ASML HOLDING NV
Form 20-F
February 05, 2004

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# Securities and Exchange Commission

**Washington, D.C. 20549**

# FORM 20-F

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D)**
**OF THE SECURITIES EXCHANGE ACT OF 1934**
for the fiscal year ended December 31, 2003

**Commission file number 0-25566**

# ASML HOLDING N.V.

(Exact Name of Registrant as Specified in Its Charter)

**THE NETHERLANDS**
(Jurisdiction of Incorporation or Organization)

**DE RUN 6501**
**5504 DR VELDHOVEN**
**THE NETHERLANDS**
**(Address of Principal Executive Offices)**

Securities registered or to be registered pursuant to
Section 12(b) of the Act:
None
(Title of Class)

Securities registered or to be registered pursuant to
Section 12(g)of the Act:
Ordinary Shares
(nominal value Eur 0.02 per share)
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None
(Title of Class)

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

**482,513,502 Ordinary Shares**
**(nominal value Eur 0.02 per share)**
**23,100 Priority Shares**
**(nominal value Eur 0.02 per share)**

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)

Name and address of person authorized to receive notices and communications from the Securities and Exchange Commission:

**Richard A. Ely**
**Skadden, Arps, Slate, Meagher & Flom (UK) LLP**
**40 Bank Street, Canary Wharf**
**London E14 5DS England**

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**Part I**

## Special Note Regarding Forward-Looking Statements

In addition to historical information, this annual report on Form 20-F contains and incorporates by reference statements relating to our future business and/or results. These statements include certain projections and business trends that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. You can generally identify these statements by the use of words like may , will , could , should , project , believe , anticipate , expect , plan , estimate , forecast , poten continue and variations of these words or comparable words.

Forward-looking statements do not guarantee future performance and involve risks and uncertainties. Actual results may differ materially from projected results as a result of certain risks and uncertainties. These risks and uncertainties include, without limitation, those described under Item 3.D. Risk Factors and those detailed from time to time in our other filings with the U.S. Securities and Exchange Commission (the Commission or the SEC ). These forward-looking statements are made only as of the date of this annual report on Form 20-F. We do not undertake to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

**Presentation of Financial and Operational Information**

In May 2001, we consummated our merger with Silicon Valley Group, Inc. ( SVG ), now part of ASML US, Inc. ( ASML US ). The merger is accounted for under the pooling of interests method. Therefore, the consolidated financial statements of ASML Holding N.V. ( ASML or the Company ) for the year ended December 31, 2001, the Selected Financial Information for the years ended December 31, 2001, 2000 and 1999 and the financial and operational information presented in this annual report on Form 20-F for the year ended December 31, 2001, reflect the combination of financial statements for ASML s historical operations with those of SVG.

Because SVG s year-end prior to the merger differed from ASML s year-end, in conformity with accounting principles generally accepted in the United States ( U.S. GAAP ) ASML s consolidated financial statements for fiscal years 2000 and 1999 contain the results of ASML s historical operations for the twelve months ended December 31, 2000 and December 31, 1999 and the results of SVG s historical operations for the twelve months ended September 30, 2000 and September 30, 1999.

On December 18, 2002, we announced the proposed divestiture of our Thermal business, including related customer support activities, and the termination of our activities in the Track business. As a result of this decision, our consolidated financial statements for each of the three years ended December 31, 2003, our Selected Financial Information for each of the five years ended December 31, 2003 and the financial and operational information presented in this annual report on Form 20-F have been adjusted to present these businesses as discontinued operations, instead of as a separate segment as they had been reported prior to the divestiture announcement. In October 2003, we substantially concluded the divestiture of our Thermal business.

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| | |
|---|---|
| **Item 1 Identity of Directors, Senior Management and Advisors** | Not applicable |
| **Item 2 Offer Statistics and Expected Timetable** | Not applicable |
| **Item 3 Key Information** | **A. Selected Financial Data** |

The following selected consolidated financial data should be read in conjunction with Item 5 Operating and Financial Review and Prospects and Item 18 Financial Statements

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**Five-Year Financial Summary**[1]

| Year ended December 31 (in thousands, except per share data) | 1999 EUR | 2000 EUR | 2001 EUR | 2002 EUR | 2003 EUR |
|---|---|---|---|---|---|
| **Consolidated statements of operations data** | | | | | |
| Net sales | 1,518,027 | 2,672,630 | 1,589,247 | 1,958,672 | **1,542,737** |
| Cost of sales | 1,028,221 | 1,571,816 | 1,558,234 | 1,491,068 | **1,173,955** |
| **Gross profit on sales** | 489,806 | 1,100,814 | 31,013 | 467,604 | **368,782** |
| Research and development costs | 234,378 | 327,015 | 347,333 | 324,419 | **305,839** |
| Research and development credits | (38,815) | (24,983) | (16,223) | (26,015) | **(19,119)** |
| Selling, general and administrative expenses | 186,638 | 256,513 | 245,962 | 263,243 | **212,609** |
| Restructuring and merger and acquisition costs | (283) | 0 | 44,559 | 0 | **24,485** |
| **Operating income (loss)** | 107,888 | 542,269 | (590,618) | (94,043) | **(155,032)** |
| Minority interest in net result from subsidiaries | 0 | (3,205) | 3,606 | 0 | **0** |
| Interest income (expense), net | 1,009 | 12,593 | (7,207) | (36,781) | **(29,149)** |
| **Income (loss) from continuing operations before income taxes** | 108,897 | 551,657 | (594,219) | (130,824) | **(184,181)** |
| (Provision for) benefit from income taxes | (34,526) | (167,923) | 179,017 | 42,779 | **59,675** |
| Cumulative effect of accounting changes net of tax | 0 | (2,676) | 0 | 0 | **0** |
| **Net income (loss) from continuing operations** | 74,371 | 381,058 | (415,202) | (88,045) | **(124,506)** |
| **Loss from discontinued operations before income taxes** | (25,270) | (3,685) | (103,001) | (183,624) | **(59,026)** |
| Benefit from income taxes | 8,087 | 674 | 39,211 | 63,846 | **23,316** |
| **Net loss from discontinued operations** | (17,183) | (3,011) | (63,790) | (119,778) | **(35,710)** |
| **Net income (loss)** | 57,188 | 378,047 | (478,992) | (207,823) | **(160,216)** |
| Basic net income (loss) from continuing operations per ordinary share[2] | 0.16 | 0.83 | (0.89) | (0.18) | **(0.26)** |
| Basic net loss from discontinued operations per ordinary share[2] | (0.04) | (0.01) | (0.14) | (0.26) | **(0.07)** |
| Basic net income (loss) per ordinary share[2] | 0.12 | 0.82 | (1.03) | (0.44) | **(0.33)** |
| Diluted net income (loss) per ordinary share[2] | 0.12 | 0.78 | (1.03) | (0.44) | **(0.33)** |
| **Number of ordinary shares used in computing per share amounts (in thousands)** | | | | | |
| Basic | 458,542 | 461,887 | 465,866 | 476,866 | **482,240** |
| Diluted | 462,682 | 483,127 | 465,866[3] | 476,866[3] | **482,240[3]** |

1 The selected consolidated data for all periods presented have been adjusted to reflect the effects of our decision in December 2002 to discontinue our Track and Thermal businesses.

2 All net income (loss) per ordinary share amounts have been retroactively adjusted to reflect the three-for-one stock split in April 2000, as well as the issuance of 47,139,000 shares in connection with the May 2001 merger with SVG, which was accounted for as a pooling of interests.

3 The calculation of the number of ordinary shares used in computing diluted net income per ordinary share in 2001, 2002 and 2003 does not assume conversion of ASML s outstanding Convertible Subordinated Notes and does not assume the effect of the exercise of options issued under ASML s stock option plans, as such conversions and exercises would have an anti-dilutive effect.

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| As of December 31 (in thousands) | 1999 EUR | 2000 EUR | 2001 EUR | 2002 EUR | 2003 EUR |
|---|---|---|---|---|---|
| **Consolidated balance sheets data** | | | | | |
| Working capital[4] | 1,550,886 | 2,145,378 | 1,822,711 | 1,662,570 | **1,463,308** |
| Total assets | 2,397,926 | 3,432,972 | 3,643,840 | 3,301,688 | **2,868,282** |
| Long-term liabilities | 823,281 | 871,742 | 1,588,846 | 1,233,398 | **1,040,556** |
| Total shareholders equity | 1,129,900 | 1,666,212 | 1,226,287 | 1,315,516 | **1,141,207** |
| **Consolidated statements of cash flows data** | | | | | |
| Purchases of property, plant and equipment | (126,057) | (181,007) | (312,857) | (138,587) | **(71,440)** |
| Depreciation, amortization and impairment | 77,773 | 111,133 | 138,959 | 186,686 | **156,900** |
| Net cash provided by (used in) operating activities | 28,198 | 250,744 | (199,615) | (54,151) | **509,333** |
| Net cash used in investing activities | (150,269) | (151,886) | (326,095) | (79,852) | **(25,702)** |
| Net cash provided by (used in) financing activities | 553,154 | 34,198 | 664,290 | 21,427 | **(68,156)** |
| Net cash provided by (used in) discontinued operations | (40,566) | (45,048) | (69,815) | (127,473) | **12,736** |
| Net increase (decrease) in cash and cash equivalents | 430,511 | 248,812 | (73,522) | (241,918) | **359,046** |
| **Ratios and other data** | | | | | |
| Increase (decrease) in net sales from continuing operations (in percent) | 36.7 | 76.1 | (40.5) | 23.2 | **(21.2)** |
| Gross profit from continuing operations as a percentage of net sales | 32.3 | 41.2 | 2.0 | 23.9 | **23.9** |
| Operating income (loss) from continuing operations as a percentage of net sales | 7.1 | 20.3 | (37.2) | (4.8) | **(10.0)** |
| Net income (loss) from continuing operations as a percentage of net sales | 4.9 | 14.3 | (26.1) | (4.5) | **(8.1)** |
| Shareholders equity as a percentage of total assets | 47.1 | 48.5 | 33.7 | 39.8 | **39.8** |
| Backlog of new systems (in units) at year-end for continuing operations | 206 | 365 | 117 | 103 | **103** |
| Backlog of used systems (in units) at year-end for continuing operations | 0 | 0 | 1 | 7 | **21** |
| Backlog of systems (in units) at year-end for continuing operations | 206 | 365 | 118 | 110 | **124** |
| Sales of systems (in units) from continuing operations | 267 | 455 | 197 | 205 | **169** |
| Number of employees at year-end for continuing operations | 4,889 | 6,628 | 6,039 | 5,971 | **5,059** |
| Number of ordinary shares outstanding (in thousands) | 460,412 | 463,395 | 466,978 | 482,182 | **482,514** |
| Stock price ASML at year-end[5] | 36.76 | 24.19 | 19.52 | 7.96 | **15.72** |
| Volatility % ASML stock (260 days)[6] | 99.7% | 80.0% | 71.0% | 89.0% | **60.9%** |

[4] Working Capital is calculated as the difference between total current assets and total current liabilities.

[5] Closing price of ASML s ordinary shares listed on the Official Segment of the stock market of Euronext Amsterdam N.V. (Source: Bloomberg)

[6] Volatility represents the variability in our share price on the Official Segment of the stock market of Euronext Amsterdam N.V. as measured over the last 260 business days of each year presented. (Source: Bloomberg)

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**Exchange Rate Information**

We publish our consolidated financial statements in euro. In this Annual Report, references to EUR or euro are to euro, and references to $ , dollars , U.S. dollars or USD are to United States dollars. Solely for the convenience of the reader, certain euro amounts presented as of and for the year ended December 31, 2003 have been translated into United States dollars using the exchange rate in effect on December 31, 2003 of USD 1.00 = EUR 0.7918. These translations should not be construed as representations that the euro amounts could be converted into U.S. dollars at that rate.

Historically, a portion of our revenues and expenses has been denominated in currencies other than the euro. For a discussion of the impact of exchange rate fluctuations on our financial condition and results of operations, see Item 5.A. Operating results Foreign Exchange Management and Note 1 to our consolidated financial statements.

The following are the Noon Buying Rates certified by the Federal Reserve Bank of New York for customs purposes (the Noon Buying Rate ) expressed in euro per U.S. dollar.

| Calendar Period | Period End | Average[1] | High | Low |
|---|---|---|---|---|
| 1999 | 0.99 | 0.94 | 1.00 | 0.85 |
| 2000 | 1.07 | 1.09 | 1.21 | 0.97 |
| 2001 | 1.12 | 1.12 | 1.19 | 1.05 |
| 2002 | 0.95 | 1.05 | 1.16 | 0.95 |
| 2003 | 0.79 | 0.88 | 0.97 | 0.79 |
| 2004 (through January 29) | 0.81 | 0.79 | 0.81 | 0.78 |

(Source: Bloomberg)

[1] The average of the Noon Buying Rates on the last business day of each month during the relevant period.

| Monthly high and low euros per U.S. dollar exchange rates | High | Low |
|---|---|---|
| July 2003 | 0.90 | 0.86 |
| August 2003 | 0.92 | 0.88 |
| September 2003 | 0.92 | 0.86 |
| October 2003 | 0.86 | 0.85 |
| November 2003 | 0.88 | 0.84 |
| December 2003 | 0.84 | 0.79 |
| January 2004 (through January 29) | 0.81 | 0.78 |

(Source: Bloomberg)

**B. Capitalization and Indebtedness**

Not applicable

**C. Reasons for the Offer and Use of Proceeds**

Not applicable

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**D. Risk Factors**

In conducting our business, we face many risks that may interfere with our business objectives. Some of these risks relate to our operational processes, while others relate to our business environment. It is important to understand the nature of these risks and the impact they may have on our business, financial condition and results of operations. Some of the more relevant risks are described below.

**Risks Related to the Semiconductor Industry**

**The Semiconductor Industry Has Been Experiencing a Period of Contraction, the Length and Extent of Which Cannot Be Forecast**

The year 2003 was an unprecedented third consecutive year of contraction in the global semiconductor industry. Adverse conditions in the semiconductor market have caused a number of semiconductor manufacturers to reduce their capital expenditures or delay expansion or construction of manufacturing facilities. This has resulted in decreased demand for our products, unanticipated rescheduling of ordered products and cancellation of previously placed orders. The performance of the semiconductor market remains difficult to predict. Continued difficult market conditions would likely have a material adverse effect on our business, financial condition and results of operations.

**The Semiconductor Industry Is Highly Cyclical and We May Be Adversely Affected by Any Future Downturns**

We expect that the semiconductor industry will experience future downturns. We cannot predict the timing, duration or severity of any future downturn or the corresponding adverse effect on our business, financial condition and results of operations. Our ability to maintain profitability through any future downturns will depend substantially on whether we are successful in our current efforts to lower our costs and break-even level, which is the number of lithography systems we must sell in a year to achieve positive net income. Sales of our photolithography systems depend in large part upon the level of capital expenditures by semiconductor manufacturers. These capital expenditures depend upon a range of competitive and market factors, including:

- the current and anticipated market demand for semiconductors and for products utilizing semiconductors;
- semiconductor prices;
- semiconductor production costs; and
- general economic conditions.

Historically, the semiconductor market has been highly cyclical and has experienced recurring periods of oversupply, resulting in significantly reduced demand for capital equipment, including advanced photolithography projection systems such as the wafer steppers and Step & Scan systems we produce. Despite this cyclicality, we intend to maintain significant levels of research and development expenditures in order to maintain our competitive position.

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**Our Business Will Suffer If We Do Not Respond Rapidly to the Commercial and Technological Changes in the Semiconductor Industry**

The semiconductor manufacturing industry is subject to:

- rapid technological change;
- frequent new product introductions and enhancements;
- evolving industry standards;
- changes in customer requirements; and
- continued shortening of product life cycles.

Our products could become obsolete sooner than anticipated because of a faster than anticipated change in one or more of the technologies related to our products or in market demand for products based on a particular technology. Our success in developing new products and in enhancing our existing products depends on a variety of factors, including the successful management of our research and development programs and timely completion of product development and design relative to competitors. If we do not develop and introduce new and enhanced systems at competitive prices on a timely basis, our customers will not integrate our systems into the planning and design of new fabrication facilities and upgrades of existing facilities, which would have an adverse impact on our business, financial condition and results of operations.

**We Face Intense Competition**

The semiconductor equipment industry is highly competitive. The principal elements of competition in our markets are the technical performance characteristics of a photolithography system and the value of ownership of that system based on its purchase price, maintenance costs, productivity and customer service and support. In addition, we believe that an increasingly important factor affecting our ability to compete is the strength and breadth of our portfolio of patents and other intellectual property rights relative to those of our competitors. This is due, in part, to the significant decline in the overall size of the market for photolithography systems that has occurred since the beginning of 2001. We believe this decline has resulted in increased competition for market share through the aggressive prosecution of patents to prevent competitors from using and developing their technology. Our competitiveness will increasingly depend upon our ability to protect and defend our patents, as well as our ability to develop new and enhanced semiconductor equipment that is competitively priced and introduced on a timely basis. See Item 4.B. Business Overview, Intellectual Property and Note 14 to our consolidated financial statements.

The cost to develop new systems, in particular photolithography systems, is extremely high, and accordingly, the photolithography equipment industry is characterized by the dominance of a few suppliers. ASML s primary competitors are Nikon Corporation ( Nikon ) and Canon Kabushika Kaisha ( Canon ). Nikon and Canon are the dominant suppliers in the Japanese market, which accounts for a significant portion of worldwide semiconductor production. This market historically has been difficult for non-Japanese companies to penetrate, and ASML has sold only a limited number of systems to Japanese customers.

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Both Nikon and Canon have substantial financial resources and broad patent portfolios. Each has stated that it will introduce new products with improved price and performance characteristics that will compete directly with our products, which may cause a decline in our sales or loss of market acceptance for our photolithography systems. In addition, adverse market conditions, industry overcapacity or a decrease in the value of the Japanese yen in relation to the euro or the U.S. dollar could lead to intensified price-based competition in those markets that account for the majority of our sales, resulting in lower prices and margins and an adverse impact on our business, financial condition and results of operations.

**Risks Related to ASML**

**The Number of Systems We Can Produce is Limited by Our Dependence on a Limited Number of Suppliers of Key Components**

We rely on outside vendors for the components and subassemblies used in our systems, each of which is obtained from a single supplier or a limited number of suppliers. Our reliance on a limited group of suppliers involves several risks, including a potential inability to obtain an adequate supply of required components and the risk of untimely delivery of these components and subassemblies.

The number of photolithography systems we have been able to produce has occasionally been limited by the production capacity of Carl Zeiss SMT AG ( Zeiss ). Zeiss is our sole supplier of lenses and other critical optical components. The inability of Zeiss to maintain and increase production levels or our inability to maintain our business relationship with Zeiss in the future could result in our inability to fulfill orders, which could damage relationships with current and prospective customers and have an adverse effect on our business, financial condition and results of operations. If Zeiss were to terminate its relationship with us or if Zeiss were unable to maintain production of lenses over a prolonged period, we would effectively cease to be able to conduct much of our business. See further Item 4.B. Business Overview, Manufacturing, Logistics and Suppliers.

In addition to Zeiss current position as our sole supplier of lenses, the excimer laser illumination systems that provide the ultraviolet light source, referred to as deep UV , used in our high resolution steppers and Step & Scan systems, are available from only a limited number of suppliers.

Although the timeliness, yield and quality of deliveries to date from our remaining subcontractors generally have been satisfactory, manufacturing certain of these components and subassemblies is an extremely complex process and delays caused by suppliers may occur in the future. A prolonged inability to obtain adequate deliveries, or any other circumstance that requires us to seek alternative sources of supply, could significantly hinder our ability to ship our products in a timely fashion, which could damage relationships with current and prospective customers and have a material adverse effect on our business, financial condition and results of operations.

**A High Percentage of Net Sales is Derived from a Few Customers**

Historically, we have sold a substantial number of lithographic systems to a limited number of customers. While the identity of our largest customers may vary from year to year, we expect

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sales to remain concentrated among relatively few customers in any particular year and foresee further concentration of customers in future periods. The loss of any significant customer or any reduction in orders by a significant customer may have an adverse effect on our business, financial condition and results of operations.

In 2003, sales to one customer accounted for EUR 314 million, or 20 percent of net sales, compared to EUR 377 million, or 19 percent of net sales, in 2002. As a result of the limited number of customers, credit risk on our receivables is concentrated. Our three largest customers accounted for 44 percent of accounts receivable at December 31, 2003, compared to 42 percent at December 31, 2002. Business failure of one of our main customers may result in adverse effects on our business, financial condition and results of operations.

**The Pace of Introduction of Our New Products is Accelerating and is Accompanied by Potential Design and Production Delays and by Significant Costs**

The development and initial production, installation and enhancement of the systems we produce, is often accompanied by design and production delays and related costs of a nature typically associated with the introduction and transition to full-scale manufacture of complex capital equipment. While we expect and plan for a corresponding learning curve effect in our product development cycle, we cannot precisely predict the time and expense required to overcome these initial problems and to ensure full performance to specifications. There is a risk that we may not be able to introduce or bring to full-scale production new products as quickly as we might have expected in our product introduction plans. This may result in adverse effects on our business, financial condition and results of operations.

**We Derive Most of Our Revenues from the Sale of a Relatively Small Number of Products**

We derive most of our revenues from the sale of a relatively small number of lithographic equipment systems (169 units in 2003 and 205 units in 2002), with an average selling price in 2003 of EUR 7.6 million (EUR 9.5 million for new systems and EUR 2.0 million for used systems). As a result, the timing of recognition of revenue from a small number of transactions may have a significant impact on our net sales and other operating results for a particular reporting period. Specifically, the failure to receive anticipated orders, or delays in shipments near the end of a particular reporting period, due, for example, to:

- unanticipated shipment rescheduling;
- cancellation by customers;
- unexpected manufacturing difficulties; and
- delays in deliveries by suppliers,

may cause net sales in a particular reporting period to fall significantly below our expectations, which would, in turn, adversely affect our operating results for that period.

**Quarterly Reporting May Increase the Volatility of Our Earnings Figures**

Since the first quarter of 2003, we have published financial results on a quarterly basis. As a result of our dependence on the sale of a relatively small number of products, described in the preceding risk factor, our quarterly earnings announcements may increase the apparent volatility of our earnings figures as compared to our historical practice of semi-annual earnings announcements.

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**Reporting in accordance with International Financial Reporting Standards May Differ from Reporting in accordance with U.S. GAAP**

Beginning in 2005, the European Commission will require companies that are quoted on a European stock market, such as Euronext Amsterdam N.V. ( Euronext Amsterdam ), to publish their financial statements in accordance with International Financial Reporting Standards ( IFRS ). While we intend to continue publishing U.S. GAAP financial statements, we also will publish our consolidated financial statements in accordance with IFRS from January 1, 2005 onwards.

Our financial condition and results of operations reported in accordance with IFRS may differ from our financial condition and results of operations reported in accordance with U.S. GAAP, which could adversely affect the market price of our ordinary shares.

See Item 5.A. Operating Results, Principal Differences Between IFRS and U.S. GAAP.

**Failure to Adequately Protect the Intellectual Property Rights upon Which We Depend Could Harm Our Business**

We rely on patents, copyrights, trade secrets and other measures to protect our proprietary technology. However, there is no assurance that such measures will be adequate. We face risks that:

- competitors may be able to develop similar technology independently;
- our pending patent applications may not be issued as expected;
- the steps we take to prevent misappropriation or infringement of our intellectual property may not be successful; and
- intellectual property laws may not sufficiently protect our proprietary rights or may adversely change in the future.

In addition, litigation may be necessary in order to enforce our intellectual property rights, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Any such litigation may result in substantial costs and diversion of resources, and, if decided unfavorably to us, could have a material adverse effect on our business, financial condition and results of operations. We also may incur substantial acquisition or settlement costs where doing so would strengthen or expand our intellectual property rights or limit our exposure to intellectual property claims of third parties.

**Defending Against Intellectual Property Claims by Others Could Harm Our Business**

In the course of our business, we are subject to claims by third parties alleging that our products or processes infringe upon their intellectual property rights. In addition, some of our customers have received notices of infringement from third parties, alleging that our equipment used by such customers in the manufacture of semiconductor products and/or the methods relating to the use of our equipment infringe one or more patents issued to such parties. We have been advised that, if such claims were successful, we could be required to indemnify customers for some or all of any losses incurred or damages assessed against them as a result of such infringement. We may also incur substantial licensing or settlement costs where doing so would strengthen or expand our intellectual property rights or limit our exposure to intellectual property claims by others.

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As more fully described in Item 4.B. Business Overview, Intellectual Property and Note 14 to our consolidated financial statements, we are currently party to a series of litigation and administrative proceedings in the United States, Japan and Korea in which Nikon alleges our infringement of Nikon patents relating to photolithography. A final non-appealable adverse decision in any of these proceedings could substantially restrict or prohibit our ability to conduct sales in or from the United States, Korea or Japan, which, in turn, could have a material adverse effect on our financial condition or results of operations.

We believe that the Nikon litigation is an example of a growing trend in the lithography industry of competing for market share by means of aggressive prosecution of intellectual property rights with the purpose of preventing or limiting a competitor s ability to utilize and develop technology. While we believe we have sufficient intellectual property rights to successfully conduct our business, there is a continuing risk that we will be subject to claims alleging the infringement of others patents or intellectual property rights. If successful, these claims could limit or prohibit us from developing our technology and producing our products, which would have a material adverse effect on our business, financial condition and results of operations. In addition, we anticipate that the costs associated with the maintenance, protection, through litigation or otherwise, and expansion of our intellectual property portfolio in coming years will increase significantly. Furthermore, we rely on a number of patents owned by Royal Philips Electronics, our former parent company. While Philips has granted us, without charge, a worldwide, irrevocable, non-exclusive license under those patents, they remain subject to the same risks regarding validity, scope and enforceability that relate to our patents. Philips has no obligation to us to defend or enforce its patents against third parties.

**We Are Subject to Risks in our International Operations**

The majority of our business activity is conducted outside Europe, including in developing and emerging markets in Asia. There are a number of risks inherent in doing business in those markets, including the following:

- potentially adverse tax consequences;
- unfavorable political or economic factors; and
- unexpected legal or regulatory changes.

Our inability to manage successfully the risks inherent in our international activities could adversely affect our business, financial condition and results of operations.

**Disruption in Taiwan s Political Environment Could Seriously Harm Our Business and the Market Price of Our Shares**

Approximately 12% of our 2003 revenues and approximately 27% of our 2002 revenues were derived from customers in Taiwan. Taiwan has a unique international political status. The People s Republic of China asserts sovereignty over Taiwan and does not recognize the legitimacy of the Taiwan government. Relations between Taiwan and the People s Republic of China, changes in Taiwanese government policies and other factors affecting Taiwan s political, economic or social environment could affect our business, financial condition and results of operation.

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**We Are Subject to Environmental Laws and Regulations**

We are subject to certain Dutch and foreign environmental regulations in areas such as energy resource management, reduction of hazardous substances, recycling, clean air, water protection and waste disposal. We believe that we have taken adequate precautions to comply with these regulations in the course of our ordinary business operations. Furthermore, we do not believe that any environmental laws or regulations currently in effect will have an adverse effect on our business, financial condition and results of operations. However, we cannot predict whether any pending or future legislation will be adopted or what the effect of such legislation would be on our business, financial condition and results of operations.

**We Are Dependent on the Continued Operation of a Limited Number of Manufacturing Facilities**

All of our manufacturing activities, including subassembly, final assembly and system testing, take place in one clean room facility located in Veldhoven, the Netherlands, and one clean room facility in Wilton Connecticut, U.S. These facilities are subject to disruption for a variety of reasons, including work stoppages, fire, energy shortages, flooding or other natural disasters. As from 2003 onwards, we are assembling a portion of our components and subassemblies at our facilities in Wilton, which were previously outsourced to an outside vendor. We cannot ensure that alternate production capacity would be available if a major disruption were to occur or that, if it were available, it could be obtained on favorable terms. Such a disruption could have an adverse effect on our business, financial condition and results of operations.

**Because of Labor Laws and Practices, any Workforce Reductions That We May Wish to Implement In Order To Reduce Costs Company-Wide May Be Delayed or Suspended.**

The semiconductor market is highly cyclical and as a consequence we may need to implement workforce reductions in case of a downturn, in order to adjust to such market changes. In accordance with labor laws and practices applicable in the jurisdictions in which we operate, a reduction of any significance may be subject to certain formal procedures, which can delay, or may result in the modification of our decision. For example in the Netherlands if our Works Council does not agree with a proposed workforce reduction in the Netherlands, but we nonetheless determine to proceed, we must temporarily suspend any action while the Works Council determines whether to appeal to the Dutch Courts. This appeal process can cause a delay of several months and may require us to address any procedural inadequacies identified by the Court in the way we reached our decision. Such delays, could impair our ability to reduce costs company-wide to levels comparable to those of our peers. See Item 6.D. Employees.

**We May Have Significant Exposure to Fluctuations in Foreign Exchange Rates, Which Could Harm Our Results of Operations**

We incur the majority of our manufacturing costs and price our systems predominantly in euro. Accordingly, fluctuations of the euro versus the Japanese yen and the U.S. Dollar may affect our results of operations. However, a portion of our revenues is denominated in currencies other than the euro. Therefore, a strengthening of the euro relative to such other currencies in which we receive revenues could adversely impact our results of operations.

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The euro is the reporting currency we use in our consolidated financial statements. A substantial portion of our assets, liabilities and operating results are denominated in U.S. dollars, and a minor portion of our assets, liabilities and operating results are denominated in currencies other than the euro and the U.S. dollar. Consequently, fluctuations in the exchange rate of the U.S. dollar and other currencies against the euro can affect our financial results.

See Item 5.A. Operating Results, Foreign Exchange Management , Item 11 Quantitative and Qualitative Disclosures About Market Risk and Note 4 to our consolidated financial statements.

**Our Ability to Realize Our Deferred Tax Assets is Uncertain**

We currently have significant deferred tax assets, which resulted primarily from operating losses incurred in prior years as well as other temporary differences. The operating losses have predominantly been incurred in the United States and The Netherlands. SFAS ( Statement of Financial Accounting Standard ) No. 109, Accounting for Income Taxes, requires the establishment of a valuation allowance to reflect the likelihood of the realization of deferred tax assets. Based on available evidence, we regularly evaluate whether it is more likely than not that the deferred tax assets will be realized. This evaluation includes our judgment on the future profitability and our ability to generate taxable income, changes in market conditions and other factors. At December 31, 2003, we believe that there is sufficient evidence to substantiate recognition of our net deferred tax assets with respect to net operating loss carry forwards in the jurisdictions concerned. Future changes in facts and circumstances, if any, may result in a need for a valuation allowance to these deferred tax asset balances which may have an adverse effect on our business, financial condition and results of operations. See Note 16 to our consolidated financial statements.

**Risks Related to Our Ordinary Shares**

**The Price of Our Ordinary Shares is Very Volatile**

The current market price of our ordinary shares may not be indicative of prices that will prevail in the trading market in the future. In particular, since our initial public offering, the market price of our ordinary shares has experienced significant fluctuation, including fluctuation that is unrelated to our performance. We expect that this fluctuation will continue in the future.

**Restrictions on Shareholder Rights May Dilute Voting Power**

Our Articles of Association reflect that we are subject to the provisions of Netherlands law applicable to large corporations, called structuurregime . These provisions have the effect of concentrating control over significant corporate decisions and transactions in the hands of our Supervisory Board, which has the power to appoint its own members. In addition, the provisions in our Articles of Association relating to our Priority Shares have the effect of taking control over certain significant corporate decisions away from holders of ordinary shares. As a result, holders of ordinary shares may have more difficulty in protecting their interests in the face of actions by members of the Board of Management or members of our Supervisory Board than if we were incorporated in the United States.

We also have a class of protective cumulative preference shares (the Preference Shares ) and have granted to Stichting Preferente Aandelen ASML, a Netherlands foundation, an option to acquire from us, at their nominal value of EUR 0.02 per share, a number of preference shares equal to the number of ordinary shares outstanding at the time of option exercise.

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This effectively would dilute by one-half the voting power of the outstanding ordinary shares. The potential issuance of preference shares may discourage or significantly impede a third party from acquiring a majority of our voting shares.

See further Item 10.B. Memorandum and Articles of Association .

**Item 4 Information on the Company**

**A. History and Development of the Company**

We commenced business operations in 1984. ASM Lithography Holding N.V. was incorporated in the Netherlands on October 3, 1994 to serve as the holding company for our worldwide operations, which include operating subsidiaries in the Netherlands, the United States, Taiwan, Italy, France, Germany, the United Kingdom, Ireland, the Republic of Korea, Singapore, Israel, China, Japan and Malaysia. In 2001, we changed our name from ASM Lithography Holding N.V. to ASML Holding N.V. Our registered office is located at De Run 6501, 5504 DR Veldhoven, the Netherlands.

In May 2001, we merged with SVG (now part of ASML US), a company that was active in the Lithography, Track and Thermal businesses. The merger is accounted for under the pooling of interests method.

In December 2002, we announced measures to contain costs, including the proposed divestiture of our Thermal business, and related customer support activities, and the termination of our activities in the Track business, except for certain ongoing customer support obligations. In June 2003, we sold certain of our fixed assets and inventories related to our Track business. In October 2003, we substantially completed the divestiture of our Thermal business. In July 2003, we announced further workforce reductions to further reduce costs company-wide.

**Capital Expenditures**

Our principal capital expenditures within continued operations over the past three years, principally relating to machinery and equipment, amounted to EUR 74.5 million for 2003, EUR 138.6 million for 2002 and EUR 313.4 million for 2001. Divestitures within continued operations, also principally comprising machinery and equipment, amounted to EUR 48.8 million for 2003, EUR 58.7 million for 2002 and EUR 21.7 million for 2001. See Notes 8 and 9 to our consolidated financial statements.

Our current capital expenditures consist of machinery and equipment (e.g. prototypes, demonstration systems and training models), information technology investments and leasehold improvements to our facilities. Our Veldhoven headquarters is financed through a special purpose vehicle that is a variable interest entity. See Item 5.E. Off-Balance Sheet Arrangements and Note 12 to our consolidated financial statements. All other current capital expenditures are financed internally.

**B. Business Overview**

We are one of the world s leading providers of advanced technology systems for the semiconductor industry, based on market share. We offer an integrated portfolio of lithography

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systems mainly for manufacturing complex integrated circuits ( semiconductors or ICs ). We supply systems to integrated circuit manufacturers throughout the United States, Asia and Europe and also provide our customers with a full range of support from advanced process and product applications knowledge to complete round-the-clock service support.

**Value of Ownership**

Our business model is based on our Value of Ownership concept that consists of the following:

- offering ongoing improvements in productivity and value by introducing advanced technology based on modular platforms;
- providing customer services that ensure rapid, efficient installation and superior on-site support and training to optimize manufacturing processes and improve productivity;
- maintaining appropriate levels of research and development to offer the most advanced technology suitable for high-throughput, low-cost volume production at the earliest possible date;
- enhancing the capabilities of the installed base through ongoing field upgrades based on new technology developments;
- reducing the cycle time between customer order of a system and the use of that system in volume production on-site; and
- expanding operational flexibility in research and manufacturing by reinforcing strategic alliances with world-class partners.

**Market and Technology Overview**

The worldwide electronics and computer industries have experienced dramatic growth since the commercialization of ICs in the 1960s, largely due to the continual reduction in the cost per function performed by ICs. Improvement in the design and manufacture of ICs with higher circuit or packing densities has resulted in smaller, lower cost ICs capable of performing a greater number of functions at higher speeds and with lower power consumption. We believe that these long-term trends will continue for the foreseeable future and will be accompanied by a continuing demand, subject to ongoing cyclical variations, for production equipment that can accurately produce advanced ICs in high volumes at the lowest possible cost. Photolithography is used to imprint complex circuit patterns onto the wafers that are the primary raw material for ICs and is one of the most critical and expensive steps in their fabrication. It is therefore a significant focus of the IC industry s demand for cost-efficient enhancements to production technology.

We primarily design, manufacture, market and service semiconductor processing equipment used in the fabrication of integrated circuits. Our photolithography equipment includes Step & Scan systems, which combine stepper technology with a photoscanning method.

Our product platform, TWINSCAN, was introduced in July 2000 and leverages the production-proven elements from our PAS 5500 product family to address the industry shift toward larger (300 mm) wafers. The TWINSCAN platform has become in 2003 the vehicle to introduce improved resolution products both for 300 mm and 200 mm wafer size factories.

To enhance the flexibility towards 200 mm factory requirements, we are developing the XT version of the TWINSCAN platform, both for 200 mm and 300 mm. The first shipment is

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expected to be in the first half of 2004 with the XT:1250 products. Our PAS 5500 product family, which supports a maximum wafer size of 200 mm in diameter, comprises advanced wafer steppers and Step & Scan systems suitable for i-line and deep UV (including 248 nanometer and 193 nanometer wavelengths) processing of wafers.

We are currently performing research & development on immersion lithography, which is one of the possible solutions to lower the cost per wafer and increase resolution. The first proof of feasibility on a Step & Scan system was completed in the second half of 2003. The next step is the development of early production tools that will allow our customers to verify the immersion process qualification under specific process conditions. This verification phase will probably take several quarters. We do not expect volume shipments of immersion lithography systems before 2005.

We are also currently performing research & development on maskless lithography. Maskless lithography is one of the possible solutions to manage escalating mask cost, which is becoming a dominant factor in bringing new semiconductor designs to market for advanced technology nodes. Designs resulting in small quantities of wafers produced, designs with many changes or designs that require a fast time-to-market will particularly benefit from this technology. In July 2003, Micronic Laser Systems AB ( Micronic ) and ASML announced the signing of a memorandum of understanding to form a joint-venture company that will focus on the optical maskless lithography market for semiconductor manufacturing. We expect to conclude a joint-venture agreement with Micronic in the first half of 2004.

**Products**

Our product development strategy focuses on the development of product families based on a modular, upgradeable design. Our PAS 5500 product family comprises advanced wafer steppers and Step & Scan systems suitable for i-line and deep UV processing of wafers up to 200mm in diameter. In mid-1997, we introduced the PAS 5500 Step & Scan systems with improved resolution and overlay. Since then, we have further developed and expanded this Step & Scan family. This modular upgradeable design philosophy has been further refined and applied in the design of our most advanced product family, the TWINSCAN platform, which is the basis for our current and next generation Step & Scan systems, producing wafers up to 300 mm in diameter and capable of extending shrink technology beyond 70 nanometers.

Our older PAS 2500 and PAS 5000 families are suitable for g-line and i-line processing of wafers up to 150 mm in diameter and are employed in manufacturing environments and in special applications for which design resolutions no more precise than 0.5 microns are required.

In November 2002, ASML introduced the TWINSCAN AT:1200B, a high numerical aperture (0.85) dual stage ArF (193 nanometer) lithography system for 300 millimeter as well as 200 millimeter wafer processing. It is the industry s first high productivity tool for volume applications at 80 nanometer linewidth.

In February 2003, we announced productivity performance enhancements for our TWINSCAN family of lithography systems. Called TWINSCAN C, the new enhancements increase throughput by approximately 15 percent, depending on product model. The productivity

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enhancements in TWINSCAN C increase wafer output to over 110 wafers per hour for 300 mm wafers at real production conditions (109 exposures per wafer). The increased stage speeds in the TWINSCAN platform allow for these productivity improvements while maintaining imaging, alignment and leveling accuracy.

In April 2003, we announced the delivery of the industry s first full-field 157 nanometer Step & Scan tool to the independent research and development chip consortium IMEC. Called the Micrascan VII, the new system is the first 157 nanometer full-field tool able to create working chips. 157 nanometer technology is an extension of optical lithography that offers smaller feature sizes for more sophisticated chips.

In October 2003, we introduced the TWINSCAN XT:1250, a high numerical aperture (0.85) dual stage ArF (193 nanometer) lithography system for 300 millimeter as well as 200 millimeter wafer processing that extends imaging to the 65 nanometer node. The TWINSCAN XT:1250 allows productivity improvements in comparison with previous product models.

In December 2003, we received the industry s first order for an immersion lithography system. The new tool ASML s TWINSCAN XT:1250i is a high productivity scanner for production applications. Delivery of the first tool is scheduled for the third quarter of 2004. We have a unique competitive advantage in immersion techniques due, in part, to the dual-stage design of our TWINSCAN system. Wafer measurement including focus and overlay is completed on the dry stage while the imaging process, using immersion fluid applied between the wafer and the lens is completed on the other, wet stage. The dual-stage advantage of TWINSCAN systems enables our customers to gain the process enhancements of immersion and to continue with familiar and proven metrology technology.

We also continually develop and sell a range of product options and enhancements designed to increase productivity and to optimize value of ownership over the entire life of our systems.

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**Current ASML Lithography product portfolio of Steppers and Step & Scan Systems**

| Feature Size | Wavelength of Light | | | |
|---|---|---|---|---|
| Feature size = | Wavelength = length of light going through projection lens; | | | |
| Resolution = | The shorter the wavelength, the smaller the line width | | | |
| Size of line | and the finer the pattern on the IC | | | |
| **width in Nanometer** | | | | |
| | **365 nm (i-line)** | **248 nm (KrF)** | **193 nm (ArF)** | **157 nm (F2)** |
| 700 | PAS 5500/22 | | | |
| 350 | PAS 5500/125 | | | |
| 300 | PAS 5500/250 | | | |
| 280 | PAS 5500/400 and AT:400 | | | |
| 150 | | PAS 5500/350 | | |
| 130 | | PAS 5500/750 and AT:750 | | |
| 120 | | PAS 5500/800 | | |
| 110 | | PAS 5500/850 and AT:850 | | |
| 100 | | | PAS 5500/1100 and AT:1100 | MSVII |
| 90 | | | PAS 5500/1150 and AT:1150 | |
| 80 | | | AT:1200 | |
| 70 | | | XT:1250 and XT:1250i | |

Notes:

1000 nanometer = 1 micron (μ) = 0.001mm = one millionth of a meter
PAS 5500/22/125/250/350 = Stepper system with wafer size of 200mm
PAS 5500/400 and up = Step & Scan system with wafer size of 200mm
AT and XT = TWINSCAN system with wafer size of 200 and 300mm
This table does not include products sold on the PAS 2500 and PAS 5000 platforms.

**Sales and Customer Support**

We market and sell our products in the United States and Europe principally through our direct sales staff. In Asia, we sell our products primarily through our own direct sales staff, supported by independent sales agents.

We support our customers with applications, service and technical support. Our field engineers and applications, service and technical support specialists are based throughout the United States, Europe and Asia.

Historically, the semiconductor market has been highly cyclical and has experienced recurring periods of oversupply, resulting in significantly reduced demand for capital equipment, including advanced photolithography projection systems such as the wafer steppers and Step & Scan systems we produce. The year 2003 was an unprecedented third consecutive year of contraction in the global semiconductor industry.

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During 2003, we sharpened our customer focus through the work of multiple cross-functional process improvement teams. These process improvement teams are striving to streamline and integrate main business processes such as new product introduction, acquisition of orders from customers, fulfillment of orders, and our post-delivery support and services.

**Customers and Geographic Markets**

In 2003, we shipped 169 systems (in our continuing operations) to a limited number of customers. We expect that sales to relatively few customers will continue to account for a high percentage of our net sales in any particular year for the foreseeable future. We make all our sales into the United States through our U.S. subsidiary and our system sales into Asia through our Hong Kong subsidiary. See Note 17 to our consolidated financial statements for a breakdown of our sales by geographic segment.

**Manufacturing, Logistics and Suppliers**

Our business model is based on outsourcing a significant part of the components and modules that comprise our lithography systems, working in partnership with suppliers from all over the world. Our manufacturing activities comprise the assembly and testing of a finished system from components and subassemblies that are manufactured to our specifications by third parties and by ourselves and the testing of those components, subassemblies and finished systems. All of our manufacturing activities (subassembly, final assembly and system testing) are performed in one clean room facility located in Veldhoven, the Netherlands, and one clean room facility in Wilton, Connecticut, U.S. We procure stepper and Step & Scan system components and subassemblies from a single supplier or a limited group of suppliers in order to ensure overall quality and timeliness of delivery. We jointly operate a formal strategy with suppliers known as Value Sourcing that is based on competitive performance in quality, logistics, technology and total cost. The essence of Value Sourcing is to maintain a supply base that is world class, globally competitive and globally present.

Our Value Sourcing strategy is based on the following strategic principles:

- maintaining long-term relationships with our suppliers;
- sharing risks and rewards with our suppliers;
- each supplier must be less than 25% dependent on ASML;
- dual sourcing of knowledge, globally, together with our suppliers; and
- single, dual or multiple sourcing of products, where possible.

Value sourcing aligns the actual supplier performance to our requirements on quality, logistics, technology and total costs. As from 2003 onwards, we are assembling a portion of our components and subassemblies at our facilities in Wilton, Connecticut, U.S.

Zeiss is our sole external supplier of lenses and other critical optical components, which account for between 20 percent and 50 percent of our cost of goods sold, varying by product type, and which collectively accounted for 36 percent of our aggregate cost of goods sold in 2003. Our relationship with Zeiss is structured as an exclusive strategic alliance pursuant to several agreements concluded in 1997, 2000 and 2003 that set forth a framework for cooperation in the areas of product research, design, planning and manufacturing and pricing, as well as customer support and warranty service. Dr. Ing. Peter H. Grassmann,

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the former Chief Executive Officer of Zeiss, is a member of ASML s Supervisory Board. See Item 6 Directors, Senior Management and Employees .

From time to time, the number of systems we have been able to produce has been limited by the capacity of Zeiss to provide us with lenses and optical components. Zeiss currently is capable of manufacturing a limited number of lenses and optical components for our wafer steppers and Step & Scan systems and is highly dependent on Zeiss manufacturing and testing facility in Oberkochen, Germany. Given our level of sales in 2003, we were not constrained by the number of lenses that Zeiss can produce. However, if our sales increase, the inability of Zeiss to maintain and increase production levels could result in us being unable to fulfill orders for our systems, which could damage relationships with current and prospective customers and have an adverse effect on our business, financial condition and results of operations. See Item 3.D. Risk Factors, The Number of Systems We Can Produce is Limited by our Dependence on a Limited Number of Suppliers of Key Components.

We have agreed with Zeiss to continue our strategic alliance on an exclusive basis until either party provides at least three years notice of its intent to terminate. Although we believe such an outcome is unlikely, if Zeiss were to terminate its relationship with us, or if Zeiss were unable to maintain production over a prolonged period (such as because of a catastrophe affecting Zeiss Oberkochen facility), we would effectively cease to be able to conduct our business.

**Research and Development**

The semiconductor manufacturing industry is subject to rapid technological changes and new product introductions and enhancements. We believe that continued and timely development and introduction of new and enhanced systems are essential for us to maintain our competitive position. To meet this ongoing requirement, we have established sophisticated development centers in the Netherlands and the United States.

We have historically devoted a significant portion of our financial resources to research and development programs and we expect to continue to allocate significant resources to these efforts. We also apply for subsidy payments in connection with specific development projects under programs sponsored by the Netherlands government, the European Community and the U.S. government (Defense Advanced Research Projects Agency, or DARPA ). Amounts received under these programs generally are not required to be repaid, except for technical development credits (Technische Ontwikkelingskredieten, or TOK ) received from the Netherlands Ministry of Economic Affairs, which are repayable contingent upon actual sales of products, the development of which is funded by the respective credits. See our discussions of research and development in Item 5 Operating and Financial Review and Prospects , and Notes 1 and 15 to our consolidated financial statements.

We invested EUR 306 million on research and development in continuing operations in 2003, a 6 percent decrease compared to 2002. We are also involved in joint research and development programs with both public and private partnerships and consortiums, involving leading chip manufacturers, as well as Netherlands government and European Union programs such as MEDEA+ (a EUREKA project) and IST. We aim to own or license our jointly developed technology and designs of critical components.

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In 2003, our research and development efforts propelled further development of the TWINSCAN platform along with several leading edge technologies, including 248 nanometer, 193 nanometer, immersion, 157 nanometer and EUV. Our research and development activities in 2003 also led to productivity enhancements for our other existing product families.

**Intellectual Property**

We rely on patents, copyrights, trade secrets and other measures to protect our proprietary technology. We aim to have appropriate licensing in place with our suppliers with respect to our jointly developed technology or, alternatively, to obtain ownership rights on know-how and designs of critical components. However, we face the risk that these measures will be inadequate. Competitors may be able to develop similar technology independently. Our pending patent applications may not be issued as intended, and intellectual property laws may not sufficiently support our proprietary rights. In addition, litigation may be necessary in order to enforce our intellectual property rights, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Any such litigation may result in substantial costs and diversion of resources, and, if decided unfavorably to us, could have a material adverse effect on our business, financial condition or results of operations. We also may incur substantial acquisition or settlement costs where doing so would strengthen or expand our intellectual property rights or limit our exposure to intellectual property claims of third parties.

On occasion, certain of our customers have received notices of infringement from third parties, alleging the ASML equipment used by those customers in the manufacture of semiconductor products and/or the methods relating to the use of ASML equipment infringe one or more patents issued to such parties. We have also been advised that, if claims were successful, we could be required to indemnify such customers for some or all of any losses incurred or damages assessed against them as a result of that infringement. We may also incur substantial licensing or settlement costs where doing so would strengthen or expand our intellectual property rights or limit our exposure to intellectual property claims by others.

**Patent litigation with Ultratech Stepper, Inc**

On May 23, 2000, Ultratech Stepper, Inc. ( Ultratech ) filed a lawsuit in the United States District Court for the Eastern District of Virginia (which was subsequently transferred to the United States District Court for the Northern District of California) against ASML. Ultratech alleged that ASML is infringing Ultratech s rights under a United States patent, through the manufacture and commercialization in the U.S. of advanced photolithography equipment embodying technology that, in particular, is used in Step & Scan equipment. Ultratech s complaint seeks injunctive relief and damages. On August 16, 2002, the Court granted ASML s motion for summary judgment of non-infringement based upon the previously reported favorable interpretation by the Court as to the scope and meaning of the claims of the asserted patent. A final judgment on those favorable rulings was subsequently entered in ASML s favor and ASML s challenge to the validity and enforceability of the patent was dismissed without prejudice in light of the finding of no infringement. Ultratech has taken an appeal to the United States Court of Appeals for the Federal Circuit from the judgment in ASML s favor, where the matter has been briefed and now awaits oral argument and disposition by the Court.

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We continue to believe that Ultratech s claims are without merit and that ASML s defenses are strong. ASML will continue to assert these defenses vigorously.

**Patent litigation with Nikon**

Since late 2001, we have been a party to a series of civil litigations and administrative proceedings in which Nikon alleges ASML s infringement of Nikon patents relating to photolithography. ASML in turn filed claims against Nikon. These proceedings are summarized below, and more detail is presented in Note 14 to our consolidated financial statements. The proceedings are at various stages of advancement, and their ultimate outcome is therefore uncertain. In each case, however, we believe we have meritorious defenses to Nikon s claims, including that Nikon s patents are both not infringed and are invalid, as well as valid counterclaims. We intend to vigorously pursue these defenses and counterclaims. If a final non-appealable decision that was adverse to ASML were to be rendered in any of these proceedings, however, our ability to conduct sales in one or more significant markets could be substantially restricted or prohibited, which in turn could have a material adverse effect on our financial condition and results of operations.

**Proceedings in the United States**

In December 2001, Nikon filed a complaint with the U.S. International Trade Commission ( ITC ) alleging that ASML s photolithography machines infringe seven patents held by Nikon and seeking to exclude ASML from importing into the United States any infringing products. A trial before an administrative law judge was completed in November 2002 and, in late January 2003, the administrative law judge initially determined that ASML had not committed any violation. Nikon then appealed the decision to the ITC. The ITC then adopted the administrative law judge s initial determination that ASML did not infringe any valid, enforceable patent of Nikon s and had not violated Section 337. Nikon has appealed the ITC s decision to the Court of Appeals for the Federal Circuit. A decision from the Court of Appeals is not expected before mid 2004.

In December 2001, Nikon also filed a separate patent infringement action in the U.S. District Court for the Northern District of California. In that proceeding, Nikon alleges infringement of five Nikon patents and seeks injunctive relief and damages. In April 2002, ASML filed a counterclaim in the ITC action, alleging that Nikon s photolithography machines sold in the United States infringe five ASML patents. This counterclaim was subsequently transferred to the U.S. District Court for the Northern District of California. Nikon filed a second patent infringement action in that court alleging infringement of six out of the seven patents from the ITC action and two additional patents. Discovery in the California litigation is currently ongoing. We do not expect a trial before late 2004.

**Proceedings in Japan**

In July 2003, Nikon withdrew its counterclaim against ASML filed in October 2002, in which Nikon argued that ASML s photolithography machines infringed 12 Japanese patents held by Nikon. In November 2003, Nikon filed a new complaint against ASML and its subsidiary in Japan alleging that ASML s photolithography machines sold in Japan infringe patents held by Nikon. A final decision for this litigation is not expected before 2006. The patent infringement actions filed by ASML in August 2002 and in January 2003 are still pending at the Tokyo

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District Court. In January 2004, ASML filed a new complaint against Nikon in the Tokyo District Court. Final non-appealable decisions for these cases are not expected before 2005.

**Proceedings in Korea**

In October 2002, Nikon filed a patent infringement action against ASML and its Korean subsidiary, alleging that ASML s photolithography machines infringe five of Nikon s patents, four of which are related to Nikon s patents asserted in its U.S. litigation. Both sides have filed briefs with the court on the preliminary issues. In January 2003, ASML filed a patent infringement complaint against Nikon and its Korean subsidiary, seeking to enjoin Nikon from the manufacture and sale of lithography devices that infringe another of ASML s patents. A decision by the Korean District Court is not expected before 2005. A final non-appealable decision (through the High Court appeal and the Supreme Court appeal) is not expected before 2006.

**Competition**

The semiconductor equipment industry is highly competitive. The principal elements of competition in our markets are the technical performance characteristics of a photolithography system and the value of ownership of that system based on its purchase price, maintenance costs, productivity and customer service and support. In addition, we believe that an increasingly important factor affecting our ability to compete is the strength and breadth of our portfolio of patent and other intellectual property rights relative to those of our competitors. We believe that the market for photolithography systems and the investments required to be a significant competitor in this market have resulted in increased competition for market share through the aggressive prosecution of patents to prevent competitors from using and developing their technology. Our competitiveness will increasingly depend upon our ability to protect and defend our patents, as well as our ability to develop new and enhanced semiconductor equipment that is competitively priced and introduced on a timely basis. See Item 3.D. Risk Factors, We Face Intense Competition and Note 14 to our consolidated financial statements.

**Government Regulation**

Our business is subject to direct and indirect regulation in each of the countries in which our customers or we do business. As a result, changes in various types of regulation could affect our business adversely. The implementation of new technological or legal requirements could impact our products, manufacturing or distribution processes, and could affect the timing of product introductions, the cost of our production or product as well as their commercial success. Moreover, environmental and other regulations that adversely affect the pricing of our products could affect our net sales and operating profit. The impact of these changes in regulation could affect adversely our business even where the specific regulations do not directly apply to us or to our products.

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**C. Organizational Structure**

ASML Holding N.V. is a holding company that operates through its subsidiaries. ASML Holding N.V. s material subsidiaries, each of which is a direct wholly-owned subsidiary, are as follows:

See Exhibit 8.1 for a full list of ASML Holding N.V. s subsidiaries.

**D. Property, Plants and Equipment**

We own several facilities, including office facilities, in the Netherlands, the United States and Japan. The book value of the buildings used in our continuing operations and owned by ASML amounted to EUR 93 million as of December 31, 2003. The book value of buildings included in our assets held for sale was EUR 3 million as of December 31, 2003. We lease our headquarters, applications laboratory and research and development facilities, manufacturing (assembly and testing) premises and some of our office facilities in Veldhoven, the Netherlands. The operating leases for all of our major facilities are long-term and contain purchase options.

In 2003, we consolidated our office facilities at our headquarters in Veldhoven. Some of these office facilities are financed through a special purpose vehicle that is a variable interest entity. See Item 5.E. Off-Balance Sheet Arrangements and Note 12 to our consolidated financial statements. We also own and have regional sales and service offices and manufacturing facilities located worldwide near our customers premises.

We expect capital expenditures in 2004 to range between EUR 75 million and EUR 85 million, of which the majority will be allocated to IT projects and equipment and to machinery and tooling equipment. See Item 4.A. History and Development of the Company, Capital Expenditures

See also Item 5.B. Liquidity and Capital Resources and Item 4.A. History and Development of the Company, Capital Expenditures and Note 9 to our consolidated financial statements. We rent certain of our facilities and office space through long-term lease contracts with leasing companies. See Item 5.E. Off-Balance Sheet Arrangements and Note 12 to our consolidated financial statements.

While we anticipate continuing capital expenditures for the purpose of upgrading and, where appropriate, incrementally expanding our facilities, we believe that our existing facilities are sufficient to accommodate the likely range of production volumes that we might experience in the market for semiconductor manufacturing equipment for the next 2 years.

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**Item 5 Operating and Financial Review and Prospects**

**Executive Summary**

ASML is the world s leading provider of lithography systems for the semiconductor industry, manufacturing complex machines that are critical to the production of integrated circuits or chips. Headquartered in Veldhoven, the Netherlands, ASML operates globally, with activities in Europe, the United States and Asia.

The year 2003 was an unprecedented third consecutive year of downturn in the global semiconductor industry. The semiconductor industry, traditionally one of the more cyclical industries, continued to suffer from overcapacity that had resulted from its high level of capital expenditures during 2000. Over the last three months of 2003, our order intake has shown considerable strength for systems to be shipped in the first half of 2004. Approximately 80 percent or 100 systems of our backlog as of December 31, 2003 is expected to be shipped in the first half of 2004. Therefore, the visibility of our sales level for the second half of 2004 is still unclear.

Our sales consist of product sales and service sales. Product sales generated approximately 88% of total net sales in 2003. During 2003, we shipped 169 systems to our customers, compared to 205 in 2002.

Cost of sales reflects primarily the costs of components and subassemblies that comprise our lithography systems and labor used in the manufacture of our systems. We procure system components and subassemblies from a single supplier or a limited group of suppliers in order to ensure overall quality and timeliness of delivery. As from 2003 onwards, we are assembling a portion of our components and subassemblies at our facilities in Wilton, Connecticut, U.S., which had previously been outsourced to an outside vendor.

The semiconductor manufacturing industry is subject to rapid technological change and frequent new product introductions and enhancements. The cost to develop new systems is extremely high. Our high level of research and development expenditures reflects our continuous effort to be a technological leader.

In December 2002, we announced cost containing measures, including a reduction in workforce, divestment of our Thermal business and termination of our Track operations. During the year 2003, we implemented the workforce reduction and substantially completed the discontinuance of our Track and Thermal businesses. In July 2003, we announced a further workforce reduction, of which the majority is planned in the Netherlands. Currently, ASML and its Works Council are nearing the completion of a joint study on implementing this workforce reduction in the Netherlands. As a consequence, the Dutch workforce reduction has been delayed and, any corresponding cost reductions have been delayed. We believe that by adjusting labor capacity and increasing operating flexibility, we can reduce our break-even level by the end of 2004 to approximately 130 new systems from its current level of approximately 160 new systems, depending upon our product mix. The break-even level is the minimum number of new systems that need to be sold in a year in order to achieve net profit in that year.

ASML has sharpened its strategic focus through the work of multiple cross-functional process improvement teams. These process improvement teams are focused on streamlining and

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integrating main business processes and are striving to improve ASML s working capital management in order to further strengthen its cash position. These working capital improvement programs include initiatives in the area of inventory control, early collection of receivables and effective management of payments and, during 2003, contributed significantly to the EUR 509 million net cash provided by our continuing operating activities.

**A. Operating Results**

**Critical accounting policies**

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of our financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to customer incentives, bad debts, inventories, tangible assets, intangible assets, leases, income taxes, financing operations, warranty and installation obligations, order cancellation costs, restructuring, long-term service contracts, pensions and other post-retirement benefits, and contingencies and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We have identified the policies below as critical to our business operations and the understanding of our results of operations.

**Recognition of revenues, income and expenses**

We distinguish between revenues from new and proven technology systems. Revenues from proven technology systems are recognized upon shipment, since title passes to the customer at that moment and the customer has unconditionally accepted the system during a factory test prior to shipment. Revenues from new technology systems are deferred until installation and acceptance at the customer s premises is completed. As soon as a track record has been established regarding the successful and timely installation and acceptance of equipment previously identified as new technology , ASML considers the equipment to be proven technology . At that time, ASML changes the timing of revenue recognition to the shipment date in accordance with its revenue policy for proven technology and recognizes previously deferred revenue. We assess the change from new technology to proven technology based on installation times, full technical compliance with contract specifications and customer site sign-off for approval. In the second half of 2002, our TWINSCAN technology, which had been previously identified as new technology, met the criteria for proven technology. A different assessment could have resulted in the deferral of a significant amount of revenues from uninstalled TWINSCAN systems in 2002, for which the revenue was recognized upon shipment during that year.

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During 2003, we delivered 2 full-field 157 nanometer Step & Scan systems to research institutes and recorded related funding and costs under research and development.

In December 2003, we received the industry s first order for an immersion lithography system, ASML s TWINSCAN XT:1250i. We are currently performing research and development on immersion lithography, which is one of the possible technologies to achieve lowering the cost per wafer and increasing resolution. The first feasibility test of immersion on a Step & Scan system was completed in the second half of 2003. The next step in the development of immersion lithography technology is the development of early production tools that will allow our customers to verify the immersion process qualification under specific process conditions. Delivery of the first tool is planned for the third quarter of 2004. Whether we will consider this new tool as new technology or proven technology will depend on our progress in developing immersion lithography technology during 2004.

The fair value of installation services provided to our customers is initially deferred and is recognized when the installation is completed. The unearned revenue balance from installation services amounted to approximately EUR 5 million at December 31, 2003. Sales from service contracts are recognized when performed. Revenue from prepaid service contracts is recognized over the term of the contract. As of December 31, 2003, the unearned revenue balance on prepaid service contracts amounted to approximately EUR 5 million.

**Warranty**

We provide standard warranty coverage on our systems for twelve months, providing labor and parts necessary to repair systems during the warranty period. The estimated warranty costs are accounted for by accruing these costs for each system upon recognition of the system sale. The estimated warranty cost is based on historical product performance and field expenses. Based upon historical service records, we calculate the charge of average service hours and parts per system to determine the estimated warranty charge. We update these estimated charges periodically. The actual product performance and/or field expense profiles may differ, and in those cases we adjust our warranty reserves accordingly. Future warranty expenses may exceed our estimates, which could lead to an increase in our cost of sales. A non-standard warranty generally includes services incremental to the standard warranty coverage. Revenues from the sale of a non-standard warranty are deferred as unearned revenue and are recognized ratably as revenue when the applicable warranty term commences. The unearned revenue balance on non-standard warranties amounted to approximately EUR 39 million as of December 31, 2003.

**Evaluation of long-lived assets for impairment and costs associated with exit or disposal activities**

We evaluate our long-lived assets, including intellectual property, for impairment whenever events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. If an impairment test is warranted, we assess whether the undiscounted cash flows expected to be generated by our long-lived assets exceed their carrying value. If this assessment indicates that the long-lived assets are impaired, the assets are written down to their fair value. These assessments are based on our judgment, which includes the estimate of future cash flows from long-lived assets and the estimate of the fair value of an asset if it is impaired. We initiated impairment assessments in 2003 based on the following

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events: discontinuance of our Track and Thermal businesses, workforce reductions, net losses from continuing operations and the consolidation of our office facilities at our headquarters in Veldhoven. As a result of those assessments, we recorded impairment charges and exit costs as follows:

During 2003, we evaluated assets related to our Thermal business for impairment anticipating the expected proceeds from its sale. Accordingly, we recorded approximately EUR 16 million impairment charges. The impairment charges were determined based on the difference between the assets carrying value and the value used in the negotiations with several potential buyers. In October 2003, we substantially completed the sale of our Thermal business; no gain or loss was realized on the sale as the net assets were stated at the value equal to the proceeds of the sale.

In addition, during 2003, we recorded impairment charges of approximately EUR 3 million on a building in the United States, previously used by our Track business, for which there are insufficient cash flows to support the carrying cost. The property and equipment impairment was determined on the difference between the building s estimated fair value, as indicated by an independent real estate appraiser, and its carrying value.

During 2003, we recorded a charge of approximately EUR 7 million relating to the consolidation of our office and warehouse facilities at our headquarters in Veldhoven as we ceased using certain of our facilities. The facility exit charges included:

- estimated future obligations for non-cancelable lease payments (net of estimated sublease income of EUR 25 million). We estimated the cost of exiting by referring to the contractual terms of the lease agreements and by evaluating the sublease agreements concluded for these facilities or, where applicable, by referring to amounts being negotiated; and

- the impairment of property and equipment (primarily leasehold improvements) for which there are insufficient cash flows to support the carrying cost. The property and equipment impairment was determined based on the difference between the assets estimated fair value and their carrying value.

During 2003, we recorded impairment charges of EUR 12 million on machinery and equipment, for which there are insufficient cash flows to support the carrying cost. The impairment charges were determined based on the difference between the assets estimated fair value and their carrying value.

Since our estimates of future cash flows are subject to considerable judgment and changes in circumstances, actual cash flows may be higher or lower. Although we believe the above-mentioned events to be the known events that might indicate asset impairment, other assets may be subject to loss in value due to uncertain market circumstances, which could result in further impairment charges in connection with these assets. See Notes 2, 3 and 9 to our consolidated financial statements.

**Inventories**

Inventories are stated at the lower of cost (first-in, first-out method) or market value. Cost includes net prices paid for materials purchased, charges for freight and customs duties, production labor cost and factory overhead. Inventory provisions are made for slow moving, obsolete or unsaleable inventory and reviewed on a quarterly basis. Our methodology involves matching our on-hand and on-order inventory with our manufacturing forecast. We evaluate for determining inventory provisions the inventory in excess of our forecasted needs on both technological and economical criteria and take appropriate provisions to reflect the risk of

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obsolescence. This methodology is significantly affected by our forecasted needs for inventory. If actual demand or usage were to be lower than estimated, additional inventory provisions for excess or obsolete inventory may be required, which could have a material adverse effect on our business, financial condition and results of operations. See Note 6 to our consolidated financial statements.

**Restructuring**

ASML applies the criteria defined in SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities and SFAS No. 112, Employers Accounting for Postemployment Benefits , in order to determine when a liability for restructuring or exit costs should be recognized.

With respect to employee termination costs, we are adopting SFAS No. 146 (effective since January 1, 2003) in the case of benefit arrangements that, in substance, do not constitute an ongoing benefit arrangement. SFAS No. 112 is adopted when termination benefits are provided under an ongoing benefit arrangement. SFAS No. 146 establishes that a liability for a cost associated with an exit or disposal activity shall be recognized and measured initially at its fair value in the period in which the liability is incurred; that is when a detail plan exists, has been committed to by management and communicated to the employees. SFAS No. 112 establishes that a liability for termination benefits provided under an ongoing benefit arrangement covered by SFAS No. 112 is recognized when the likelihood of future settlement is probable and can be reasonably estimated. Accordingly, the application of SFAS No. 146 or SFAS No. 112 may affect the timing of recognition, as well as the amounts recognized.

On December 18, 2002, ASML announced workforce reductions of approximately 700 positions worldwide. The related restructuring charges of EUR 7 million were recorded in 2003 since the details on the plan had not been finally determined by December 31, 2002. As of December 31, 2003, this plan has been fully effectuated.

On July 16, 2003, ASML announced further workforce reductions of approximately 550 positions worldwide, of which the majority is planned in the Netherlands. ASML recorded a provision of EUR 15 million as an ongoing benefit arrangement during 2003 in respect of this workforce reduction announced in July 2003. The amount of the provision was based upon the details of the exit plan agreed on with our Works Council in the Netherlands for the workforce reductions announced in December 2002. Currently, the Board of Management and the Dutch Works Council are nearing the completion of a joint study on implementing these workforce reductions in the Netherlands. Consequently, the Dutch workforce reduction has been delayed.

Other exit costs include purchase and other commitments to be settled or fulfilled. Related costs are estimated based on expected settlement fees and committed payments, taking into account future potential benefits, if any, from those commitments.

**Income tax**

We use the asset and liability method in accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the tax effect of incurred net operating losses and for tax consequences attributable to differences between the balance sheet carrying amounts of existing assets and liabilities and their respective tax bases.

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If it is more likely than not that the carrying amounts of deferred tax assets will not be realized, a valuation allowance will be recorded to reduce the carrying amounts of those assets.

In 2003, we performed an extended assessment with respect to our ability to realize our deferred tax assets resulting from net operating loss carry-forwards. In this analysis, we incorporated the application of a proposed Advanced Pricing Agreement ( APA ) that is under negotiation with the Dutch and United States tax authorities. Furthermore, in assessing the need to record a valuation allowance on our deferred tax assets, we took into account possible tax planning alternatives, and expected future profits in the Netherlands and in the United States. Based on our assessment, we believe that it is more likely than not that the net operating losses will be offset by future taxable income before the statute on loss compensation expires. However, if our assessment were incorrect, a significant portion of the deferred tax assets recorded on our balance sheet would have to be written down. See also Item 3.D. Risk Factors, Our Ability to Realize Our Deferred Tax Assets is Uncertain .

**ASML vision, mission, goal and business strategy**

| | | |
|---|---|---|
| Vision | - | Offering the right technologies at the right time combined with superior value of ownership measured by customers return on investment in our tools. |
| Mission | - | Providing leading edge imaging solutions to continuously improve our customers global competitiveness. |
| Goal | - | Achieving sustainable and profitable market leadership through customer satisfaction. |
| Business strategy | - | Maintaining leadership by providing high value drivers for customers while striving for operational excellence that results in top financial performance. |

**Business strategy**

ASML s commitment is to be the industry s global leader in our core competence of semiconductor lithography equipment, which images nanometric circuit patterns on a silicon wafer, the material from which tiny chips (integrated circuits) are made. We define and direct our business strategy through technology leadership, customer focus and operational excellence.

**Technology leadership**

We drive technology leadership along the semiconductor industry roadmap in close consultation with existing customers and potential new ones. This means we seek to satisfy the needs of different types of chipmakers by customizing and configuring products to provide premium value for the owners of ASML lithography systems. We pursue world class productivity to benefit every type of customer. This includes high volume, reliability demands associated with production of memory chips; fast and frequent changeovers required by foundries or made-to-order chip contractors; complexity of making microprocessors; and unique specifications set by independent device manufacturers.

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Changing technology and rising capital investments increasingly influence the equipment choices of chipmakers. Therefore, ASML continually anticipates, adapts and maintains its product offerings to embrace the stages, speed and size of growth in different lithography market segments. The Company s product range for steppers and advanced Step & Scan systems spans the industry s current wavelength technology for 200 and 300 millimeter wafers alike. Our proven products cover 365, 248 and 193 nanometer wavelengths, addressing the range of market needs for leading edge as well as less critical line widths. Since 2000, we offer the industry s only dual-stage wafer imaging system - our TWINSCAN platform - that allows exposure of one wafer while simultaneously measuring another wafer.

Consistent with our strategy to remain at the industry forefront for chipmaking, in 2003, we shipped the industry s first full-field Step & Scan tool at the 157 nanometer wavelength. In 2003, we also introduced our new immersion lithography system, a pioneering and promising product that replaces the air over the wafer with fluid to enhance focus and shrink line widths.

Consistent with a business strategy focused on our core lithography competence, we also strive to enhance productivity and process performance in the lithography area of chipmaking where wafers spend most of their overall process time. We form and maintain strategic alliances with other semiconductor equipment suppliers, allowing us to offer customers more complete solutions. For example, we have joint development programs with leading makers of track equipment in the so-called litho-cluster, where wafer coating and exposure can couple to better meet demands of chipmakers. We are seeking to jointly develop an optical maskless lithography system to reduce time to market of new devices and help solve escalating mask costs, an important factor for new semiconductor designs that feature advanced and ever smaller critical dimensions.

ASML also continues to offer solutions for special application markets and to provide proprietary mask technologies and software products that extend the limits of optical lithography for semiconductor manufacturing.

ASML s strategic pursuit is to offer technology choice, incremental quality and sustainable levels of added value. We increase the customization of our products for customers and strive to provide superior integration of our tools with theirs. For a market and technology overview and further information about ASML products, reference is made to Item 4.B. Business Overview.

**Customer focus**

Customer focus is central to the Company s strategic pursuit of market share leadership. And ASML s strategic approach to customer focus lies in the empowerment of multi-discipline account management teams. Our account managers represent our customers across every function and business process at ASML, from marketing and technology to logistics and customer support. Doing so ensures that everyone at ASML is kept informed and involved, as appropriate, in the Company s customer focus process.

We track and treat levels of customer satisfaction three ways: our own systematic methods; ratings provided by individual customers using their own criteria, and independent industry surveys. The Company s commitment to customers is to develop, install and support

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technological tools for volume production. Doing so enables customers to become better competitors and make more profit in the medium and long term.

Strategically, we engage customers in very early stages of technology development; we listen to their needs surrounding product introduction and volume utilization. Together, we create a dynamic and shared roadmap that begins with a customer need and ends with a customer solution. ASML professionals continue building customer relationships as we assist in developing and delivering technology and associated results that are above and beyond normal expectations. As a result, ASML not only maintains its technology leadership, but also secures market leadership.

We foster a culture of openness as the core of our customer focus, while providing customers with confidentiality for their business, financial and proprietary information. In addition, customer support training provides leading edge learning solutions to meet customer needs involving operators, technicians and engineers for service, application, process and specialist requirements. The Company s strategy of superior value for owners of ASML systems allows each customer to operate their chip fabrication facilities - anywhere in the world - with the highest productivity.

When customers are satisfied, then they have confidence to commit capital expenditures: customers repeat purchases of ASML lithography systems and buy additional products and services from ASML. It also means that customers are willing to pay premiums consistent with ASML s added value, in the face of fierce pricing competition from rivals.

**Operational excellence**

To achieve technology leadership and customer focus, it is also important to look inward. During 2003, inside ASML we sharpened our strategic focus through the work of multiple cross-functional process improvement teams. From an operational perspective, these process improvement teams are striving to streamline and integrate main business processes such as new product introduction, acquisition of orders from customers, fulfillment of orders, and our post-delivery support and services. We strive to measure the output of each process, namely its quantified results and how it adds value.

ASML s business strategy includes outsourcing the majority of components and subassemblies that make up our lithography products. We work in partnership with suppliers, jointly operating a strategy known as Value Sourcing. It is based on the QLTC principle that stands for quality, logistics, technology and total cost. With ASML Value Sourcing, we strive to attain flexibility, best-of-breed contributions and cost savings. It exemplifies mutual commitment, alongside shared risk and reward. Selected sourcing from our own facilities in the Netherlands and in the United States provides an additional check on supplier performance.

The Company s value of ownership proposition is a strategic driver for increasing sales. This means customers assess ASML s added value. Their calculated return on capital employed in semiconductor fabrication facilities supports ASML s ability to maintain pricing for our lithography systems. Internally, ASML is committed to improvements in gross margin by reducing cost of goods.

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Operational excellence is a strategic pillar that supports reduction of fixed and variable costs to increase operating profit and generate cash from working capital. Operational excellence enhances efficiencies and effectiveness. This means cost reductions in research and development; selling, general and administrative expenses; customer support; information technology and management systems; inventory and work-in-progress; manufacturing and facilities management; and other activities. Operational excellence strengthens the Company s ability to offer customers a range of technological and system choices at the right time.

Operational excellence is an internal strategic condition for increasing flexibility and reducing our breakeven level for the number of systems that we manufacture, depending on the mix of products ordered by customers in different market segments in various regions of the world. With a lower cost base and a higher capacity for flexibility, ASML can satisfy customer demand on a timely basis and continue to strengthen our competitive position.

Excellent people help make operational excellence happen. As technology roadmaps and customer requirements become more demanding, ASML needs the best talent available: fewer, better qualified, more completely committed people. The Company s human resource strategy embraces our unique culture of individual and team commitment that makes outstanding accomplishments possible.

Given the structural changes and intensified cyclical conditions in the world market for semiconductor lithography systems, the Company s strategy is to transform our technology and market success into a sustainable business success through operational excellence. This means benchmarking financial results versus peer technology companies. It also means pursuit of predictable quarterly results that are consistent with shareholder expectations.

In summary, the Company s commitment is to add measurable value and long-term results to benefit our customers as they design, produce and price their products.

**Financial criteria for ASML**

We strive to provide to our shareholders attractive return on their invested capital. This means that we will continue working on increasing the value of ownership (see Item 4.B. Business Overview ) to our customers resulting in higher average unit sales prices for our systems. Furthermore, we will continue on controlling our cost base by focusing on cost of goods reduction programs and controlling research and development costs and selling, general and administrative expenses. Finally, we intend to further improve our working capital management. Our working capital improvement program includes inventory control, early collection of our receivables and effective management of payments.

To reflect our efforts in achieving return on capital invested by our shareholders, we measure ourselves, amongst others, on the following financial key performance criteria: gross margin, operating margin, inventory turns, days sales outstanding, operating income and market share.

**Results of Operations**

The following discussion and analysis of results of operations should be viewed in the context of the risks affecting our business strategy, described in Item 3.D. Risk Factors .

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Our 2001 merger with SVG has been accounted for under the pooling of interests method. Therefore, our consolidated financial statements for the year ended December 31, 2001 reflect the combination of financial statements of our historical operations with those of SVG. Our decision in December 2002 to sell our Thermal business and to terminate our Track business has resulted in separate disclosure for continuing and discontinued operations. Our consolidated financial statements for the year ended December 31, 2001, have been retroactively reclassified in order to reflect the impact of this decision.

Set forth below are our consolidated statements of operations from continuing operations data for the three years ended December 31, 2003, expressed as a percentage of total net sales:

| Year ended December 31 | 2001 | 2002 | 2003 |
|---|---|---|---|
| Total net sales | 100.0% | 100.0% | **100.0%** |
| Cost of sales | 98.0[1] | 76.1 | **76.1[2]** |
| Gross profit on sales | 2.0 | 23.9 | **23.9** |
| Research and development costs | 21.9 | 16.6 | **19.8** |
| Research and development credits | (1.0) | (1.3) | **(1.2)** |
| Selling, general and administrative costs | 15.5 | 13.4 | **13.8** |
| Restructuring and merger and acquisition related charges | 2.8 | N/A | **1.6** |
| Operating loss from continuing operations | (37.2) | (4.8) | **(10.0)** |
| Interest expense, net | 0.5 | 1.9 | **1.9** |
| Loss from continuing operations before income taxes | (37.4) | (6.7) | **(11.9)** |
| Benefits from income taxes | (11.3) | (2.2) | **(3.9)** |
| Net loss from continuing operations | (26.1) | (4.5) | **(8.1)** |

[1] Includes restructuring charges of EUR 400 million.

[2] Includes restructuring charges of EUR 5 million.

**Results of operations from continuing operations 2003 compared with 2002**

During the year 2003 we continued to face a significant downturn in the semiconductor industry, which started in 2001. In the last quarter of 2003, we have seen what may be the beginning of an upturn that is apparent in most business segments within the semiconductor industry.

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**Consolidated sales and gross profit**

The following table shows a summary of sales (revenue and units sold), gross profit on sales and average sales price data on an annual basis for the years ended December 31, 2003 and 2002:

| Year ended December 31 | 2002 First half year | 2002 Second half year | 2002 Full year | 2003 First half year | 2003 Second half year | 2003 Full year |
|---|---|---|---|---|---|---|
| Net sales (EUR million) | 788 | 1,171 | 1,959 | **647** | **896** | **1,543** |
| Net product sales (EUR million) | 674 | 1,067 | 1,741 | **553** | **804** | **1,357** |
| Net service sales (EUR million) | 114 | 104 | 218 | **94** | **92** | **186** |
| Total units recognized | 78 | 127 | 205 | **74** | **95** | **169** |
| Total new systems recognized | 73 | 110 | 183 | **55** | **71** | **126** |
| Total used systems recognized | 5 | 17 | 22 | **19** | **24** | **43** |
| Gross profit on sales (% of sales) | 29.6 | 20.0 | 23.9 | **19.4** | **27.2** | **23.9** |
| Average unit sales price for new systems (EUR thousands) | 8,581 | 9,141 | 8,917 | **8,736** | **10,034** | **9,464** |
| Average unit sales price for used systems (EUR thousands) | 1,162 | 763 | 854 | **1,816** | **2,162** | **2,018** |

Consolidated net sales from continuing operations consist of revenue from product sales (systems and options) and service sales. Consolidated net sales decreased from 2002 to 2003 by approximately 21 percent. Product sales declined by approximately 22 percent from 2002 to 2003, primarily due to a decreasing number of new systems recognized, partially offset by an increase in average unit sales price ( ASP ). The ASP for new systems increased by approximately 6% reflecting a shift in our product portfolio towards an increased share of our latest technology equipment (TWINSCAN systems), which accounted for 38 percent of total shipment volume of new systems in 2003 compared to approximately 33 percent in 2002. The number of new systems recognized decreased from 183 units in 2002 to 126 units in 2003 due to:

- a further decline in equipment demand by the semiconductor industry in 2003 after a modest recovery shown in the first half of 2002 for delivery in the second half of 2002; and
- the effect of the accounting treatment of new technology systems (see Critical Accounting Policies ) resulting in additional recognition of EUR 138 million of revenues of 13 systems in 2002 that were initially deferred in 2001.

The number of used systems sold increased from 22 units in 2002 to 43 in 2003. This increase reflects the uncertain market conditions in which our customers seek opportunities to quickly expand production capacity in their existing production facilities without significant capital expenditures to secure long-term growth. These systems are used in less critical resolution capabilities. The ASP for used systems increased by approximately 136 percent reflecting a shift from our older PAS 2500 towards our newer PAS 5500 family, including scanner systems. We estimate that the number of used systems sold will increase in 2004, provided that the number of systems available on the market for repurchase is not limited.

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Service sales showed a 15 percent decrease from EUR 218 million in 2002 to EUR 186 million in 2003. This decrease is mainly due to:

- the decline in exchange rate of the USD versus the euro during 2003 which resulted in lower revenues from USD denominated service contracts, which account for approximately 50 percent of our service revenues;
- the decline in service sales on our former activities in the Track business as a result of the expiration of our warranty and service obligations. In December 2002, we decided to terminate our activities in the Track business; however, decided to continue to service our existing customers for whom we had warranty or other service obligations. Consequently, customer support related to the Track business is not included in discontinued operations; and
- an increase in the number of customers that opted for in-house servicing instead of external servicing.

Currently, approximately 90 percent of the global top 10 IC manufacturers are ASML customers. In 2003, sales to one customer accounted for EUR 314 million, or 20 percent of net sales. In 2002, sales to one customer accounted for EUR 377 million, or 19 percent of net sales.

Gross profit as a percentage of net sales in 2003 was equal to 2002 (23.9 percent). The gross profit on new systems decreased from 24.3 percent to 21.7 percent due to the negative influence of severe price competition (2.2 percent negative impact on our gross profit), relatively more sales of newer technology systems having lower gross profit (4.4 percent negative impact on our gross profit) and under-utilization of our production facilities due to less sales (2.5 percent negative impact on our gross profit). This decrease in gross profit was offset by lower repayments of Technical development credits as this program was fully repaid during 2003 (1.5 percent positive impact on our gross profit), lower costs of sales due to the replacement of independent sales agents with our own employees for the purpose of servicing our Asian customers (1.0 percent positive impact on our gross profit) and a decrease in charges to provisions for obsolete inventory (4.0 percent positive impact on our gross profit).

The gross profit on service sales increased to 21.7 percent in 2003 from 7.3 percent in 2002. This increase was primarily due to additional provisions in 2002 for obsolete service parts and training system write-downs.

**Lithography order backlog**

We started 2003 with an order backlog of 110 systems (103 new and 7 used), and received orders for delivery of 239 systems during the year. In 2003, we recorded 169 system sales and 56 order cancellations or push-outs beyond twelve months, this resulting in an order backlog of 124 systems (103 new and 21 used) as of December 31, 2003. The total value of the backlog as of December 31, 2003 amounts to EUR 993 million, compared with a backlog of approximately EUR 1,089 million as of December 31, 2002.

**Research and development**

Research and development costs decreased from EUR 324 million in 2002 to EUR 306 million in 2003 as a result of more cost-efficient programs and workforce reductions. The level of

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research and development expenditures reflects our continuing effort to introduce several leading edge lithography products for 193 nanometer applications and the newest versions of the TWINSCAN platform, combined with continued investments in in 248 nanometer high numerical aperture (NA) program, immersion, next generation 157 nanometer lithography solutions and EUV.

Our future operating results will depend significantly on our ability to produce products and provide services that have a competitive advantage in our industry. To do this, we believe that we must continue to make substantial investments in our research and development efforts. Our research and development activities are intended to enable our customers to achieve a higher return on their capital investments and higher productivity through cost-effective, leading edge technology solutions.

Research and development credits decreased from EUR 26 million in 2002 to EUR 19 million in 2003 due to a decreased volume for research and development expenditures that qualified for credits. Included in 2002 credits is a postponed credit (EUR 3.5 million) on 2001 expenditures that was subject to certain criteria that were only achieved in 2002. We expect the level of credits in 2004 to be similar or slightly higher than in 2003, although the precise amount remains subject to further negotiation with the relevant granting authorities.

**Selling, general and administrative costs**

Selling, general and administrative costs decreased by 19.0 percent from EUR 263 million in 2002 to EUR 213 million in 2003, mainly as a result of workforce reductions and decreased legal fees associated with patent infringement cases. Selling, general and administrative costs as a percentage of net sales increased from 13.4 percent in 2002 to 13.8 percent in 2003, as a result of the decline in net sales.

**Restructuring costs**

On December 18, 2002, ASML announced workforce reductions of approximately 700 positions worldwide. With respect to this plan, we recorded in 2003 restructuring charges for a total amount of EUR 7 million of which EUR 4 million in cost of sales and EUR 3 million in restructuring costs. As of December 31, 2003, this plan has been fully effectuated.

On July 16, 2003, ASML announced further workforce reductions of approximately 550 positions worldwide of which the majority is planned in the Netherlands. During 2003, ASML recorded a provision of EUR 15 million as an ongoing benefit arrangement of which EUR 4 million is included in cost of sales and EUR 11 million is included in restructuring costs. The amount of the provision was based upon the details of the exit plan agreed on with our Works Council in the Netherlands for the workforce reductions announced in December 2002. Currently, the Board of Management and the Dutch Works Council are nearing the completion of a joint study on implementing these workforce reductions in the Netherlands. Consequently, the Dutch workforce reduction has been delayed.

During 2003, we recorded restructuring costs of approximately EUR 7 million relating to the consolidation of our office and warehouse facilities at our headquarters in Veldhoven as we ceased using certain of our facilities. The facility exit charges included estimated future obligations for non-cancelable lease payments and the impairment of property and equipment

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(primarily leasehold improvements) for which there are insufficient cash flows to support the carrying cost.

**Net interest expense**

Net interest expense decreased from EUR 37 million in 2002 to EUR 29 million in 2003 due to an increase in interest income, which is partially offset by an increase in interest expense. Our interest income relates primarily to interest earned on our cash and cash equivalents. Interest income increased compared with 2002, primarily due to higher cash and cash equivalent balances throughout the year as a result of our improved working capital and issuance in May 2003 of EUR 380 million principal amount of our 5.50% Convertible Subordinated Notes due 2010. This was partially offset by a decrease in market short-term interest rates. Our interest expense relates primarily to our convertible notes. Our interest expense increased in 2003 compared with 2002, primarily due to the issuance of the above-mentioned Convertible Subordinated Notes, partially offset by the repurchases and redemption of our 520 million USD 4.25 percent Convertible Subordinated Notes during the second half of 2003.

**Income taxes**

Income taxes represented 32.7 and 32.4 percent of income before taxes in 2002 and 2003, respectively. This decrease results from a change in distribution of pre-tax losses between geographical areas. See Note 16 to our consolidated financial statements.

**Discontinued operations**

Results from discontinued operations comprise the results of our Thermal business, which we substantially divested in October 2003, and our Track business which we terminated in December 2002. Our decision to discontinue these businesses was the result of the downturn in the semiconductor market, which has led to significant losses in these businesses. Substantial future investments in these businesses would have been required to achieve a positive contribution to our future financial results.

| Year ended December 31 | 2002 | 2003 |
|---|---|---|
| **Revenues** | | |
| Track | 7,236 | **2,514** |
| Thermal | 105,929 | **38,198** |
| Total | 113,165 | **40,712** |
| **Loss from discontinued operations, net of taxes** | | |
| Track loss from operations | (27,991) | **(1,456)** |
| Track exit costs (net of taxes) | (30,626) | **(1,944)** |
| Thermal loss from operations | (61,161) | **(21,906)** |
| Thermal exit costs (net of taxes) | 0 | **(10,404)** |
| Total | (119,778) | **(35,710)** |

In December 2002 we reviewed our long-lived assets used in the Thermal business for potential impairment and recorded no impairment charges. During 2003, we again reviewed our long-lived assets for impairment as we entered into negotiations with several potential buyers and accordingly recorded impairment charges of EUR 16 million.

In October 2003, we completed the sale of our Thermal business to a privately held company

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formed by VantagePoint Venture Partners. At the time of the sale, no gain or loss was realized as the net assets were stated at the value equal to the proceeds of the sale. The net loss of our Thermal business amounted to EUR 32 million in 2003 compared to EUR 61 million in 2002. The termination of the Track business resulted in an exit plan that included workforce reduction, fixed asset impairments and inventory write-offs due to discontinued product lines. The exit plan included the disposal of remaining assets related to the Track business. In 2002, ASML decided to continue to service existing customers of its Track business for whom ASML had warranty or other service obligations. Consequently, customer support related to the Track business was not included in discontinued operations for 2002. In June 2003, ASML sold certain of its fixed assets and inventories related to its Track business to Rite Track. No gain or loss was realized on the sale. The net loss of the Track business amounted to EUR 3 million in 2003 compared to EUR 59 million for 2002. The net loss for 2002 included total pre-tax estimated exit costs of EUR 47 million. These exit costs included asset impairments, inventory write downs, purchase and other commitment settlements and employee termination costs. The net loss in 2003 relates mainly to impairment charges recorded on a building in the United States, previously used by our Track business. This impairment was determined on the difference between the building s estimated fair value, as indicated by an independent real estate appraiser and its carrying value.

**Results of operations from continuing operations in 2002 compared with 2001**

The semiconductor industry downturn, that began in 2001, showed, in the first half of 2002, a modest recovery in equipment demand for order intake for delivery in 2002 and 2003. The second half of 2002, however, showed a further deepening of the downturn. Our techno- logical leadership in 2002 resulted in market gains in 2002, despite the overall decline.

**Consolidated sales and gross profit**

The following table shows a summary of sales (revenues and units), gross profit on sales and average sales price on an annual basis for the years ended December 31, 2002 and 2001:

| | 2001 | | | 2002 | | |
|---|---|---|---|---|---|---|
| **Year ended December 31** | **First half year** | **Second half year** | **Full year** | **First half year** | **Second half year** | **Full year** |
| Net sales (EUR million) | 831 | 758 | 1,589 | **788** | **1,171** | **1,959** |
| Net product sales (EUR million) | 700 | 636 | 1,336 | **674** | **1,067** | **1,741** |
| Net service sales (EUR million) | 131 | 122 | 253 | **114** | **104** | **218** |
| Total units recognized | 120 | 77 | 197 | **78** | | |