased by 5.6% over the fourth quarter of 2001, but decreased by 25% compared to the first quarter 2001.

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The following table sets forth information with respect to worldwide semiconductor sales by type of semiconductor and geographic region:

	Worldwide Semiconductor Sales(1)					Compound Annual Growth Rates(2)			
	1983	1993	1999	2000	2001	83-93	93-97	99-00	00-01
	(in billions of $)					(expressed as percentages)			
Integrated Circuits	$ 13.3	$ 66.0	$ 130.3	$ 176.9	$ 118.5	17.4%	16.0%	35.8%	(33.0)%
Analog (linear and mixed-signal)	2.8	10.7	22.1	30.5	23.2	14.3	16.5	38.0	(24.0)%
Digital Logic	6.7	34.1	75.9	97.2	70.4	17.7	19.9	28.1	(27.6)%
Memory:									
DRAM	1.7	13.1	20.7	28.9	11.2	22.7	10.7	39.6	(61.3)%
Others	2.0	8.1	11.6	20.3	13.7	15.0	4.4	75.0	(33.0)%
Total Memory	3.7	21.2	32.3	49.2	24.9	19.1	8.4	52.3	(49.5)%
Total digital	10.4	55.3	108.2	146.4	95.3	18.2	15.8	35.3	(34.9)%
Discrete	3.7	8.6	13.4	17.7	13.1	8.8	11.1	32.0	(26.0)%
Opto-electronics	0.7	2.6	5.7	9.8	7.4	14.0	14.7	71.9	(24.5)%
TAM	**$ 17.8**	**$ 77.3**	**$ 149.4**	**$ 204.4**	**$ 139.0**	**15.8%**	**15.4%**	**36.8%**	**(32.0)%**
Europe	3.3	14.6	31.9	42.3	30.2	16.0	18.8	32.6	(28.6)%
Americas	7.8	24.7	47.5	64.1	35.8	12.2	16.8	34.9	(44.2)%
Asia Pacific	1.2	14.2	37.2	51.3	39.8	28.0	20.7	37.9	(22.3)%
Japan	5.5	23.8	32.8	46.7	33.2	15.8	7.8	42.4	(29.1)%
TAM	**$ 17.8**	**$ 77.3**	**$ 149.4**	**$ 204.4**	**$ 139.0**	**15.8%**	**15.4%**	**36.8%**	**(32.0)%**

(1) Source: WSTS
(2) Calculated using end points of the periods specified.

Although cyclical changes in production capacity in the semiconductor industry and demand for electronic systems have resulted in pronounced cyclical changes in the level of semiconductor sales and fluctuations in prices and margins for semiconductor products from time to time, the semiconductor industry has experienced substantial growth over the long term. Factors that are contributing to long-term growth include the development of new semiconductor applications, increased semiconductor content as a percentage of total system cost, emerging strategic partnerships and growth in the electronic systems industry in the Asia Pacific region.

Semiconductor Classifications

The process technologies, levels of integration, design specificity, functional technologies and applications for different semiconductor products vary significantly. As differences in these characteristics have increased, the semiconductor market has become highly diversified as well as subject to constant and rapid change. Semiconductor product markets may be classified according to each of these characteristics.

Semiconductors can be manufactured using different process technologies, each of which is particularly suited to different applications. Since the mid-1970s, the two dominant processes have been bipolar (the original technology used to produce integrated circuits) and complementary metal-oxide-silicon (CMOS). Bipolar devices typically operate at higher speeds than CMOS devices, but CMOS devices consume less power and permit more transistors to be integrated on a single IC. While bipolar semiconductors were once used extensively in large computer systems, CMOS has become the prevalent technology, particularly for devices used in personal computer systems. In connection with the development of new semiconductor applications and the demands of system designers for more integrated semiconductors, advanced technologies have been developed during the last decade that are particularly suited to more systems-oriented semiconductor applications. For mixed-signal applications, BiCMOS

technologies have been developed to combine the high-speed and high-voltage characteristics of bipolar technologies with the low power consumption and high integration of CMOS technologies. For intelligent power applications, BCD technologies have been developed that combine bipolar, CMOS and diffused metal oxide silicon (DMOS) technologies. Such systems-oriented technologies require more process steps and mask levels, and are more complex than the basic function-oriented technologies. The use of systems-oriented technologies requires knowledge of system design and performance characteristics (in particular, analog

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and mixed-signal systems and power systems) as well as expertise and experience with several semiconductor process technologies.

Semiconductors are often classified as either discrete devices (such as individual diodes, thyristors, transistors as well as optoelectronic products) or integrated circuits (in which thousands of functions are combined on a single chip of silicon to form a more complex circuit). Compared to the market for ICs, there is typically less differentiation among discrete products supplied by different semiconductor manufacturers. Also, discrete markets have generally grown at slower, but more stable, rates than IC markets.

Semiconductors may also be classified as either standard components or application-specific ICs (ASICs). Standard components are used by a large group of systems designers for a broad range of applications, while ASICs are designed to perform specific functions in specific applications. Generally, there are three types of ASICs: full-custom devices, semicustom devices and application-specific standard products (ASSPs). Full custom devices are typically designed to meet the particular requirements of one specific customer. Semicustom devices are more standardized ICs that can be customized with efficient computer aided design (CAD) tools within a short design cycle time to perform specific functions. ASSPs are standardized ASICs that are designed to perform specific functions in a specific application, but are not proprietary to a single customer.

The two basic functional technologies for semiconductor products are analog and digital. Analog (or linear) devices monitor, condition, amplify or transform analog signals, which are signals that vary continuously over a wide range of values. Analog circuits are critical as an interface between electronic systems and a variety of real world phenomena such as sound, light, temperature, pressure, weight or speed. Electronics systems continuously translate analog signals into digital data, and vice versa.

The analog semiconductor market consists of a large and growing group of specific markets that serve numerous and widely differing applications, including applications for automotive systems, instrumentation, computer peripheral equipment, industrial controls, communications devices, video products and medical systems. Because of the varied applications for analog circuits, manufacturers typically offer a greater variety of devices to a more diverse group of customers. Compared to the market for commodity digital devices such as standard memory and logic devices, the analog market is characterized by longer product life cycles, products that are less vulnerable to technological obsolescence, and lower capital requirements due to the use of mature manufacturing technologies. Such characteristics have resulted in growth rates that have been less volatile than growth rates for the overall semiconductor industry.

Digital devices perform binary arithmetic functions on data represented by a series of on/off states. Historically, the digital IC market has been primarily focused on the fast growing markets for computing and information technology systems. Increasing demands for high-throughput computing and networking and the proliferation of more powerful personal computers and workstations in recent years have led to dramatic increases in digital device density and integration. As a result, significant advances in electronic system integration have occurred in the design and manufacture of digital devices.

There are two major types of digital ICs: memory products and logic devices. Memory products, which are used in electronic systems to store data and program instructions, are generally classified as either volatile memories (which lose their data content when power supplies are switched off) or nonvolatile memories (which retain their data content without the need for constant power supply). Volatile memories are used to store data in virtually all computer systems, from large and mid-range computers to personal computers and workstations. Memory products are typically standard, general purpose ICs that can be manufactured in high volumes using basic CMOS processes, and they are generally differentiated by cost and physical and performance characteristics, including data capacity, die size, power consumption and access speed.

The primary volatile memory devices are DRAMs (dynamic random access memory), which accounted for 45% of semiconductor memory sales in 2001, and SRAMs (static RAMs). DRAMs are volatile memories that lose their data content when power supplies are switched off, whereas SRAMs are volatile memories that allow the storage of data in the memory array but without the need for clock or refresh logic circuitry. SRAMs are roughly four times as complex as DRAMs (four transistors per bit of memory compared to one transistor) and are significantly more expensive than DRAMs per unit of storage. DRAMs are used in a computer s main memory to temporarily store data retrieved from low cost external mass memory devices such as hard disk drives. SRAMs are principally used as caches and buffers between a computer s microprocessor and its DRAM-based main memory.

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Nonvolatile memories are typically used to store program instructions that control the operation of microprocessors and electronic systems. Among such nonvolatile memories, read-only memories (ROMs) are permanently programmed when they are manufactured while programmable ROMs (PROMs) can be programmed by system designers or end-users after they are manufactured. Erasable PROMs (EPROMs) may be erased and reprogrammed several times, but to do so EPROMs must be physically removed from electronic systems, exposed to ultraviolet light, reprogrammed using an external power supply and then returned to the systems. Electrically erasable PROMs (EEPROMs) can be erased byte by byte and reprogrammed in-system without the need for removal. Using EEPROMs, a system designer or user can program or reprogram systems at any time. Flash memories are products that represent an intermediate solution for system designers between EPROMs and EEPROMs based on their cost and functionality.

Flash memories are typically less expensive per bit of stored information than EEPROMs, and can also be erased and rewritten. The entire content of a Flash memory or large blocks of data (not individual bytes) can be erased with a Flash of current. Because Flash memories can be erased and reprogrammed electrically and in-system, they are more flexible than EPROMs and, therefore, are progressively replacing EPROMs in many of their current applications. Flash memories are typically used in high volume in digital mobile phones and digital consumer applications (set-top boxes, DVDs, digital cameras, MP3 digital music players) and are also suitable for solid state mass storage of data and emerging high-volume applications.

Logic devices process digital data to control the operation of electronic systems. The largest segment of the logic market, standard logic devices, includes microprocessors, microcontrollers and digital signal processors. Microprocessors are the central processing units of computer systems. Microcontrollers are complete computer systems contained on single integrated circuits that are programmed to specific customer requirements. They contain microprocessor cores as well as logic circuitry and memory capacity. Microcontrollers control the operation of electronic and electromechanical systems by processing input data from electronic sensors and generating electronic control signals, and are used in a wide variety of consumer products (including alarm systems, household appliance controls and video products), automotive systems (including engine control and dashboard instrumentation), computer peripheral equipment (including disk drives, facsimile machines, printers and optical scanners), industrial applications (including motor drives and process controllers), and telecommunications systems (including telephones, answering machines and digital cellular phones). DSPs are parallel processors used for high complexity, high speed real-time computations in a wide variety of applications, including answering machines, modems, digital cellular telephone systems, audio processors and data compression systems. Standard devices are intended for utilization by a large group of systems designers for a broad range of applications. Consequently, standard devices usually contain more functions than are actually required and, therefore, may not be cost-effective for certain specific applications. In addition to standard logic devices, a broad range of full-custom, semicustom and application-specific standard products (ASSP) logic devices is developed for a wide variety of applications. These devices are typically designed to meet particular customer requirements. Compared to memory markets, logic device markets are much more differentiated and dependent upon intellectual property and advanced product design skills.

Analog/digital (or mixed-signal) ICs combine analog and digital devices on a single chip to process both analog signals and digital data. Historically, analog and digital devices have been developed separately as they are fundamentally different and it has been technically difficult to combine analog and digital devices on a single IC. System manufacturers have generally addressed mixed-signal requirements using printed circuit boards containing many separate analog and digital circuits acquired from multiple suppliers. However, system designers are increasingly demanding system level integration in which complete electronic systems containing both analog and digital functions are integrated on a single IC.

Mixed-signal ICs are typically characterized as analog ICs due to their similar market characteristics, including longer product life cycles, diverse applications and customers and more stable growth through economic cycles as compared to digital devices. However, certain parts of the mixed-signal market are becoming higher volume markets as the increasing use of mixed-signal devices has enhanced the options of system designers and contributed to the development of new applications, including multimedia, video conferencing, automotive, mass storage and personal communications.

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Item 5. *Operating and Financial Review and Prospects*

The following discussion should be read in conjunction with our Consolidated Financial Statements and Notes thereto included elsewhere in this annual report on Form 20-F. The following discussion contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended. Our actual results may differ significantly from those projected in the forward-looking statements. For a discussion of factors that might cause future actual results to differ materially from our recent results or those projected in the forward-looking statements in addition to those set forth below, see Cautionary Statement Regarding Forward-Looking Statements and Item 3. Key Information Risk Factors . We assume no obligation to update the forward-looking statements or such factors.

Overview

The semiconductor industry experienced very difficult business conditions in 2001, registering the worst downturn in its history. The industry s downward trend, which began in the fourth quarter of 2000, continued throughout all 2001. According to preliminary trade association data, worldwide sales of semiconductor products (the total available market or TAM) decreased 32.0% in 2001 compared to 2000, after an increase in 2000 of 36.8% compared to 1999, and the market for products produced by us (the serviceable available market, or SAM , which consists of the TAM without DRAMs, and optoelectronic devices) decreased in 2001 by approximately 27.3% after an increase in 2000 of approximately 34.8% compared to 1999. In 2001, the TAM was $139.0 billion, while the SAM was $120.4 billion. Starting from 2001, our SAM was redefined in order to be more in line with our product portfolio, as such covering approximately 56% of total TAM and excluding PC motherboard major devices such as microprocessors and their peripherals, random access memories (RAMs), read-only memories (ROMs) and semicustom and discrete segments such as the small signal transistor market and optoelectronics devices. In 2001, our redefined SAM decreased by 24% over 2000 following an increase of 44.5% compared with 1999.

Our net revenues in 2001 were $6,356.9 million, an 18.6% decrease from $7,813.2 million in 2000, while in 2000 our net revenues increased 54.5% compared to 1999.

Based on trade association data for 2001, we believe we gained market share against both the TAM and the SAM compared to 2000.

Within a poor industry environment, characterized by significant overcapacity and pricing pressures, we continued to outperform the industry in the markets we serve and to further strengthen our financial position. Importantly, we remained profitable during the most negative cycle in the history of the semiconductor industry. This was achieved through a combination of cost reduction programs, yield improvements and optimization measures that enabled us to avoid the major employee lay-offs that characterized most of our industry.

In 2001, the difficult business conditions resulted in declining product demand from many of our end markets, which negatively affected our revenues. These declines in product demand were exacerbated in certain areas by excess inventory held by our customers. The declining product demand and the inventory reduction programs initiated by our customers produced a significant drop in our volumes of sales and consequently, a strong decrease in the rates of utilization of our manufacturing facilities. These negative market conditions also generated pressure on our average selling prices mainly for our standard and commodity products. Furthermore, during the latter part of 2001, we launched a program to reduce our inventory levels which succeeded in bringing our year-end inventory level in line with the lower activity rates. All these factors resulted in the decision to close certain wafer fabrication plants and in selective shutdowns, mainly of the most mature 125mm and 150mm wafer fabrication plants. Our gross margin was thus negatively impacted, both by reduced revenues and production levels, decreasing significantly when compared to the previous year period.

In response to the deteriorating conditions in the semiconductor industry, we have taken actions designed to further enhance our competitive position, both over the short- and medium/long-term. We believe these actions are in keeping with our overall strategic direction:

On May 31, 2001, we announced the planned closing of our facility in Ottawa, Canada. The closure was completed by the end of 2001 and all production has been transferred to our other facilities around the world. In September 2001, we initiated a plan for the closure of our 150mm plant in Rancho Bernardo, California. The closure was completed in April 2002. We recorded restructuring charges and other related plant closure expenses of $25.9 million pursuant to the closures of our facilities in

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Ottawa, Canada, and Rancho Bernardo, California. In addition, we recorded an impairment charge of $96.6 million for some of the tangible assets of our facilities in Ottawa, Canada and Rancho Bernardo, California.

We implemented several short-term temporary shutdowns in many of our wafer fabrication plants, particularly in the more mature plants.

During 2001, we implemented measures to decrease selling, general and administrative costs and non-core research and development expenditures. These measures, comprising primarily a hiring freeze, external contract renegotiations and discretionary cost reductions, contributed significant savings in 2001 when compared to 2000.

We reduced our capital expenditures in 2001, from an initial plan of $2.5 billion to $1.7 billion.

During 2001, we reviewed the carrying values of our tangible and intangible assets in our balance sheet and, as a consequence, recorded an impairment charge of $319.6 million for some of those assets, as a result of the $96.6 million related to the closure of our plants of Ottawa, Canada and Rancho Bernardo, California, of expected under-utilization of certain mature wafer fabrication plants and with respect to intangible assets pursuant to acquisitions made in prior years.

We also recorded a special inventory charge for obsolescence of $70.7 million in cost of sales in the second quarter 2001 due to significant cancellations of customers orders that resulted in unusable quantities of work in process and finished goods inventories.

As anticipated, during the 2002 first quarter there was a sequential decline in our net revenues from the 2001 fourth quarter, which was primarily attributable to seasonal factors as well as pricing pressures resulting from industry-wide overcapacity. Net revenues for the 2002 first quarter were $1,355.2 million, representing a 6.4% sequential decline from the 2001 fourth quarter. During the 2002 first quarter we reached a beneficial level of operating leverage from our fabrication facilities, illustrated by a sequential gross margin increase from 31.7% in the 2001 fourth quarter to 33.4% in the 2002 first quarter. This performance resulted from significant yield improvements and higher overall wafer fabrication plants utilization rates. During the first quarter 2002, we continued to tightly control discretionary spending while maintaining programs that will fuel our future growth. In the aggregate, our selling, general and administrative expenses and our research and development expenses totalled $365.2 million, virtually flat on a sequential basis. At the same time, we continued to fund our research and development programs, our 300mm wafer projects and the expansion of our leading-edge technology capacity. Net order flow accelerated in the first quarter of 2002, during which time we also experienced a degree of price stabilization that benefited memory and other product families. Based upon available backlog information and order rate trends, we believe that we are positioned to post double-digit sequential net revenue growth of approximately 10% in the 2002 second quarter. This projected net revenue gain is expected to reflect strengthened demand from virtually all of our end-markets, which would significantly increase our overall wafer fabrication plants utilization rates. Within this scenario, our ability to leverage our infrastructure could add 200 to 300 basis points to gross margin in the 2002 second quarter as compared with the 2002 first quarter. Such performance could affect second quarter 2002 earnings to an even greater extent, reflecting the benefits of our reduced cost structure. Over a longer-term horizon, we believe that we enjoy a very favorable competitive position in those targeted applications which are likely to lead the market in unit growth. Thus, while global economic and business conditions remain the key variables affecting semiconductor industry performance, we believe that we will continue to gain market share in the markets we serve.

Our capital expenditures for 2002 are expected to be approximately $1.2 billion, one-half of which is related to maintenance and optimization of existing plants. The remaining amount will be primarily allocated to the 300mm wafer projects and the expansion of leading-edge technology capacity. These investments, in concert with ongoing product development and strategic initiatives, are expected to strengthen our ability to gain additional and profitable market share as global economic and business conditions improve.

Other Developments

We completed our plan to repurchase our shares announced during September 2001. As of December 31, 2001, 9.4 million of our common shares had been repurchased for a total amount of $233.3 million and are reflected

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at cost as a reduction of shareholders equity. The repurchased shares have been designated to fund our most recent employee stock option plan. On March 1, 2002, we announced our intention to proceed with a further repurchase of a maximum amount of four million common shares, in order to fund further stock option grants under our most recent employee stock option plan. The repurchase of such four million common shares was completed in early May 2002 for a total amount of $115.1 million.

On December 11, 2001, our principal shareholder, STMicroelectronics Holding II B.V., completed the private placement of 69 million of our common shares, for the benefit of Finmeccanica and France Telecom, two of our indirect shareholders. France Telecom also completed the offering of 1.5 billion notes exchangeable into 30 million of our existing common shares held by STMicroelectronics Holding II B.V. on or after January 2, 2004.

After these operations, STMicroelectronics Holding N.V., the parent company of STMicroelectronics Holding II B.V., was owned 49% by FT1CI, a French holding company owned by Areva and France Telecom, and 51% by Finmeccanica, an Italian holding company, based on indirect economic interests in us, and jointly owned based on voting rights. In connection with the operation, the shareholders of STMicroelectronics Holding II B.V. signed a new shareholders agreement on December 10, 2001 to restructure their holdings in STMicroelectronics Holding II B.V. The agreement permits the shareholders to restructure the holding companies, provides for new corporate governance principles and for the terms and conditions of future disposals of common shares in STMicroelectronics, and contains provisions relating to stability in the shareholding structure and future flexibility. Under the new shareholders agreement, the parties have agreed to modify the governance rights within the holding company so that they will be shared equally by FT1CI and Finmeccanica, despite the difference in percentage ownership, for 24 months after the date of the new shareholders agreement plus the three-month period thereafter. The new shareholders agreement also states that France Telecom intends to dispose as soon as possible of its indirect interest in the shares, while Areva has expressed its interest in obtaining the option of liquidating its stake after a 24-month period from the date of such agreement. The new shareholders agreement provides that Finmeccanica will have the right to sell additional shares during such 24-month period so that it may sell a total number of shares equal to the amount sold by France Telecom. Any such transaction, or publicity concerning such potential transaction, could affect the market price of STMicroelectronics and cause the market price of our shares to drop significantly.

During 2001, we have finalized the acquisition of Ravisent and Veridicom and the formation of SuperH, Inc., a joint venture with Hitachi, Ltd. These transactions were conducted in order to strengthen our activities in technology and design.

In February 2002, in order to strengthen our position in the DSL sector, we announced the acquisition of the intellectual property and products of Tioga Technologies for Digital Subscriber Line (xDSL) chipsets.

In March 2002, we announced an agreement with Royal Philips Electronics and Taiwan Semiconductor Manufacturing Company Ltd. (TSMC) for the joint development of advanced process technologies at the 300mm wafer fabrication facility Crolles 2 site in our Crolles, France research and development center. In April, we announced that Motorola had signed a memorandum of understanding to join. There can be no assurance, however, that we will be able to finalize the terms of the alliance or that it will succeed.

In April 2002, we signed an agreement to acquire the semiconductor chip manufacturing unit, Alcatel Microelectronics, from Alcatel for 390 million (approximately $351 million), subject to final adjustments and governmental approval, and to cooperate on the joint development of DSL chip sets that will also be made available to the open market. The new agreement also calls for us to become a preferred supplier of Alcatel, thus expanding our long-standing strategic alliance. Simultaneously with this acquisition, we signed an agreement with Idaho-based AMI Semiconductors Inc. for sale of the mixed-signal business activities of Alcatel Microelectronics for 70 million (approximately $63 million). This second transaction includes Alcatel Mictroelectronics fabrication facilities located in Oudenaarde, Belgium, approximately 1,000 employees and the associated process technologies.

At our annual general meeting of shareholders held on March 27, 2002, all of the proposed resolutions were approved including:

- the re-appointment of the current Supervisory Board Members for a three-year term;

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the re-appointment of Mr. Pasquale Pistorio to a three-year term as our President and Chief Executive Officer; and

the distribution of a cash dividend of $0.04 per share, consistent with the prior year s cash dividend payment.

Results of Operations

The tables below set forth information on our net revenues by product group and by geographic region:

	Year ended December 31,				
	1997	1998	1999	2000	2001
	(in millions)				
Net Revenues by Product Group:(1)					
Telecommunications, Peripherals and Automotive(1)	$ 1,606.9	$ 1,855.2	$ 2,305.5	$ 3,481.7	$ 3,031.4
Discrete and Standard ICs(1)	839.5	816.7	927.9	1,213.1	942.5
Memory Products	708.6	659.6	835.9	1,552.9	1,381.5
Consumer and Microcontrollers(1)(4)	738.8	806.3	886.4	1,466.3	895.7
New Ventures Group and Others(2)(4)	125.4	110.0	100.6	99.2	105.8
Total	**$ 4,019.2**	**$ 4,247.8**	**$ 5,056.3**	**$ 7,813.2**	**$ 6,356.9**
Net Revenues by Geographic Region:(3)					
Europe	$ 1,753.3	$ 1,768.9	$ 1,833.6	$ 2,629.2	$ 2,169.0
North America	899.1	937.3	1,156.1	1,843.0	1,160.7
Asia Pacific	1,065.8	1,247.9	1,658.2	2,614.7	2,301.8
Japan	214.5	180.7	239.7	402.4	331.4
Emerging Markets(3)	86.5	113.0	168.7	323.9	394.0
Total	**$ 4,019.2**	**$ 4,247.8**	**$ 5,056.3**	**$ 7,813.2**	**$ 6,356.9**
	(as a percentage of net revenues)				
Net Revenues by Product Group:(1)					
Telecommunications, Peripherals and Automotive(1)	40.0%	43.6%	45.6%	44.6%	47.7%
Discrete and Standard ICs(1)	20.9	19.2	18.4	15.5	14.8
Memory Products	17.6	15.5	16.5	19.9	21.7
Consumer and Microcontrollers(1) (4)	18.4	19.0	17.5	18.8	14.1
New Ventures Group and Others(2)(4)	3.1	2.7	2.0	1.2	1.7
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Net Revenues by Geographic Region:(3)					
Europe	43.6%	41.6%	36.3%	33.6%	34.1%
North America	22.4	22.1	22.9	23.6	18.3
Asia Pacific	26.5	29.4	32.8	33.5	36.2
Japan	5.3	4.3	4.7	5.2	5.2
Emerging Markets(3)	2.2	2.6	3.3	4.1	6.2
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

(1)

In January 1999, we implemented organizational changes to better orient our product groups to end-use applications. As a result, net revenues have been restated for prior periods to reflect these changes. In addition, the former Dedicated Products Group has become the Telecommunications, Peripherals and Automotive Groups, while the former Programmable Products Group has become the Consumer and Microcontrollers Groups.

(2) Includes revenues from sales of subsystems and other products and from the New Ventures Group, which was created in May 1994 to act as a center for our new business opportunities.

(3) Revenues are classified by location of customer invoiced. For example, products ordered by U.S.-based companies to be invoiced to Asia Pacific affiliates are classified as Asia Pacific revenues. Net revenues by geographic region have been reclassified to reflect the creation of Region Five in January 1998, which includes emerging markets such as South America, Africa, Eastern Europe, the Middle East and India. Prior years have been restated to reflect this reclassification. In the fourth quarter of 2000, Region Five changed its name to become the Emerging Markets region.

(4) In 2001, we implemented organizational changes to better orient our product groups to end-use applications. These changes affected the Consumer and Microcontrollers Groups and the New Ventures Group and Others. As a result, net revenues have been restated for prior periods to reflect these changes.

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The following table sets forth certain financial data from our consolidated statements of income since 1997, expressed in each case as a percentage of net revenues:

	Year ended December 31,				
	1997	1998	1999	2000	2001
Net sales	98.8%	99.1%	99.3%	99.4%	99.2%
Other revenues	1.2	0.9	0.7	0.6	0.8
Net revenues	100.0	100.0	100.0	100.0	100.0
Cost of sales	(61.1)	(61.7)	(60.4)	(54.0)	(63.7)
Gross profit	38.9	38.3	39.6	46.0	36.3
Operating Expenses:					
Selling, general and administrative	(11.3)	(11.5)	(10.6)	(9.0)	(10.1)
Research and development	(15.2)	(16.2)	(16.5)	(13.1)	(15.4)
Other income and expenses	0.5	1.7	0.8	(1.1)	(0.1)
Impairment and restructuring charges					(5.4)
Total operating expenses	(26.0)	(26.0)	(26.3)	(23.2)	(31.0)
Operating income	12.9	12.3	13.3	22.8	5.3
Net interest income (expense)		0.2	0.7	0.6	(0.2)
Equity in loss of joint venture					(0.1)
Income before income taxes and minority interests	12.9	12.5	14.0	23.4	5.0
Income tax expense	(2.9)	(2.8)	(3.1)	(4.8)	(1.0)
Income before minority interests	10.0	9.7	10.9	18.6	4.0
Minority interests	0.1		(0.1)		
Net income	10.1%	9.7%	10.8%	18.6%	4.0%

2001 vs. 2000

In 2001, we were negatively impacted by the downward cycle of the semiconductor industry, which contributed to the significant decrease of our net revenues, operating income, net income and diluted earnings per share. However, we maintained our commitment to invest significant amounts in research and development on our core and strategic programs. We have largely reduced our capital spending during the year in line with the decline of end customers demand in order to maintain a solid financial position.

Net revenues. Net sales decreased 18.8%, from $7,764.4 million in 2000 to $6,303.9 million in 2001. The decrease in net sales was primarily the result of lower volume due to a decline of semiconductor market demand. Average selling prices were also under pressure, which resulted in a general overall decline in pricing of our products, estimated at approximately 6%. Other revenues increased from $48.8 million in 2000 to $53.0 million in 2001 due primarily to an increase in co-development contract fees. Net revenues decreased 18.6%, from $7,813.2 million in 2000 to $6,356.9 million in 2001. The exchange rate impact on net revenues in 2001 was estimated to be marginally negative due to the appreciation of the U.S. dollar, in particular as compared to the euro.

With respect to the product groups, the Telecommunications, Peripherals and Automotive Groups net revenues decreased 12.9% primarily as a result of volume decreases in wireline telecommunications, automotive products and data storage devices partially offset by an increase in volume in wireless telecommunications. The Discrete and Standard ICs Group s net revenues decreased 22.3%, due to the volume and price declines across virtually all major product families. Net revenues of the Memory

Products Group decreased by 11.0% as a result of price declines in its major product families and volume decreases, mainly in EPROM (erasable programmable read-only memory), EEPROM (electrically erasable PROMs) and Smartcards; an improved mix in Flash memories partially offset these declines. The Consumer and Microcontrollers Groups net revenues decreased 38.9% as a result of significantly lower volume in digital consumer applications such as set-top boxes, consumer TV and imaging products, as well as a general decrease in prices in most major product families.

In 2001, we continued to focus on differentiated ICs, which accounted for 66.1% of our net revenues, compared to 63.3% in 2000. Such products foster close relationships with customers, resulting in early knowledge of their evolving requirements and opportunities to access their markets for other products. Analog ICs (including

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mixed signal ICs), the majority of which are also differentiated ICs, accounted for approximately 51% of our net revenues in 2001 compared to 49% in 2000, while discrete devices accounted for approximately 10% of our net revenues in 2001 compared to approximately 10% in 2000. In recent years, these families of products, in particular analog ICs, have experienced less volatility in sales growth rates and average selling prices than the overall semiconductor industry. However, the difficult competitive environment in the semiconductor market in more recent years has led to price pressures in these product families as well.

In 2001, approximately 34.1% of our net revenues were realized in Europe, 18.3% in North America, 36.2% in Asia Pacific, 5.2% in Japan and 6.2% in Emerging Markets. All the major regions registered significant declines in revenues in 2001 versus 2000, with North America particularly impacted and declining 37.0%, due to the local unfavorable economic environment, while Emerging Markets revenues increased 21.6% in 2001 versus 2000, due in part to the move of some customers production facilities to low labor cost areas.

In 2001, our top ten customers represented approximately 50% of our consolidated net revenues compared to approximately 47% in 2000. One customer, the Nokia group of companies, represented 19.3% of 2001 net revenues.

Gross profit. Cost of sales decreased from $4,216.9 million in 2000 to $4,047.0 million in 2001, primarily due to a significant decrease in production volume and the decrease in the cost of outsourced wafers manufactured by external foundries, while there was an increase in depreciation associated with new capital investments. Additionally, in cost of sales we recorded a special obsolete inventory charge of $70.7 million in the second quarter of 2001 due to significant cancellations of certain customers orders.

Our gross profit decreased 35.8%, from $3,596.3 million in 2000 to $2,309.9 million in 2001, primarily as a result of lower net revenues. As a percentage of net revenues, gross margin decreased from 46.0% in 2000 to 36.3% in 2001, due to the lower level of net sales, declining selling prices and under-utilization of our manufacturing facilities. The exchange rate impact on gross profit in 2001 compared to 2000 was estimated to be marginally favorable, since the appreciation of the U.S. dollar versus the euro had a favorable impact on cost of sales that was higher than the unfavorable impact on net revenues. See Impact of Changes in Exchange Rates .

Selling, general and administrative expenses. Selling, general and administrative expenses decreased 8.9%, from $703.7 million in 2000 to $641.4 million in 2001, reflecting the results of the cost reduction actions taken by us to respond to the market downturn on discretionary expenses, as well as of a hiring freeze. As a percentage of net revenues, selling, general and administrative expenses increased from 9.0% in 2000 to 10.1% in 2001 due to the decrease in net revenues.

Research and development expenses. Research and development expenses decreased 4.7%, from $1,026.3 million in 2000 to $977.9 million in 2001. The decrease in research and development was mainly due to lower spending in non-core activities and cost reduction in certain external development contracts. However, we continued to invest heavily in research and development and plan to continue increasing our research and development staff. We continue to allocate significant financial resources to expand our market leadership in key applications, reflecting our commitment to service and continuous innovation. Our reported research and development expenses do not include marketing design center, process engineering, pre-production or industrialization costs. As a percentage of net revenues and due to the declining revenues, research and development expenses increased from 13.1% in 2000 to 15.4% in 2001.

Impairment and restructuring charges. Total impairment and restructuring charges in 2001 were $345.5 million while no such charge was booked in 2000.

In the second quarter of 2001, we recorded an impairment charge of $296.3 million. This charge includes impairment losses of (i) $176.7 million associated with the tangible assets of some of our fabrication sites; (ii) $97.3 million related to purchased technologies and goodwill on previous acquisitions; and (iii) $22.3 million for financial assets with an other than temporary decline in value. This impairment charge resulted from a significant deterioration in the business climate in the semiconductor industry. Due to these market changes, we revised our production forecasts and we foresee an under-utilization of the capacities of certain 150mm fabrication facilities.

Additionally, in the second quarter of 2001, we recorded restructuring charges of $15.0 million related to the closure of our facility in Ottawa, Canada. These restructuring charges related to the severance of plant personnel and were paid in 2001.

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In the third quarter of 2001, we recorded an impairment charge of $23.3 million relating to the building and facilities of our Rancho Bernardo, California, 150mm wafer fabrication plant to be closed by April 2002. This impairment charge was based on quoted market value and resulted from our decision to close the plant.

In the fourth quarter of 2001, we recorded expenses of $10.9 million relating to severance costs and retention bonuses for plant employees during the closure of our facilities in Ottawa, Canada and Rancho Bernardo, California. Any costs of relocating personnel from the facilities and for transferring equipment to other fabrication sites will be recognized as incurred during 2002.

Other income and expenses. Other income and expenses decreased from expenses of $83.6 million in 2000 to expenses of $6.1 million in 2001. Other income and expenses include primarily funds received from government agencies in connection with our research and development programs, the cost of new plant start-ups, the amortization of goodwill and related acquisition costs, as well as foreign currency gains and losses, the gains realized on certain sales of marketable securities, the costs of certain activities relating to intellectual property and miscellaneous revenues and expenses. The decrease of the negative balance in other income and expenses resulted primarily from the gains on sales of marketable securities, lower start-up costs of new production facilities and higher income from public funding for research and development. Goodwill amortization also increased due to recent acquisitions such as WSI, in late 2000 and Ravisent, in early 2001.

Operating income. Our operating income decreased by 81.0%, from $1,782.7 million in 2000 to $339.0 million in 2001. The exchange rate impact on operating income in 2001 was estimated to be favorable since the appreciation of the U.S. dollar against the euro had a favorable impact on cost of sales and operating expenses, which more than offset the negative impact on revenues.

Net interest income (expense). Net interest decreased from income of $46.7 million in 2000 to expense of $13.0 million in 2001 primarily as a result of the decrease in interest income from our available cash due to the significant decline in interest rates for U.S. dollar-denominated funds, while our interest expenses are mainly related to our convertible bonds, which are at fixed rates.

Income tax expense. Provision for income tax was $61.1 million in 2001 compared to $375.1 million in 2000, primarily as a result of the decrease in income before income taxes and minority interests. Our accrued effective tax rate decreased from 20.5% in 2000 to 19.0% in 2001. Our tax rate is variable and depends on changes in the level of operating profits within various local jurisdictions and on changes in the applicable taxation rates of these jurisdictions. We currently enjoy certain tax benefits in some countries; as such benefits may not be available after 2001 due to changes within the local jurisdictions, our effective tax rate could increase in the coming years.

Net income. Our net income decreased 82.3%, from $1,452.1 million in 2000 to $257.1 million in 2001. As a percentage of net revenues, 2001 net income was 4.0%, down from 18.6% of 2000 net income. The decrease in net income in 2001 is primarily due to the strong decline in net revenues and the impairment and restructuring charges incurred during the year. These negative items were partially offset by the reduction in selling, general and administrative expenses and in research and development expenses, reflecting our cost reduction measures taken in 2001. Diluted earnings per share reached $0.29, a decrease of 81.6% compared to diluted earnings per share of $1.58 in 2000. All per share numbers have been adjusted to reflect the 3-for-1 stock split effected in May 2000.

2000 vs. 1999

In 2000, we benefited from the industry recovery and our strong market position, and increased significantly our net revenues, operating income, net income and diluted earnings per share in each successive quarter. We continued to invest significant amounts in research and development and completed several strategic acquisitions, which enhanced our intellectual property portfolio. We accelerated our capital spending during the year in order to build up capacity to meet demand.

Net revenues. Net sales increased 54.6%, from $5,023.1 million in 1999 to $7,764.4 million in 2000. The increase in net sales was primarily the result of higher volume and an improved product mix, including sales of new products. The exchange rate impact on net sales in 2000 was estimated to be negative. Other revenues increased from $33.2 million in 1999 to $48.8 million in 2000 due primarily to an increase in licensing revenues. Net revenues increased 54.5%, from $5,056.3 million in 1999 to $7,813.2 million in 2000.

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The Telecommunications, Peripherals and Automotive Groups net revenues increased 51.0% primarily as a result of volume increases in wireless and wireline telecommunications, data storage devices and automotive products and a more favorable product mix in wireline products. The Discrete and Standard ICs Group s net revenues increased 30.7%, as the volume increases in basically all major product families and the more favorable product mix in standard commodities and discrete devices more than offset the price declines in basically all major product families. Net revenues of the Memory Products Group increased by 85.8% as a result of volume increases in basically all product families (such as Flash memories, Smartcard ICs and EEPROMs) and improved mix in Flash memories and EPROMs. The Consumer and Microcontrollers Groups net revenues increased 65.4% as a result of significantly higher volumes in digital video, digital consumer applications and imaging products, partially offset by a general decrease in prices in most major product families.

Gross profit. Our gross profit increased 79.7%, from $2,001.8 million in 1999 to $3,596.3 million in 2000, primarily as a result of higher net revenues. As a percentage of net revenues, gross profit increased from 39.6% in 1999 to 46.0% in 2000, benefiting from higher production volumes, improved product mix and a more cost-effective utilization of manufacturing facilities.

Cost of sales increased from $3,054.5 million in 1999 to $4,216.9 million in 2000, primarily due to a significant increase in production volume, the increase in purchases of wafers from external foundries and the increased depreciation associated with new capital investments.

The exchange rate impact on gross profit in 2000 compared to 1999 was estimated to be favorable. The appreciation of the U.S. dollar versus the euro had a favorable impact on cost of sales that was higher than the unfavorable impact on net revenues. See Impact of Changes in Exchange Rates .

Selling, general and administrative expenses. Selling, general and administrative expenses increased 31.7%, from $534.2 million in 1999 to $703.7 million in 2000, reflecting increased efforts in the marketing and administrative functions and the information technology area. As a percentage of net revenues, selling, general and administrative expenses decreased from 10.6% in 1999 to 9.0% in 2000.

Research and development expenses. Research and development expenses increased 22.8%, from $836.0 million in 1999 to $1,026.3 million in 2000. We continued to invest heavily in research and development and plan to continue increasing our research and development staff. We continue to allocate significant financial resources to expand our market leadership in key applications, reflecting our commitment to service and continuous innovation. Our reported research and development expenses do not include marketing design center, process engineering, pre-production or industrialization costs. As a percentage of net revenues, research and development expenses decreased from 16.5% in 1999 to 13.1% in 2000.

Other income and expenses. Other income and expenses decreased from income of $39.9 million in 1999 to expenses of $83.6 million in 2000. Other income and expenses include primarily funds received from government agencies in connection with our research and development programs, the cost of new plant start-ups, the amortization of goodwill and related acquisition costs, as well as foreign currency gains and losses, the gains realized on certain sales of marketable securities, the costs of certain activities relating to intellectual property and miscellaneous revenues and expenses. The decrease in other income and expenses resulted primarily from higher start-up costs of new production facilities. In addition, lower funds received from government agencies in connection with our research and development programs, higher patent expenses and higher goodwill amortization contributed to the increase in expenses.

Operating income. Our operating income increased by 165.5%, from $671.5 million in 1999 to $1,782.7 million in 2000. The exchange rate impact on operating income in 2000 was estimated to be favorable since the appreciation of the U.S. dollar against the euro had a favorable impact on gross profit and operating expenses.

Net interest income (expense). Net interest income increased from income of $35.6 million in 1999 to income of $46.7 million in 2000 primarily as a result of the increase in cash and cash equivalents following the share offering and the Liquid Yield Option Notes (LYONs) offering completed on September 22, 1999, and the convertible debt offering completed on November 16, 2000.

Income tax expense. Provision for income tax was $375.1 million in 2000 compared to $157.2 million in 1999, primarily as a result of the increase in income before income taxes and minority interests. The accrued effective tax rate decreased from 22.2% in 1999 to 20.5% in 2000 mainly due to the application of new benefits in

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certain countries. As such benefits may not be available after 2000, an increase in the effective tax rate could result in the coming years.

Net income. Our net income increased 165.3%, from $547.3 million to $1,452.1 million. As a percentage of net revenues, 2000 net income was 18.6%, up from 10.8% of 1999 net income. Diluted earnings per share reached $1.58, an increase of 154.8% compared to diluted earnings per share of $0.62 in 1999. All per share numbers have been adjusted to reflect the 2-for-1 stock split effected in June 1999 and the 3-for-1 stock split effected in May 2000.

Quarterly Results of Operations

The following table sets forth certain financial information for the years 2000 and 2001. Such information is derived from unaudited consolidated financial statements, prepared on a basis consistent with the audited consolidated financial statements, that include, in the opinion of management, only normal recurring adjustments necessary for a fair presentation of the information set forth therein. Operating results for any quarter are not necessarily indicative of results for any future period. In addition, in view of the significant growth experienced by us in recent years, the increasingly competitive nature of the markets in which we operate, the changes in product mix and the currency effects of changes in the composition of sales and production among different geographic regions, we believe that period-to-period comparisons of our operating results should not be relied upon as an indication of future performance.

Our quarterly and annual operating results are also affected by a wide variety of other factors that could materially and adversely affect revenues and profitability or lead to significant variability of operating results, including, among others, capital requirements and the availability of funding, competition, new product development and technological change and manufacturing. In addition, a number of other factors could lead to fluctuations in operating results, including order cancellations or reduced bookings by key customers or distributors, intellectual property developments, international events, currency fluctuations, problems in obtaining adequate raw materials on a timely basis, and the loss of key personnel. As only a portion of our expenses varies with our revenues, there can be no assurance that we will be able to reduce costs promptly or adequately in relation to revenue declines to compensate for the effect of any such factors. As a result, unfavorable changes in the above or other factors have in the past and may in the future adversely affect our operating results. Quarterly results have also been and may be expected to continue to be substantially affected by the cyclical nature of the semiconductor and electronic systems industries, the speed of some process and manufacturing technology developments, market demand for existing products, the timing and success of new product introductions and the levels of provisions and other unusual charges incurred.

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	Quarter ended (unaudited)							
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 31, 2000	March 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 31, 2001
	(in millions, except percentages and per share data)(1)							
Consolidated Statement of Income Data								
Net revenues	$ 1,702.2	$ 1,877.3	$ 2,042.0	$ 2,191.7	$ 1,921.1	$ 1,587.2	$ 1,400.7	$ 1,447.9
Cost of sales	(985.1)	(1,001.6)	(1,077.1)	(1,153.1)	(1,065.3)	(1,054.6)	(938.6)	(988.4)
Gross profit	717.1	875.7	964.9	1,038.6	855.8	532.6	462.1	459.5
Operating expenses:								
Selling, general and administrative	(159.5)	(177.1)	(174.0)	(193.1)	(176.8)	(180.2)	(144.2)	(140.3)
Research and development	(235.1)	(245.1)	(259.8)	(286.4)	(272.1)	(255.7)	(229.2)	(220.8)
Other income and expenses	(30.5)	(37.7)	(19.3)	4.1	5.4	22.7	(17.2)	(16.9)
Impairment and restructuring charges						(311.3)	(23.3)	(10.9)
Total operating expenses	(425.1)	(459.9)	(453.1)	(475.4)	(443.5)	(724.5)	(413.9)	(388.9)
Operating income (loss)	292.0	415.8	511.8	563.2	412.3	(191.9)	48.2	70.6
Net interest income (expense)	16.4	14.0	7.3	9.0	3.1	0.5	(4.8)	(11.8)
Equity in loss of joint ventures							(1.2)	(3.6)
Income (loss) before income taxes and minority interests	308.4	429.8	519.1	572.2	415.4	(191.4)	42.2	55.2
Income tax expense	(69.4)	(92.7)	(103.6)	(109.5)	(74.2)	28.6	(6.2)	(9.3)
Income (loss) before minority interests	239.0	337.1	415.5	462.7	341.2	(162.8)	36.0	45.9
Minority interests	(0.6)	(0.6)	(0.2)	(0.8)	(0.4)	(1.7)	(0.2)	(0.9)
Net income (loss)	$ 238.4	$ 336.5	$ 415.3	$ 461.9	$ 340.8	$ (164.5)	$ 35.8	$ 45.0
Basic earnings(loss) per share	$ 0.27	$ 0.38	$ 0.47	$ 0.52	$ 0.38	$ (0.18)	$ 0.04	$ 0.05
Diluted earnings(loss) per share	$ 0.26	$ 0.37	$ 0.45	$ 0.50	$ 0.38	$ (0.18)	$ 0.04	$ 0.05
Number of shares used in calculating earnings per share (basic)	878.2	887.0	888.5	889.3	890.1	894.5	898.1	890.5
Number of shares used in calculating earnings per share (diluted)	933.5	934.5	934.0	942.4	951.5	894.5	905.1	898.1

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	Quarter ended (unaudited)							
	April 1, 2000	July 1, 2000	Sept. 30, 2000	Dec. 31, 2000	March 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 31, 2001
	(as a percentage of net revenues)							
Net revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	(57.9)	(53.4)	(52.7)	(52.6)	(55.5)	(66.4)	(67.0)	(68.3)
Gross profit	42.1	46.6	47.3	47.4	44.5	33.6	33.0	31.7
Operating expenses:								
Selling, general and administrative	(9.4)	(9.4)	(8.5)	(8.8)	(9.2)	(11.4)	(10.3)	(9.7)
Research and development	(13.8)	(13.1)	(12.7)	(13.1)	(14.2)	(16.1)	(16.4)	(15.2)
Other income and expenses	(1.8)	(2.0)	(0.9)	0.2	0.4	1.4	(1.2)	(1.2)
Impairment and restructuring charges						(19.6)	(1.7)	(0.8)
Total operating expenses	(25.0)	(24.5)	(22.2)	(21.7)	(23.0)	(45.7)	(29.6)	(26.9)
Operating income (loss)	17.2	22.1	25.1	25.7	21.5	(12.1)	3.4	4.8
Net interest income (expense)	1.0	0.8	0.3	0.4	0.1		(0.3)	(0.8)
Equity in loss of joint ventures							(0.1)	(0.2)
Income (loss) before income taxes and minority interests	18.2	22.9	25.4	26.1	21.6	(12.1)	3.0	3.8
Income tax expense	(4.2)	(4.9)	(5.1)	(5.0)	(3.8)	1.8	(0.4)	(0.6)
Income (loss) before minority interests	14.0	18.0	20.3	21.1	17.8	(10.3)	2.6	3.2
Minority interests		(0.1)			(0.1)	(0.1)		(0.1)
Net income (loss)	14.0%	17.9%	20.3%	21.1%	17.7%	(10.4)%	2.6%	3.1%

(1) All share information has been adjusted to reflect the 3-for-1 stock split effected in May 2000.

Net revenues. We recorded net revenues for the fourth quarter 2001 of $1,447.9. with a decrease in net revenues of 33.9% versus the $2,191.7 million of the fourth quarter 2000 net revenues, experiencing significant revenue decreases across all our product groups and our main geographic regions. We recorded a 3.4% sequential improvement over the $1,400.7 million reported in the third quarter 2001, reflecting a more favorable product mix as well as the sales gains in computer peripherals and the continued growth of the wireless portion of our telecom business.

Third quarter 2001 net revenues were 31.4% below 2000 third quarter net revenues and showed an 11.8% sequential decrease over the second quarter of 2001 net revenues. Second quarter 2001 net revenues were 15.5% below second quarter 2000 net revenues and decreased sequentially by 17.4% compared to the first quarter of 2001 net revenues. First quarter 2001 net revenues were 12.9% above first quarter 2000 net revenues and decreased sequentially 12.3% compared to the fourth quarter of 2000 net revenues.

With respect to the product groups, the Memory Products Group net revenues in the 2001 fourth quarter decreased 40.1% in comparison to the 2000 fourth quarter, 2001 fourth quarter net revenues increased 2.5% in comparison to the 2001 third quarter net revenues, reflecting significant progress in sales of Smartcard products while Flash revenues were basically flat. In the 2001 fourth quarter, net revenues from the Telecommunications, Peripherals and Automotive Groups decreased 28.2% over the year

ago quarter, 2001 fourth quarter net revenues increased 4.4% sequentially over the third quarter 2001 net revenues, reflecting stronger sales of wireless telecommunications and hard disk drives, while sales of wireline telecommunications products continued to decrease. Net revenues for the Consumer and Microcontrollers Groups decreased 40.9% compared to the 2000 fourth quarter, 2001 fourth quarter net revenues were sequentially flat with a slight 0.7% increase versus the third quarter 2001 net revenues. Net revenues for the Discrete and Standard ICs Products Group decreased 31.0% in the 2001 fourth quarter over the 2000 fourth quarter, 2001 fourth quarter net revenues increased 5.3% sequentially over the third quarter 2001 net revenues.

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During the fourth quarter of 2001, net revenues from differentiated products totaled $1,012.1 million, a 3.9% increase over the previous quarter, and accounted for 69.9% of fourth quarter 2001 revenues. In the 2000 fourth quarter, differentiated products net revenues equaled $1,367.1 million and accounted for 62.4% of our net revenues.

In fourth quarter 2001, approximately 30.5% of our net revenues were realized in Europe, 17.6% in North America, 40.5% in Asia Pacific, 3.2% in Japan and 8.3% in Emerging Markets. All the major regions registered significant declines in revenues in fourth quarter 2001 versus fourth quarter 2000, with North America and Japan particularly impacted, due to the local unfavorable economic environment. Emerging Markets revenues increased 18.1% in the fourth quarter 2001 versus the fourth quarter 2000, also associated to the move of some customers production facilities to low labor cost areas.

Gross profit. In the fourth quarter of 2001, gross profit was $459.5 million, 55.8% below the year-ago period. Gross profit margin in the 2001 fourth quarter was 31.7%, representing a significant decline compared to 47.4% in the fourth quarter of 2000 penalized b