

NOKIA CORP  
Form 20-F  
February 07, 2003

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As filed with the Securities and Exchange Commission on February 7, 2003.

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# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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## 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, 2002

Commission file number 1-13202

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### Nokia Corporation

(Exact name of Registrant as specified in its charter)

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Republic of Finland

(Jurisdiction of incorporation)

Keilalahdentie 4, P.O. Box 226, FIN-00045 NOKIA GROUP, Espoo, Finland

(Address of principal executive offices)

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

Title of each class	Name of each exchange on which registered
American Depositary Shares Shares, par value EUR 0.06	New York Stock Exchange New York Stock Exchange <sup>(1)</sup>

(1) Not for trading, but only in connection with the registration of American Depositary Shares representing these shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities registered pursuant to Section 12(g) of the Act: **None**

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

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

Shares, par value EUR 0.06: **4,787,907,141**

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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  No

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

Item 17  Item 18

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## INTRODUCTION AND USE OF CERTAIN TERMS

Nokia Corporation is a public limited liability company incorporated under the laws of the Republic of Finland. In this document, any reference to "we," "us," "the Group" or "Nokia" means Nokia Corporation and its subsidiaries on a consolidated basis, except where we make clear that the term means Nokia Corporation or a particular subsidiary or business group only, and except that references to "our shares," matters relating to our shares or matters of corporate governance shall refer to the shares and corporate governance of Nokia Corporation. Nokia Corporation has published its consolidated financial statements in euro for periods beginning on or after January 1, 1999. In this Form 20-F, references to "EUR," "euro" or "€" are to the common currency of the European Economic and Monetary Union, or EMU, references to "FIM," "Finnish markka" or "markka" are to the prior currency of the Republic of Finland and references to "dollars," "US dollars", "USD" or "\$" are to the currency of the United States. Solely for the convenience of the reader, this Form 20-F contains conversions of selected euro amounts into US dollars at specified rates, or, if not so specified, at the rate of 1.0485 US dollars per euro, which was the noon buying rate in New York City for cable transfers in euro as certified for customs purposes by the Federal Reserve Bank of New York on December 31, 2002. No representation is made that the amounts have been, could have been or could be converted into US dollars at the rates indicated or at any other rates.

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In this Form 20-F, unless otherwise stated, references to "shares" are to Nokia Corporation shares, par value EUR 0.06.

Our principal executive office is currently located at Keilalahdentie 4, P.O. Box 226, FIN-00045 NOKIA GROUP, Espoo, Finland and our telephone number is +358 (0)7 1800-8000.

Nokia Corporation furnishes Citibank, N.A., as Depositary, with consolidated financial statements and a related audit opinion of our independent public accountants annually. These financial statements are prepared on the basis of International Accounting Standards, or IAS. Nokia's consolidated financial statements contain a reconciliation of net income and shareholders' equity to accounting principles generally accepted in the United States, or US GAAP. Upon receipt, the Depositary generally delivers these consolidated financial statements to record holders of American Depositary Receipts, or ADRs, evidencing American Depositary Shares, or ADSs. One ADS represents one share. We also furnish the Depositary with quarterly reports containing unaudited financial information prepared on the basis of IAS, as well as all notices of shareholders' meetings and other reports and communications that are made available generally to our shareholders. The Depositary makes these notices, reports and communications available for inspection by record holders of ADSs and delivers to all record holders of ADSs notices of shareholders' meetings received by the Depositary. In addition to the reports delivered to holders of ADSs by the Depositary, holders can access our consolidated financial statements as well as other information previously included in our printed annual reports, at [www.nokia.com](http://www.nokia.com). With each annual distribution of our consolidated financial statements, we offer our shareholders and ADS holders the option of receiving all of these documents electronically in the future.

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### FORWARD-LOOKING STATEMENTS

It should be noted that certain statements herein which are not historical facts, including, without limitation, those regarding:

the timing of product deliveries;

our ability to develop and implement new products and technologies;

expectations regarding market growth and developments;

expectations for growth and profitability; and

statements preceded by "believe," "expect," "anticipate," "foresee" or similar expressions

are forward-looking statements.

Because these statements involve risks and uncertainties, actual results may differ materially from the results that we currently expect. Factors that could cause these differences include, but are not limited to:

developments in the mobile communications market including the development of the mobile phone replacement market and the timing and success of the roll-out of new products and solutions based on 3G and subsequent new technologies;

demand for our products and solutions;

the development of the mobile software and services market in general;

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the availability of new products and services by network operators;

market acceptance of new products and service introductions;

the intensity of competition in the mobile communications market and changes in the competitive landscape;

the impact of changes in technology;

general economic conditions globally and in our most important markets;

pricing pressures;

consolidation or other structural changes in the mobile communications market;

the success and financial condition of our partners, suppliers and customers;

the management of our customer financing exposure;

the success of our product development;

our success in maintaining efficient manufacturing and logistics as well as high product quality;

our ability to source quality components and research and development without interruption and at acceptable prices;

our ability to have access to the complex technology involving patents and other intellectual property rights included in our products and solutions;

inventory management risks resulting from shifts in market demand;

fluctuations in exchange rates, including, in particular, fluctuations between the euro, which is our reporting currency, and the US dollar and the Japanese yen; and

the impact of changes in government policies, laws or regulations

as well as the risk factors specified in this Form 20-F under "Item 3.D Risk Factors."

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### PART I

#### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

**ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE**

Not applicable.

**ITEM 3. KEY INFORMATION****3.A Selected Financial Data**

The financial data set forth below at December 31, 2001 and 2002 and for each of the years in the three-year period ended December 31, 2002 have been derived from our audited consolidated financial statements included in Item 18 of this Form 20-F. Financial data at December 31, 1998, 1999 and 2000 and for each of the years in the two-year period ended December 31, 1999 have been derived from Nokia's previously published audited consolidated financial statements not included in this document.

The financial data at December 31, 2001 and 2002 and for each of the years in the three-year period ended December 31, 2002 should be read in conjunction with, and are qualified in their entirety by reference to, our audited consolidated financial statements.

The audited consolidated financial statements from which the selected consolidated financial data set forth below have been derived were prepared in accordance with IAS, and net income and shareholders' equity have been reconciled to US GAAP, which differ in some respects from IAS. For a discussion of the principal differences between IAS and US GAAP, see "Item 5.A Operating Results Principal Differences Between IAS and US GAAP" and note 36 to our audited consolidated financial statements.

The financial data set forth below for the year ended December 31, 1998 has been converted into euro at the rate of 5.94573 Finnish markka per euro, the conversion ratio announced on December 31, 1998. As of January 1, 1999, we adopted the euro as our reporting currency. Accordingly, the selected financial data for 1998 depicts the same trends that would have been presented had they been presented in Finnish markka. However, because they were originally prepared using Finnish markka, they are not necessarily comparable to financial statements of other companies that originally prepared financial statements in a currency other than the Finnish markka and converted those currencies to euro.

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	Year ended December 31,					
	1998	1999	2000	2001	2002	2002
	(EUR)	(EUR)	(EUR)	(EUR)	(EUR)	(USD)
(in millions, except per share data)						
<b>Profit and Loss Account Data</b>						
<i>Amounts in accordance with IAS</i>						
Net sales	13,326	19,772	30,376	31,191	30,016	31,472
Operating profit	2,489	3,908	5,776	3,362	4,780	5,012
Profit before tax and minority interests	2,456	3,845	5,862	3,475	4,917	5,155
Profit from continuing operations	1,680	2,577	3,938	2,200	3,381	3,545
Cumulative prior year effect of change in accounting policies	70					
Net profit	1,750	2,577	3,938	2,200	3,381	3,545
<b>Continuing operations</b>						
Basic earnings per share <sup>(1)</sup>	0.37	0.56	0.84	0.47	0.71	0.74
Diluted earnings per share <sup>(1)</sup>	0.36	0.54	0.82	0.46	0.71	0.74
<b>Net profit</b>						
Basic earnings per share <sup>(1)</sup>	0.38	0.56	0.84	0.47	0.71	0.74
Diluted earnings per share <sup>(1)</sup>	0.37	0.54	0.82	0.46	0.71	0.74
Cash dividends per share <sup>(1)(2)</sup>	0.12	0.20	0.28	0.27	0.28	
<b>Average number of shares (millions of shares)</b>						
Basic	4,553	4,594	4,673	4,703	4,751	4,751

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	Year ended December 31,					
Diluted	4,693	4,743	4,793	4,787	4,788	4,788
<b>Amounts in accordance with US GAAP</b>						
Income from continuing operations	1,689	2,542	3,847	1,903	3,603	3,778
Net income	1,689	2,542	3,847	1,903	3,603	3,778
Continuing operations						
Basic earnings per share <sup>(1)</sup>	0.37	0.55	0.82	0.40	0.76	0.80
Diluted earnings per share <sup>(1)</sup>	0.36	0.54	0.80	0.40	0.75	0.79
Net income						
Basic earnings per share <sup>(1)</sup>	0.37	0.55	0.82	0.40	0.76	0.80
Diluted earnings per share <sup>(1)</sup>	0.36	0.54	0.80	0.40	0.75	0.79

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	Year ended December 31,					
	1998	1999	2000	2001	2002	2002
	(EUR)	(EUR)	(EUR)	(EUR)	(EUR)	(USD)
(in millions, except per share data)						
<b>Balance Sheet Data</b>						
<b>Amounts in accordance with IAS</b>						
Fixed assets and other non-current assets	2,220	3,487	6,388	6,912	5,742	6,020
Cash and cash equivalents	2,891	4,159	4,183	6,125	9,351	9,805
Other current assets	4,923	6,633	9,319	9,390	8,234	8,633
Total assets	10,034	14,279	19,890	22,427	23,327	24,458
Shareholders' equity	5,109	7,378	10,808	12,205	14,281	14,974
Minority interests	63	122	177	196	173	181
Long-term interest-bearing liabilities	257	269	173	207	187	196
Other long-term liabilities	152	138	138	253	274	287
Borrowings due within one year	760	793	1,116	831	377	395
Other current liabilities	3,693	5,579	7,478	8,735	8,035	8,425
Total shareholders' equity and liabilities	10,034	14,279	19,890	22,427	23,327	24,458
Net interest-bearing debt <sup>(3)</sup>	(1,874)	(3,097)	(2,894)	(5,087)	(8,787)	(9,213)
Share capital	255	279	282	284	287	301
<b>Amounts in accordance with US GAAP</b>						
Total assets	10,030	14,289	19,676	22,038	22,977	24,091
Shareholders' equity	5,102	7,384	10,871	12,021	14,150	14,836

(1) Adjusted for share splits.

(2) The cash dividend for 2002 is what the Board of Directors will propose for approval at the Annual General Meeting convening on March 27, 2003.

(3) Net interest-bearing debt consists of borrowings due within one year and long-term interest-bearing liabilities, less cash and cash equivalents.

**Distribution of Earnings**

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We distribute retained earnings, if any, within the limits set by the Finnish Companies Act. We make and calculate the distribution, if any, either in the form of cash dividends, share buy-backs, or in some other form (or a combination of these). There is no specific formula by which the amount of a distribution is determined, although some limits set by law are discussed below. The timing and amount of future distributions of retained earnings, if any, will depend on our future earnings and financial condition.

Under the Finnish Companies Act, we may distribute retained earnings on our shares only upon a shareholders' resolution, on the basis of our annual accounts on a consolidated and individual basis, as approved by our shareholders and, subject to limited exceptions, in the amount proposed by our Board of Directors. The amount of any distribution is limited to, among other things, the lower of our retained earnings on a consolidated and individual basis, in each case as available at the end of the preceding financial year. Subject to exceptions relating to the right of minority shareholders to request otherwise, the distribution may not exceed the amount proposed by the Board of Directors.

Under the Finnish Companies Act, we may repurchase our own shares pursuant to either a shareholders' resolution or an authorization to the Board of Directors approved by the company's shareholders. Such authorizations to the Board of Directors are effective for a maximum of one year. The undertaking of share buy-backs is subject not only to the regulations in the Companies

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Act, but also to the rules of the stock exchanges on which the repurchases take place. Since 2000, the Board of Directors of Nokia has been authorized by our shareholders in the Annual General Meetings to undertake repurchases of Nokia's own shares up to 224 million shares in 2000, 225 million shares in 2001 and 220 million shares in 2002. On January 23, 2003, we announced that the Board of Directors will propose that the Annual General Meeting convening on March 27, 2003 should approve a new authorization to repurchase up to 225 million shares. The Board expects to proceed with a share buy-back program in 2003, assuming that it receives authorization at that Annual General Meeting.

The table below sets forth actual share buy-backs by the Group in respect of each fiscal year indicated.

	Number of shares	EUR millions
2000	3,252,000	160
2001	995,000	21
2002	900,000	17

The Board of Directors will propose for approval at the Annual General Meeting convening on March 27, 2003 a dividend of EUR 0.28 per share in respect of 2002.

The table below sets forth the amounts of total cash dividends per share and per ADS paid in respect of each fiscal year indicated. For the purposes of showing the US dollar amounts per ADS for 1998-2001, the dividend per share amounts have been translated into US dollars at the noon buying rate on the respective dividend payment dates.

	EUR per share	USD per ADS
1998	0.12	0.13
1999	0.20	0.19
2000	0.28	0.25
2001	0.27	0.24
2002	0.28 <sup>(1)</sup>	

<sup>(1)</sup> To be proposed by the Board of Directors for approval at the Annual General Meeting convening on March 27, 2003.

In each of 1998 and 1999, we effected a two-for-one share split, effective in public trading on April 16, 1998, and April 12, 1999, respectively. In 2000, we effected a four-for-one share split, effective in public trading on April 10, 2000. In the table above, the dividend per share and dividend per ADS figures for previous periods have been adjusted accordingly.

We make our cash dividend payments in euro. As a result, exchange rate fluctuations will affect the US dollar amount received by holders of ADSs on conversion of these dividends. Moreover, fluctuations in the exchange rates between the euro and the US dollar will affect the dollar



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equivalent of the euro price of the shares on the Helsinki Exchanges and, as a result, are likely to affect the market price of the ADSs in the United States. See also "Item 3.D Risk Factors Our net sales and costs are affected by fluctuations in the rate of exchange particularly between the euro, which is our reporting currency, and the US dollar and the Japanese yen as well as certain other currencies."

### **Exchange Rate Data**

Before January 1, 1999, the Finnish markka was a part of the European Monetary System exchange rate mechanism known as the Exchange Rate Mechanism, or ERM. Within the ERM, exchange rates fluctuated within permitted margins, fixed by central bank intervention. Under the provisions of

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the Treaty on European Union negotiated at Maastricht in 1991 and signed by the then 11 member states of the European Union in early 1992, the EMU superseded the EMS on January 1, 1999, and the euro was introduced as the single European currency. Since this date, the euro has been the lawful currency of the EMU states. The following 12 current member states participate in the EMU and have adopted the euro as their national currency: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Spain. The fixed legal rate of conversion between the Finnish markka and the euro was announced on December 31, 1998, at 5.94573 Finnish markka per euro.

The following table sets forth information concerning the noon buying rate in New York City for cable transfers as certified for customs purposes by the Federal Reserve Bank of New York for (i) Finnish markka for the year 1998, expressed in Finnish markka per US dollar, and (ii) euro for the years 1999 through 2002 and for each of the months in the six-month period ended January 31, 2003, expressed in US dollars per euro.

The average rate for a year means the average of the exchange rates on the last day of each month during a year. The average rate for a month means the average of the exchange rates at the end of each day during that month.

For the year ended December 31:	Exchange Rates			
	Rate at period end	Average rate	Highest rate	Lowest rate
	(Finnish markka per USD)			
1998	5.0645	5.3433	5.6280	4.8995
	(USD per EUR)			
1999 <sup>(1)</sup>	1.0070	1.0588	1.1812	1.0016
2000	0.9388	0.9232	1.0335	0.8270
2001	0.8901	0.8954	0.9535	0.8370
2002	1.0485	0.9495	1.0485	0.8594
For the month ended:				
August 31, 2002	0.9806	0.9778	0.9882	0.9640
September 30, 2002	0.9879	0.9811	0.9959	0.9685
October 31, 2002	0.9881	0.9815	0.9881	0.9708
November 30, 2002	0.9932	1.0020	1.0139	0.9895
December 31, 2002	1.0485	1.0204	1.0485	0.9927
January 31, 2003	1.0739	1.0633	1.0861	1.0361

<sup>(1)</sup> The noon buying rate for the Finnish markka ceased to be available after January 15, 1999.

On January 31, 2003, the noon buying rate was USD 1.0739 per EUR 1.00.

### **3.B Capitalization and Indebtedness**

Not applicable.

### 3.C Reasons for the Offer and Use of Proceeds

Not applicable.

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### 3.D Risk Factors

Set forth below is a description of factors that may affect our business, results of operations and share price from time to time.

*The new advanced products and solutions that we are and will be developing incorporate complex, evolving technologies, including 3G and subsequent new technologies. This exposes us to certain risks that, if they were to occur, could have a material adverse impact on us and our ability to grow our business.*

The markets for our products and solutions are characterized by rapidly changing and increasingly complex technologies. The business of Nokia Mobile Phones, which accounted for approximately 77% of our net sales in 2002, could be adversely affected by risks within and outside of our control related to these new technologies and their successful commercialization. In order to be competitive, Nokia Mobile Phones must continuously maintain and develop a wide portfolio of mobile phones that covers all major consumer segments and technology standards, and that includes phones that contain increasingly complex software that supports services which continue to drive the demand for our products and solutions. There is a risk that we will not be successful in maintaining and developing this wide portfolio, or that the technologies and related products and solutions on which we focus may not be brought to market by us and/or mobile network operators as quickly as anticipated, may not achieve as broad a customer acceptance among operators or end-users as we expect, or may not prove to be sufficiently compatible with the existing technologies and products of other product and solution providers.

We promote open standards in our technology in order to support open competition and interoperability. We aim to achieve this through working together with customers, suppliers and industry participants in global standardization fora. By driving open standards, specifications and interoperability, our aim is to support industry growth by ensuring a global and open mobile software and services market with reduced fragmentation, enhanced interoperability and compelling end-user offerings. Failure or delay in the creation of open, global specifications could have an adverse effect on the mobile communications market in general and a negative impact on our mobile phone sales and operating profit.

At any given time, Nokia Networks, which accounted for approximately 22% of our net sales in 2002, is developing a number of network infrastructure solutions incorporating advanced technologies from which we will select those that we feel have the best chance for success, based on our expectations of future market demand and evolution. Currently, Nokia Networks designs and builds networks based primarily on GSM, EDGE and WCDMA technologies. Although these are currently the dominant communications technology platforms, they may not always be; our networks business's sales and operating profit may be adversely affected if these technologies or subsequent new technologies on which we focus do not achieve as broad acceptance among customers as we expect, or if we fail to adapt to different technology platforms that emerge over time. Network operators' delays in rolling out new systems and services based on 3G technologies, as well as their reduced capital investment, adversely impacted our networks business's results of operations in 2002 and may continue to do so.

The development and application of new technologies involve time, substantial costs and risks, whether we develop these technologies internally or by acquiring or investing in other companies. We may experience difficulties in realizing the expected benefits from our investments in new technologies and businesses, or from our promotion of open standards. In addition, our new technology, products and solutions may become obsolete more quickly than in the past as communications technology continues to evolve rapidly. Furthermore, our products' and solutions' reliance on new less-proven technologies may cause performance and quality problems or defects.

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This may cause a delay in market acceptance of our products and solutions, harm our reputation and subject us to increased costs.

*Changes in the communications industry are expected to increase competition and change the competitive landscape and may affect our sales and operating profit negatively.*

The markets for our products and solutions are intensely competitive. Our competitors, including many new market entrants, may implement new technologies before we do or strengthen their footing in the delivery of existing technologies more rapidly than we. Our competitors may deliver new products and solutions earlier, or provide more attractively priced, enhanced or better quality products and solutions, than we do. The development of other new technologies and potential changes in customer behavior also may change the competitive landscape for our products and solutions in ways that we cannot currently predict.

To date, our principal competitors on a global basis have been Motorola, Ericsson, Siemens, Samsung and Nortel, although we also compete with a variety of other companies. These include new suppliers of mobile phones. With the development of new technologies and services, competition for our mobile communications business is also coming from new categories of market entrants. For example, we may encounter increased competition in our handset business from consumer electronics product and device manufacturers that are increasing their focus on mobile communications, and in our networks business from communications equipment, Internet systems and software suppliers, as well as system integrators.

***We may not reach our targets, and may experience greater variability in our sales and operating profit than in the past, particularly depending on the general economic conditions and the pace of development and acceptance of new technologies.***

A variety of factors could affect our ability to reach our targets and have a material adverse effect on our quarterly and annual sales and operating profit. The economic slowdown and the financial condition of our clients could continue to negatively impact demand for mobile phones, the timing of network capacity build-outs, and the development and acceptance of new technologies and related products and solutions.

Nokia Mobile Phones quarterly and annual net sales and operating profit can be affected by the global growth rate in mobile phone unit sales, which depends in part on regional economic factors in our major markets, competitive pressures, seasonality, the timing and success of our new product introductions and shipments, the development of the market for replacement phones, the rate at which network operators launch new technologies and services for mass consumption, as well as the commercial acceptance of these new technologies and services. Nokia Networks quarterly and annual net sales and operating profit can be affected by general economic conditions, operator investment behavior and competitive pressures. Other such factors include the product mix of multi-year contracts, the deployment progress and the technical success we achieve under network contracts, in particular those comprising new technologies. We could also be affected adversely by any harm to the Nokia brand. Additionally, currently perceived risks of acts of war and terrorist activity in various parts of the world have created uncertainties that may affect the global economy and our results of operations adversely.

Any of these factors may affect our ability to reach our targets. In addition, uncertainties affecting any of these factors, particularly during difficult economic conditions, render estimates of our results of operations even more difficult to make than usual, and therefore may lead us to revise our estimates more frequently than in the past.

***If we fail to manage the prices and costs of our portfolio of mobile phones, our sales and operating profit may be negatively affected.***

We seek to maintain profitability through managing a balanced portfolio of mobile phone models, which we try to achieve by frequently introducing new phones with improved design and technological features, by leveraging the strength of our global brand and by reducing product costs. Although these actions have enabled us to maintain relatively stable average selling prices and control our product costs in recent years, we may not be successful in doing so in the future, which could cause our sales and operating profit to suffer materially.

***The global networks business relies on a limited number of customers and large multi-year contracts. Unfavorable developments under a major contract or in relation to a major customer may affect our sales, operating profit and cash flow adversely.***

In our networks business, we rely on a limited number of customers and on large, complex, multi-year system contracts. If an unfavorable development occurs under a major contract or involves one or more of these customers, this could impact our future sales and operating profit adversely.

Large multi-year contracts, which are typical in the networks industry, usually require the dedication of substantial amounts of working capital and other resources, which impacts our cash flow negatively. There is also an increased risk that the timing of net sales and operating profit associated with these contracts may be different than expected. Moreover, any non-performance by Nokia under these contracts may have significant adverse consequences for us because network operators, which already have made significant investments in licenses and other commitments for new technologies, are demanding stringent contract undertakings such as penalties for contract violations.

*Customer financing to network operators can be a competitive requirement and could affect our net sales, operating profit, balance sheet and cash flow adversely.*

Network operators sometimes require their suppliers, including us, to arrange or provide long-term financing as a condition to obtaining or bidding on infrastructure projects. In some cases, the amounts of these financings and the associated impact on our working capital may be significant.

At December 31, 2002 our outstanding long-term loans to customers totaled EUR 1,056 million, while financial guarantees given on behalf of third parties totaled EUR 91 million. In addition, we had financing commitments totaling EUR 857 million. Total customer financing (outstanding and committed) was EUR 2,004 million, of which EUR 1,573 million, or 79%, was in respect of 3G networks.

In 2002, we reduced our total customer financing (outstanding and committed) by EUR 2,206 million compared to 2001. EUR 1.2 billion of customer financing commitments have been released in mutual agreement with the borrowers, and EUR 0.2 billion of outstanding loans have been repaid or financial guarantees released. We have also reduced our outstanding loans and commitments by EUR 0.4 billion pursuant to arrangements with banks, financial institutions and export credit agencies, or ECAs. Our intent is to further mitigate our total customer financing exposure, market conditions permitting. We are seeking to make further arrangements with financial institutions and investors to transfer credit risk we have incurred from the commitments and outstanding loans we have made as well as from the financial guarantees we have given.

The financial requirements for building out telecommunication networks are substantial. In particular, some operators, including those that may purchase our networks, have incurred

significant indebtedness in connection with the acquisition of 3G licenses or are early stage companies without an established customer base or revenue streams. Defaults by these operators have occurred in the past, could occur again in the future for reasons beyond our control, and could result in the restructuring of these financing arrangements and/or require us to re-assess the ultimate collectibility of such financings, which could result in write-offs of all or a portion of the outstanding loan balances affected and thus may negatively impact our results of operations. In 2001, we wrote off EUR 714 million in customer loans related to a defaulted financing to Telsim (EUR 669 million), a GSM operator in Turkey, and to the insolvency of Dolphin in the United Kingdom (EUR 45 million).

In 2002, MobilCom, a German operator to which we had extended customer financing loans, experienced financial difficulties. We have entered into an agreement with MobilCom's shareholder France Telecom S.A. regarding the assignment to France Telecom of MobilCom's obligations to us under the loans and the subscription by us of France Telecom subordinated convertible perpetual bonds with a total face value of approximately EUR 0.8 billion as repayment for such loans. As a result, we recorded a net charge of EUR 265 million in 2002 to write down the loans receivable to their estimated recoverable amount and to write off various other amounts related to MobilCom. The estimated recoverable amount of the MobilCom loans is based on the current estimated fair value of the subordinated convertible perpetual bonds of France Telecom. The fair value of the bonds will be reassessed upon completion of the assignment of the loans to France Telecom and the issuance of the bonds. We expect the assignment and subscription to be completed in March 2003 after MobilCom and France Telecom have received approval from their respective boards and shareholders. We have also terminated the remaining financing commitment to MobilCom of approximately EUR 530 million, which is included in the EUR 1.2 billion reduction of our customer financing commitments.

We see the current industry environment as not requiring material increases in customer financing. Customer financing continues to be requested by operators, but to a lesser extent and with lower importance than during the past years. As a strategic market requirement, we plan to continue to extend customer financing to a small number of selected customers. Nevertheless, should customer requirements, market or economic conditions change significantly, we may be required to increase the total amount of our customer financing.

We cannot guarantee that we will be successful in providing this type of financing to customers. Also, our ability to manage our total customer finance exposure depends on a number of factors, including our capital structure, market conditions affecting our customers, the level of credit available to us and our ability to mitigate exposure on acceptable terms. We cannot guarantee that we will be successful in managing the challenges connected with the total customer financing exposure that we may from time to time have. See "Item 4.B Business Overview Nokia Networks," "Item 5.B Liquidity and Capital Resources Customer Financing," and notes 7 and 34(b) to our consolidated financial statements included in Item 18 of this Form 20-F for a more detailed discussion of issues relating to customer financing and related commercial credit risk.

*Our sales and operating profit could be adversely affected if we fail to efficiently manage our manufacturing and logistics, or fail to ensure that our products meet our quality standards.*

Our sales and operating profit could be adversely affected if we fail to efficiently manage our manufacturing and logistics, or to ensure that our products meet our quality standards. Our manufacturing is complex, requires advanced and costly equipment and includes outsourcing to third parties. These operations are continuously modified in an effort to improve manufacturing efficiency and flexibility. We may experience difficulties in ramping up or down production at our facilities, adopting new manufacturing processes and finding the most timely way to develop the best technical solutions for new products. Difficulties in achieving optimal levels of manufacturing

efficiency for, and the uninterrupted output of, our products may have a material adverse effect on our sales and operating profit and may result from, among other things, capacity constraints, construction delays or delays in adjusting production at our facilities, upgrading or expanding existing production capacity, changing process technologies or interruptions in data communication systems that run our operations. In addition, during periods of decline in our sales or delayed product development, we may have excess capacity and may incur various costs relating to existing contractual commitments to suppliers, redundancies, obsolescence of components, impairment of related assets and structural changes to our operations. Also, a failure could occur at any stage of our product creation, manufacturing and delivery processes, resulting in our products and solutions not meeting our quality standards, which could have a material adverse effect on our sales, operating profit and reputation.

***We depend on our suppliers for the timely delivery of components and for their compliance with our supplier requirements, such as, most notably, our product quality standards. Their failure to do so could adversely affect our ability to deliver our products successfully and on time.***

Our manufacturing also depends on obtaining adequate supplies of fully functional components on a timely basis. Our principal requirements are for electronic components, such as semiconductors, microprocessors, micro controllers, memory devices and displays, which have a wide range of applications in our communications products. In addition, a particular component may be available only from a limited number of suppliers. We also outsource a portion of our manufacturing to third parties. If a component supplier fails to meet our supplier requirements, such as, most notably, our product quality standards, and consequently some of our products are unacceptable to us, this could adversely affect our sales and operating profit. Suppliers may from time to time extend lead times, limit supplies or increase prices due to capacity constraints or other factors, which could adversely affect our ability to deliver our products on a timely basis. Moreover, if one of the third parties to which we outsource manufacturing fails to perform, or experiences delays or disruption to its manufacturing, or financial difficulties, this could adversely affect our sales and operating profit.

***We are developing a number of our new products and solutions in partnership with other companies. If any of these companies were to fail to perform, we may not be able to bring our products and solutions to market successfully or on a timely basis.***

We sometimes invite providers of technology, components or software critical to the production of a number of our products and solutions, including those employing 3G technology, to work with us to develop these technologies. These arrangements involve the commitment by each company of various resources, including technology, research and development as well as personnel. We attempt to structure these arrangements to maximize cooperation and loyalty between the parties. However, if these arrangements do not develop as expected, especially those that involve proprietary components and complementary technologies, if the products produced by companies working with us do not meet the required quality standards, or if the financial standing of our partners deteriorates, our ability to introduce these new products and solutions successfully and on schedule may be hampered.

***Our operations rely on complex information technology systems and networks. If any system or network disruption occurs, this reliance could have a material adverse impact on our operations, sales and operating profit.***

Our operations rely to a significant degree on the efficient and uninterrupted operation of complex information technology systems and networks, which are integrated with those of third parties.

Any failure of our current or future systems or networks could have a material adverse effect on our operations, sales and operating profit. Furthermore, any data leakages resulting from information technology security breaches could also adversely affect us.

All information technology systems are potentially vulnerable to damage or interruption from a variety of sources. We pursue various measures in order to manage our risks related to system and network disruptions, including the use of multiple suppliers and available information technology security. However, despite precautions taken by us, an outage in a telecommunications network utilized by any of our information technology systems, virus or other unanticipated problem that leads to the interruption of our information technology systems or networks could have a material adverse effect on our operations, sales and operating profit.

***If we are unable to recruit, retain and develop appropriately skilled employees, we may not be able to implement our strategies and, consequently, our results of operations may suffer.***

To meet our business challenges and retain the effectiveness of our operations, changes in our business models, technology and an intensely competitive environment, we must continue to recruit, retain and develop appropriately skilled employees with a comprehensive understanding of different businesses and technologies. As competition for skilled personnel in our industry remains keen, we seek to create a corporate culture that encourages creativity and continuous learning. We also are continuously developing our compensation and benefit policies and taking other measures to attract and motivate skilled personnel. Nevertheless, we have encountered in the past, and may encounter in the future, shortages of appropriately skilled personnel.

***As our products and solutions include complex technology involving patented and other proprietary technologies, we face a risk of claims that we have infringed third parties' intellectual property rights. These may result in costly and time-consuming litigation, the invalidation of intellectual property rights on which we depend or increased licensing costs for us to be able to utilize these rights.***

Our products and solutions include complex technology involving patented and other proprietary technologies. As the number of entrants in the market grows and the complexity of the technology and the overlap of product functionalities increase, the possibility of an inadvertent infringement and related intellectual property claim against us increases. There may be patents and patent owners relevant to our product lines that are unknown to us. In addition, although we endeavor to ensure that companies that work with us possess appropriate intellectual property rights, we recognize that we cannot fully avoid risks of intellectual property rights infringement created by companies with which we work in cooperative research and development activities. Similarly, we or our customers may face claims of infringement in connection with our customers' use of our products and solutions.

Any such claims, regardless of merit, could result in costly litigation and the payment of damages and other compensation, divert the attention of our personnel, cause product shipment delays or require us to develop non-infringing technology or to enter into royalty or licensing agreements. If we were unable to develop non-infringing technology, or if royalty or licensing agreements were not available on commercially acceptable terms, we could be precluded from making and selling the affected products. As new features are added to our products, we may need to acquire further licenses, including from new and sometimes unidentified intellectual property owners. The cumulative costs of obtaining any necessary licenses are difficult to predict and may over time have a negative effect on our operating profit. See "Item 4.B Business Overview Patents and Licenses" for a more detailed discussion of our intellectual property activities.

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***Allegations of health risks from the electromagnetic fields generated by base stations and mobile handsets, and the lawsuits and publicity relating to them, regardless of merit, could affect our operations negatively by leading consumers to reduce their use of mobile phones or by causing us to allocate monetary and personnel resources to these issues.***

There has been public speculation about possible health risks to individuals from exposure to electromagnetic fields from base stations and from the use of mobile phones. While a substantial amount of scientific research conducted to date by various independent research bodies has indicated that these radio signals, at levels within the limits prescribed by public health authority safety standards and recommendations, present no adverse effect to human health, we cannot be certain that future studies, irrespective of their scientific basis, will not suggest a link between electromagnetic fields and adverse health effects that would adversely affect our sales and share price. Research into these issues is ongoing by government agencies, international health organizations and other scientific bodies in order to develop a better scientific and public understanding of these issues. Our contributions to ongoing research efforts are described in "Item 4.B Business Overview Research and Development."

Currently, we and several other mobile phone manufacturers, distributors and network operators have been named as defendants in a series of class action suits filed to various US jurisdictions. These cases have been consolidated and are now before a US federal district court in Baltimore, Maryland, United States. The suits allege that the use of mobile phones without a headset poses a health risk. In addition, we and other mobile phone manufacturers and network operators have been named as defendants in five lawsuits by individual plaintiffs who allege that radio emissions from mobile phones caused or contributed to each plaintiff's brain tumor. See "Item 8.A.7 Litigation" for a more detailed discussion of these lawsuits.

Although Nokia products and solutions are designed to meet all relevant safety standards and recommendations globally, no more than a perceived risk of adverse health effects of mobile communications devices could adversely affect us through a reduction in sales of handsets or increased difficulty in obtaining sites for base stations, and could harm our share price.

***Our net sales and costs are affected by fluctuations in the rate of exchange particularly between the euro, which is our reporting currency, and the US dollar and the Japanese yen as well as certain other currencies.***

We operate globally and are therefore exposed to foreign exchange risks. Our policy is to monitor and hedge exchange rate exposure, and we manage our operations to mitigate, but not to eliminate, the positive or negative impact of exchange rate fluctuations. Exchange rate fluctuations may affect our sales growth and operating profit materially in future periods. See "Item 5.A Operating Results Exchange Rates" and "Item 11. Quantitative and Qualitative Disclosures About Market Risk."

In addition to the effect of exchange rate fluctuations on our results, an investor's return in US dollars from an investment in ADSs or shares may be affected by any depreciation of the euro because the value of dividends and other distributions paid in euro would decline as the value of the euro, expressed in US dollars, declines.

***Our net sales derived from, and assets located in, emerging market countries may be adversely affected by economic, regulatory and political developments in those countries.***

We generate net sales from and have invested in various emerging market countries. As net sales from these countries represent a significant portion of our total net sales, economic or political turmoil in these countries could adversely affect our net sales and operating profit. Our investments in emerging market countries also may be subject to risks and uncertainties,

including unfavorable taxation treatment, exchange controls, nationalization, inflation, currency fluctuations, or the absence or lack of regulation.

***Changes in various types of regulation in countries around the world could affect our business adversely.***

Our business is subject to direct and indirect regulation in each of the countries in which we, the companies with which we work or our customers do business. As a result, changes in various types of regulation could affect our business adversely. For example, it is in our interest that the Federal Communications Commission maintain a regulatory environment that ensures the continued growth of the wireless sector in the United States. In addition, changes in regulation affecting the construction of base stations and other network infrastructure could adversely affect the timing and costs of new network construction or expansion and the commercial launch and ultimate commercial success of these networks.

Moreover, the implementation of new technological or legal requirements, such as recycling requirements, could impact our products and solutions, manufacturing or distribution processes, and could affect the timing of product introductions, the cost of our production or products as well as their commercial success. Finally, tariff, environmental and other regulation that adversely affects the pricing of our products and solutions as well as new services related to our products could affect our net sales and operating profit. The impact of these changes in regulation could affect our business adversely even though the specific regulations do not directly apply to us or our products and solutions.

See "Item 4.B Business Overview Government Regulation."

***Our share price has been and may continue to be volatile in response to conditions in the global securities markets generally and in the communications and technology sectors in particular.***

Our share price has been subject to significant volatility, in part due to highly volatile securities markets generally, particularly for communications and technology companies' shares, as well as developments in our sales and operating profit. Factors other than Nokia's results of operations that may affect our share price include, among other things, market expectations of our performance, projected growth in the mobile handset and communications network markets, and any adverse changes in our brand value. In addition, our share price may be affected by factors such as the level of business activity or perceived growth (or the lack thereof) in the market in general, the performance of other technology companies, announcements by or the results of operations of our competitors, customers and suppliers, potential litigation involving ourselves or our industry, and announcements concerning the success of 3G mobile networks, products and services, as well as general market volatility. See "Item 9.A Offer and Listing Details" for information regarding the trading price history of our shares and ADSs.

**ITEM 4. INFORMATION ON THE COMPANY****4.A History and Development of the Company**

During our 137-year history, Nokia has evolved from a papermaking company to a conglomerate manufacturing multiple diverse products, and more recently to one of the world's leading mobile communications companies. Nokia Corporation was formed in 1967 through the merger of three Finnish companies: Nokia Ab, a wood pulp mill founded in 1865 which took its name from the nearby Nokia River, Finnish Rubber Works Ltd, a manufacturer of rubber boots, tires and other consumer and industrial rubber products founded in 1898, and Finnish Cable Works, a manufacturer of cable for power transmission and telegraph and telephone networks founded in 1912.

Nokia entered the telecommunications equipment market in 1960 when an electronics department was established at Finnish Cable Works, which concentrated on the production of radio transmission equipment. At the same time, we began to pursue several other unrelated business operations in order to diversify our manufacturing activities and protect against economic cycles.

In the 1980s, we strengthened our position in the telecommunications, consumer electronics and personal computer markets through the creation and acquisition of a number of companies. We introduced the first fully digital local telephone exchange in Europe in 1982 and the world's first car telephone for the Nordic Mobile Telephone analogue standard in 1984. In 1987, we acquired the consumer electronics operations and part of the components business of Standard Elektrik Lorenz of Germany, as well as the French consumer electronics company, Oceanic. At the beginning of 1988, we became Scandinavia's largest information technology company when we acquired Ericsson's information systems division.

In the early 1990s, we made a strategic decision to concentrate on telecommunications as our core business, with the goal of establishing a market-leading presence in every major global market. As a result, we began to divest our basic industry and non-telecommunications operations. During the period from 1989 to 1996, we sold our paper, personal computer, rubber, footwear, chemicals, power plant, cable, aluminum and television businesses.

We believe that Finland's openly competitive business climate and emphasis on innovation have contributed to our success. From the beginning of the telecommunications era, there have been several telecommunications operators in Finland, none of which was required or predisposed to purchase equipment from national suppliers. Finland's competitive marketplace initially permitted us to establish a market presence. Our need to export products to other markets to achieve growth, as well as our need to respond constantly to aggressive international competitors and customers, helped us to develop our business and products efficiently and build a leading competitive position.

Regulatory and technological advancements also have played a role in our success. The deregulation of the Finnish and European telecommunications industries since the late 1980s has stimulated competition and customer expectations. The technological breakthrough of GSM, which could carry data in addition to high quality voice, was followed by the European resolution, in 1987, to adopt GSM as the European digital standard by July 1, 1991. Finland met the deadline and the first GSM call was made with a Nokia phone over the Nokia-built network of Radiolinja. In the same year, we agreed to supply GSM networks to nine other European countries. During this period, GSM was also established as a standard in several Asian countries, opening important new markets for us. Our expertise in GSM technology has laid the foundation for our international success as a mobile network supplier.

Today, Nokia is comprised of two main business groups, Nokia Mobile Phones and Nokia Networks, together accounting for substantially all of our net sales in 2002, as well as Nokia

Ventures Organization, the corporate research unit Nokia Research Center and the common group functions. In addition to being the leading mobile phone supplier in the world, Nokia is one of the world's leading providers of mobile and Internet protocol, or IP, networks. For a detailed description of our business, see "Item 4.B Business Overview." We attribute much of our success to our unique corporate culture, which emphasizes and values product innovation, customer satisfaction and employees motivated by high levels of trust, independence and opportunities for personal and professional enrichment.



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During 2002, Nokia's aggregate capital expenditures totaled EUR 432 million compared with EUR 1,041 million in 2001 and EUR 1,580 million in 2000. For further information regarding capital expenditures see "Item 5.A Operating and Financial Review and Prospects Operating Results" and for a description of capital expenditures by business segment see note 2 to our consolidated financial statements included in Item 18 of this Form 20-F. It is worth noting that Nokia is not a capital intensive company in terms of fixed assets, but rather invests heavily in research and development, building the Nokia brand and marketing. We expect the amount of capital expenditure during 2003 to be somewhat higher than in 2002 and to be funded from cash generated from operations.

Nokia maintains listings on six major securities exchanges. Our principal executive office is located at Keilalahdentie 4, P.O. Box 226, FIN-00045 NOKIA GROUP, Espoo, Finland and our telephone number is +358 (0) 7 1800-8000. Our agent in the United States is Nokia Inc., 6000 Connection Drive, Irving, Texas, 75039, and its telephone number is +1 (972) 894-5000.

### 4.B Business Overview

Nokia is a world leader in mobile communications. We believe that it is our experience and innovation, combined with the user-friendliness, reliability and quality of our products and solutions that have made Nokia the world's leading supplier of mobile phones and a leading provider of mobile and IP networks.

For the 2002 financial year, Nokia's net sales totaled EUR 30.0 billion (USD 31.5 billion). At the end of 2002, we employed 51,748 people and had production facilities in nine countries, research and development centers in 14 countries and sales in over 130 countries, together with a global network of sales, customer service and other operational units.

While the world economy during 2002 had an inevitable impact on Nokia's sales growth, we increased our profitability and market share in 2002 compared to 2001 and ended the year with our highest ever net cash position of EUR 8.8 billion. In addition, we did not compromise on investments essential to future business success. We intend to remain at the forefront of our industry in providing useful and compelling ways for people to enrich their personal and work lives.

The core business strengths that we believe differentiate Nokia from its peers and enable us to maintain the leadership position in our industry can be summarized as follows:

**Brand as an asset:** Our leading brand enables higher profitability in terms of customer loyalty and greater market access and economies of scale, as well as allowing us to attract and retain the best suppliers and employees, which, in turn, brings higher productivity. In 2002, we invested in our brand by spending EUR 1,174 million in advertising and promotion, representing about 4% of net sales.

**Strong product offering:** Our strong product offering goes beyond voice centric mobile phones to include entirely new functional categories of mobile devices, such as enhanced communicators, entertainment devices and media and imaging phones.

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**Advanced technology:** Nokia is a frontrunner in developing leading technologies with 38% of our workforce employed in the area of research and development and about 10% of net sales (EUR 3,052 million) invested into research and development in 2002.

**Excellence in execution:** We have demonstrated our experience, efficiency and skill in execution and in managing our demand supply chain by delivering new ideas and technologies in product form at the right time, and in the right volumes to meet demand.

**Culture and values:** The "Nokia Way" is based on mutual respect and a willingness to work together in a constructive way towards continuous renewal. We see our strong values-based culture as a core competence, fundamental to our continuing success in our rapidly evolving industry.

Today, Nokia is comprised of two main business groups, Nokia Mobile Phones and Nokia Networks, together accounting for substantially all of our net sales in 2002, as well as Nokia Ventures Organization, the corporate research unit Nokia Research Center and the common group functions.

**Nokia Mobile Phones** is the world's largest mobile phone supplier. With our comprehensive product portfolio covering all consumer segments and mobile protocols, we believe that Nokia is in a strong position to lead the development of mobile communications, based on our vision of an increasing share of all personal communication whether voice, text, images or multimedia, or services and transactions occurring over personal wireless terminals such as mobile phones. The mobile phone is well suited to be the main application foundation and communication medium because it is made expressly to transmit information, it is easily personalized to meet individual needs and preferences, and it has penetrated every major global market. We seek to enable people to connect with one another and to various sources of services and information, regardless of time or place. In 2002, Nokia Mobile Phones represented approximately 77% of our net sales.

**Nokia Networks** is a leading provider of mobile and IP network infrastructure and related services. Nokia Networks aims to be a leader in IP mobility core, radio and broadband access for network operators and service providers. Nokia Networks also seeks to enable mobile multimedia and Internet applications, to achieve sustainable high value-added business with network operators and service providers and to become a preferred partner for major operators. In 2002, Nokia Networks represented approximately 22% of Nokia's net sales.

**Nokia Ventures Organization** exists to identify and develop new business ideas outside Nokia's current focus and to contribute to the growth and renewal of our existing core businesses. The division includes two established businesses: Nokia Internet Communications, which provides world-class IP security and virtual private network, or VPN, solutions for corporate enterprise and managed service provider networks, and Nokia Home Communications, which designs and manufactures digital communications solutions for the home environment. Nokia Ventures Organization also invests in Nokia Venture Partners, an independent venture capital firm investing in mobile and IP related start-up businesses. In addition, the division includes Insight and Foresight, which identifies new business opportunities; New Growth Businesses, which develops strategic new ideas into sustainable business; and the Nokia Early Stage Technology Fund, which provides seed financing for business ideas generated within Nokia. In 2002, Nokia Ventures Organization represented approximately 1% of our net sales.

### **Industry Overview**

We compete in the global telecommunications industry in general and in the mobile industry in particular. During 2002, the market for mobile phones showed slight overall volume growth, reflecting the arrival of feature-rich multimedia products supporting compelling new advanced mobile services. The mobile network infrastructure market showed an overall decline, largely as a result of network operators cutting back on their level of capital investments as they focused increasingly on short-term cash flow generation and debt reduction.

As the mobile industry evolves into new applications and services, cooperation among industry players has intensified, facilitating the faster adoption of mobile services as well as market growth for the entire mobile industry. Nokia, an active promoter of the Open Mobile Architecture initiative, launched in November 2001, was a founding member of the Open Mobile Alliance, which naturally evolved from this. Since its inception in June 2002, the Open Mobile Alliance has rapidly expanded from around 180 founding members to include more than 300 companies at December 31, 2002, representing leading mobile network operators, device and network suppliers, IT companies and content providers. The Open Mobile Alliance aims to deliver open standards for the mobile industry, helping to create interoperable services which work across countries, operators and mobile terminals.

### **The Mobile Phone Industry**

According to Nokia's preliminary estimates, the mobile phone market returned to growth in 2002, with overall market volumes reaching about 405 million units. This represents growth of more than 5% compared with volumes in 2001 of around 380 million units. Regionally, mobile phone market volumes continued to rise in Europe and Asia-Pacific, with about 8% market growth. Demand in the Americas is also estimated to have grown, by approximately 4% compared with the previous year.

Spurred by the launch of an increasing number of mass-volume products with color and multimedia messaging capability, business people and consumers from a large existing subscriber base became increasingly motivated in 2002 to upgrade their phones, or even look towards multiple

phone ownership. We believe that the replacement market is set to become the main driver for growth in the coming years. In 2002, the share of replacement sales was roughly half of all global mobile phone units sold.

In 2002, we estimate the global subscriber base to have grown to an estimated 1,125 million users, and project this number to exceed 1.5 billion users in 2005 as more and more individuals recognize the benefits of mobile services in their personal and work lives. Expectations are based on current subscriber growth rate estimates worldwide. Within this time frame, Europe is likely to remain the largest region in terms of the total number of mobile phone users, followed by Asia-Pacific, and then the Americas. Global penetration at the end of 2002 reached approximately 18%, with penetration having exceeded 80% in a number of European countries while reaching about 50% in the United States and about 16% in China.

We see new growth opportunities in this industry as the functionality of mobile devices extends from voice to new applications and services, such as imaging, games, entertainment and business applications. At the same time, technologies such as color, Java, MMS and XHTML have become tangible reality in the form of new device functionality, applications and services, contributing to the creation of entirely new communications markets.

For information regarding anticipated future trends as well as Nokia's forecasts concerning the mobile phone industry, see "Item 5.D Trend Information."

#### *The Mobile Networks Industry*

The mobile communications industry saw significant developments in the introduction of mobile data services during 2002. However, during 2002, the combined effects of a general economic slowdown and high 3G license costs induced most mobile network operators to focus increasingly on short-term cash flow generation and debt reduction while cutting back on their level of capital investments. As a result, the size of the overall mobile network infrastructure market decreased by approximately 20%, compared with the previous year.

The year brought the introduction of multimedia messaging, or MMS, which is being introduced in most major networks. Launched in March 2002, MMS has rapidly established itself around the world as the platform for the first mass market advanced mobile services. By the end of 2002, approximately 100 operators had begun offering MMS services with millions of individuals taking it into use.

The transition from existing second-generation networks to next-generation network technologies continued during 2002. Growth in wireless subscribers continues throughout the world with additional demand for capacity and quality. True wideband 3G networks are expected to provide the most cost-effective way to deliver this over the years to come. Of the 112 network operators who have been granted 3G licenses, well over 100 have selected WCDMA technology. Despite a slower than previously anticipated rollout pace, towards the close of the year, the first WCDMA networks were taken into pre-commercial and commercial use, with some further commercial WCDMA launches expected for the first half of 2003.

We expect the new high-speed and high-capacity networks to be more complex than traditional telecommunications networks. This will require the capability to integrate different elements in well-functioning systems and end-to-end solutions for mobile and fixed broadband networks. Today, operators or service providers can choose among a variety of solutions from different vendors for different network elements. In addition, we expect that infrastructure vendors like Nokia with strong end-to-end capabilities will have an advantage because they will be able to offer their customers the ability to deliver seamless Internet and Intranet application services for all types of networks. This means a broader choice and better quality of advanced mobile services available for business users and consumers.

For information regarding anticipated future trends as well as Nokia's forecasts concerning the mobile networks industry, see "Item 5.D Trend Information."

#### *The Internet Security Industry*

Protection of corporate digital assets has become a priority as companies extend network access to their employees, partners and customers. Maintaining the integrity and security of a company's information and protecting its network from unauthorized or fraudulent exploitation requires the installation of dedicated comprehensive appliance-based security solutions as well as the implementation of increasingly effective security policies.

While companies continue to deploy various security solutions including firewalls, they are also focusing on other essential security applications such as vulnerability assessment, intrusion detection, anti-virus and content security. Nevertheless, in 2002, overall information technology

spending was flat and the corporate network security market experienced slow growth.

### ***Business Strategy***

Our business objective is to strengthen our position as a leading communication products and systems provider. Our strategic intent, as the trusted brand, is to create personalized communication technology that enables people to shape their own mobile world. We innovate

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technology to allow people to access Internet applications, devices and services instantly, irrespective of time and place. Achieving interoperability of network environments, terminals and mobile services is a key part of our intent.

We intend to capitalize on our leadership role by continuing to enter segments of the communications market that we believe will experience rapid growth or grow faster than the industry as a whole. By expanding into these segments during the initial stages of their development, we have established Nokia as one of the world's leading players in wireless communications and significantly influenced the way in which voice and other services have been transferred to a wireless, mobile environment. As demand for wireless access to an increasing range of services accelerates, we plan to lead the development and commercialization of the higher capacity networks and systems required to make wireless content more accessible and rewarding to the end user. In the process, we plan to offer our customers unprecedented choice, speed and value.

Nokia has a history of contributing to the development of new technologies, products and systems for mobile communications. Recent examples include: our commitment to the Open Mobile Alliance; the co-development of a new operating system for future terminals with Symbian; short-range wireless connectivity with Bluetooth; wireless LANs for enabling local mobility in fixed LANs; and MMS for enabling mobile multimedia messaging. In addition, we continue to be active in IP convergence. Nokia has established alliances with service providers in order to make mobile access to services easier for the end user.

To achieve our strategic intent, our strategy focuses on:

Creating personalized communication technology;

Being the preferred provider of products and solutions for mobile communications;

Driving open standards, specifications and interoperability enabling a non-fragmented global mobile services market;

Strengthening and leveraging Nokia, the trusted brand; and

Expanding our business and market position on a global basis.

***Creating personalized communication technology:*** We want to strengthen our leadership position in converging personal digital terminal solutions. We capitalize on our understanding of user needs and our ability to meet and exceed user expectations providing user-friendly, highly functional personalized products and solutions. We build on our core competencies in various key areas, including design and product innovations, brand development, and effective demand/supply network management, to bring new product concepts and associated services to market.

***Being the preferred provider of products and solutions for mobile communications:*** We aim to position Nokia as the preferred provider of products and solutions for mobile communications by providing leading mobile devices and communications networks that enable end-to-end service delivery for both cellular and broadband networks. We develop leading high-capacity cellular networks, platforms and user applications for the mobile Internet, end-to-end broadband access solutions and Professional Mobile Radio systems.

***Driving open standards, specifications and interoperability enabling a non-fragmented global mobile services market:*** We continue to employ open standards in our technology in order to promote open competition and interoperability. Our key commitment is to create a global and open mobile software and services market. We aim to achieve this through working together with customers, suppliers and industry participants in the Open Mobile Alliance and other industry fora, and through a solid focus on end-to-end solutions in all our development

activities. By driving

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open standards, specifications and interoperability, our aim is to ensure the introduction of new, interoperable mobile services worldwide. This is expected to boost innovation by independent software producers as well as to provide consumers with a wide and varied selection of competitive, yet interoperable products and services.

***Strengthening and leveraging Nokia, the trusted brand:*** According to a variety of consumer surveys, the Nokia brand is associated with well-designed, high-quality and technologically advanced products and customer services that are also user-friendly. We have invested considerable resources in establishing the Nokia name as the leading brand in mobile communications. We intend to sustain and enhance the Nokia brand through active advertising, sponsorship and other marketing activities in all of our principal markets. We believe that our leading market position provides significant opportunities for Nokia to better understand and respond to the usage patterns of end users, and thus further enhance the Nokia brand.

***Expanding our business and market position on a global basis:*** For more than a decade, we have actively expanded our business globally. As a result, our mobile phones and network systems are produced and sold worldwide. We therefore benefit from strong economies of scale throughout our organization.

Our strategy is to continue our focused pursuit of global business opportunities by cultivating a strong local presence in all growing markets and pursuing partnering and investment opportunities in order to obtain complementary technologies and enhanced market positions.

#### ***Nokia Mobile Phones***

Nokia Mobile Phones develops mobile phones for all major standards and customer segments in over 130 countries. Nokia introduced the world's first car phone for the Nordic Mobile Telephone analogue standard in 1984. It weighed approximately 10 kilograms, or 22 pounds, and was used primarily as a business tool. Today, one of our smallest models, the Nokia 6610, weighs a mere 76 grams, or about 2½ ounces. Our mobile phones are used daily by virtually every demographic segment of the population, not only as a communications device, but as a social staple and fashion accessory.

Nokia's comprehensive product portfolio consists of several categories catering for the very diverse sets of values, needs, lifestyles and preferences of our consumers. Up until now category evolution has revolved predominantly around voice-centric models, driven mainly by style related aspects. We believe that future product portfolio expansion will be driven by emerging functional categories, enabled by a number of new technologies such as color, Java, MMS and XHTML, and the evolution from second generation to 2.5 and 3G technologies.

Nokia's product category matrix can be illustrated by six style categories (basic, expression, active, classic, fashion and premium) and five functional categories (voice, entertainment, media, imaging and business applications). The matrix helps to identify potential new products in each cross-section between style and function. By combining each of the styles with each of the functions, we should be increasingly able to address specific user needs. We believe for the different models to be successful, they need to be differentiated from one another in terms of features, functionality and design.

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#### **Nokia's product category matrix**

We believe that the comprehensiveness and competitiveness of our product portfolio is one of the key reasons that Nokia has succeeded as the world's leading mobile phone supplier. As a mobile phone supplier that aspires to maintain a leading global position, Nokia must be able to offer attractive, personally relevant products to multiple user segments and for various usage needs.

Nokia's value-adding strategy for continued market leadership is the ongoing addition of new features and functionality to our products. This means introducing new models within existing product categories, such as voice centric mobile phones, while at the same time developing entirely new functional categories of mobile devices such as enhanced communicators, entertainment devices and media and imaging phones. New applications such as MMS, content access and downloading and mobile browsing, are being implemented across product categories.

In 2002, Nokia Mobile Phones continued to renew its product line-up, launching a record 34 new products, incorporating color, imaging, multimedia, mobile games and polyphonic ring tones. Of the total new phones launched, 14 had color screens and multimedia capability. This attests to the growing share of feature-rich phones offering advanced mobile services in our product portfolio. During 2002, Nokia launched its first WCDMA 3G mobile phone, the Nokia 6650, which began deliveries to operators for testing in October 2002. We also commenced shipments of our first CDMA2000 1X mobile phones in the Americas. These included the Nokia 6370, the Nokia 6385, the Nokia 3585, and the Nokia 8280. In imaging, Nokia began shipping its iconic camera phone, the Nokia 7650, expanding the scope of the mobile market from voice to visual communications. In the enterprise segment, Nokia expanded its product offering from the Nokia Communicator 9200 series to include the Nokia 6800 messaging device, with full QWERTY keypad optimized for personal and enterprise mobile e-mail. In entertainment, Nokia announced it would bring mobility to gaming by offering console quality games for its new mobile game deck device category. Under a collaboration agreement with world leading games publisher, Sega, the two companies will develop games for the new Nokia N-Gage mobile game deck, which will run on the Nokia Series 60 platform and the Symbian operating system.

In January 2002, Nokia announced the creation of a new subsidiary and brand, Vertu, specializing in handcrafted, high-performance mobile phones. The first Vertu products were delivered in August 2002 and are now selling through a new distribution channel that consists of Vertu stores

in Paris and Singapore, client suites in London, New York, Beverly Hills, Singapore and Hong Kong, and selected luxury department and specialty stores internationally.

During 2002, Nokia Mobile Phones took steps to accelerate growth and enhance both agility and scale benefits with the introduction of a new operational structure. From May 1, 2002, nine new business units were each made responsible for product and business development within a defined market segment as follows:

**Mobile Phones** is continuing the development of Nokia's traditional voice centric mobile phones business. The unit will focus on bringing feature-rich segmented mobile phones to the market.

**Mobile Entry Products** aims to drive market expansion with the most affordable mobile devices particularly in emerging markets. The unit also plans to work with local mobile operators in creating attractively priced ownership concepts and service packages.

**Imaging** aims to drive strong profitable growth by leading the mobile industry from voice to visual communications. Key products include Nokia's first imaging phone, the Nokia 7650, the Nokia 3650 and Nokia's first WCDMA 3G phone, the Nokia 6650.

**Entertainment and Media** is responsible for making games, music and media mobile by creating mobile products and applications optimized for these kinds of content. A key product for 2003 is the Nokia N-Gage game deck device, which is optimized for mobile games.

**Business Applications** is responsible for developing and marketing devices and solutions that enable companies and corporations to make their employees more enterprising through mobile office solutions.

**Time Division Multiple Access (TDMA)** is responsible for developing and marketing mobile phones for TDMA technology, serving customers mainly in the Americas. The unit aims at maintaining our leading TDMA market share.

**Code-Division Multiple Access (CDMA)** aims to create a leading position in the CDMA markets by expanding our product portfolio, bringing selected key technologies to market and working closely with our mobile network operator customers in this business.

**Mobile Enhancements** aims to drive new elements of connectivity and the Nokia brand experience by creating and selling mobile enhancements and solutions that make consumers' lives easier, safer, more productive and fun.

**Mobile Services** aims to generate a revenue stream through close collaboration with operators to sell branded, Nokia device enhancing entertainment and personalization content and services to Nokia users.

We intend this new structure to allow us to optimize our activities in these vertically-focused areas, while continuing to achieve broad economies of scale from horizontal functions such as application software development and our demand supply network. As well, a global network of research and development centers in 14 countries delivers product designs to 10 regional manufacturing and distribution centers in eight countries. Customer sales are conducted through local sales organizations. Nokia's mobile phones are sold under the Nokia brand name, but occasionally are co-branded with an operator's brand.

For 2002, Nokia mobile phone volumes reached a record level of 152 million units, representing faster than market growth of 9%, compared with 2001. Based on our estimate of Nokia handset volumes sold in 2002 into the distribution channels as a percentage of estimated aggregate retail

unit sales, Nokia again increased its market share for the fifth consecutive year, reaching about 38% for 2002, compared to 37% for 2001, bringing us closer to our target of 40%.

The following table sets forth net sales, operating profit and average number of employees for Nokia Mobile Phones during the past three years.

***Nokia Mobile Phones Net Sales, Operating Profit and Average Number of Employees***

	Year ended December 31,		
	2002	2001	2000
	EUR million, except average number of employees		
Net sales	23,211	23,158	21,887
Operating profit	5,201	4,521	4,879
Average number of employees	26,090	27,320	27,353

The following table sets forth the regional distribution of net sales for Nokia Mobile Phones during the past three years.

*Nokia Mobile Phones Percentage of Net Sales by Region*

	2002	2001	2000
Europe	54%	48%	47%
Americas	22%	30%	32%
Asia-Pacific	24%	22%	21%
Total	100%	100%	100%

**Mobile Software**

In August 2001, the Nokia Mobile Software Unit was established. The objective of the Mobile Software Unit is to stimulate the innovation and growth of the mobile services industry by driving the creation and adoption of open standards, specifications and interoperability.

The Mobile Software Unit develops, markets and sells server-based solutions for mobile network operators, service providers and other enterprises, as well as software, such as the Series 60 terminal software platform, and separate terminal components, for Nokia Mobile Phones and other mobile phone manufacturers. During 2002, we saw further progress in mobile software licensing and announced Series 60 licensing agreements with Matsushita, Samsung, Siemens and Sendo, who together with Nokia represent approximately 60% of the total global mobile phone market.

Further, the Mobile Software Unit serves the software developer community of around one million members by offering support for application development and testing and by offering business-to-business and business-to-consumer opportunities for developers through two web-based marketplaces, Nokia Tradepoint and Nokia Software Market.

**Nokia Networks**

Nokia Networks is a leading provider of mobile and IP network infrastructure and related services. Nokia Networks aims to be a leader in IP mobility core, radio and broadband access for network operators and service providers. Nokia Networks also seeks to enable mobile multimedia and Internet applications, to achieve sustainable high value-added business with network operators and service providers and to become a preferred partner for major operators.

We design and build networks based primarily on GSM, GPRS, EDGE and WCDMA technologies, and our networks have been, or are expected to be, installed in all major global markets that have adopted these standards. In addition, we provide solutions based on WLAN and broadband wireless technologies, and are a leading supplier of MMS solutions. By the end of 2002, we had delivered MMS solutions to well over 40 customers in Europe, Asia and the Americas. About 60% of Nokia MMS solution customers have launched their commercial services.

By the end of 2002, Nokia had agreed to supply WCDMA networks to 37 customers. Nokia's WCDMA network coverage rollouts are ongoing, with volume deliveries to 25 operator customers having begun by the end of 2002. In September 2002, the first Nokia delivered WCDMA-based 3G network was taken into test use, while the first commercial launch of a Nokia-delivered WCDMA 3G network took place in December with J-Phone in Japan. Volume project deliveries of 800 and 1900 MHz GSM/EDGE infrastructure to US customers commenced in



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December 2001, and since October 2002 all base stations delivered by Nokia have been EDGE-capable. Volume deliveries of EDGE-capable base stations are also taking place throughout the world. For information regarding revenue recognition, see "Item 5.A Operating Results Critical accounting policies" and note 1 to our consolidated financial statements included in Item 18 of this Form 20-F.

Nokia Networks' accessible market contracted by around 15% during 2002, while its sales declined by 13%. This resulted in a slight market share increase for Nokia Networks in the mobile infrastructure market. Based on company estimates of equipment sales, at the end of 2002, Nokia had a leading position in GSM networks with a market share of over 25%, and commanded a 15-20% share of the total mobile network infrastructure market. Nokia does not expect conditions in this industry to improve markedly during 2003, with its own accessible market expected to decrease by a further 5-10%.

Network operators sometimes require their suppliers, including us, to arrange or provide long-term financing as a condition to obtaining or bidding on infrastructure projects. For information regarding our customer financing exposures please see note 34(b) to our consolidated financial statements; "Item 3.D Risk Factors Customer financing to network operators can be a competitive requirement and could affect our net sales, operating profit, balance sheet and cash flow adversely;" and Item 5.B "Liquidity and Capital Resources Customer Financing."

The following table sets forth net sales, operating profit and average number of employees for Nokia Networks during the past three years.

### *Nokia Networks Net Sales, Operating Profit (Loss) and Average Number of Employees 2002*

	Year ended December 31,		
	2002	2001	2000
	EUR (m), except average number of employees		
Net sales	6,539	7,534	7,714
Operating profit (loss)	(49)	(73)	1,358
Average number of employees	18,463	22,040	23,508

In addition, the following table sets forth the regional distribution of net sales for Nokia Networks during the same periods.

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### *Nokia Networks Percentage of Net Sales by Region*

	2002	2001	2000
Europe	52%	51%	60%
Americas	21%	11%	7%
Asia-Pacific	27%	38%	33%
Total	100%	100%	100%

#### *Nokia Networks Business Units*

Nokia Networks competes in four different business areas of the communications industry. Separate units within Nokia Networks address each of these areas:

***IP Mobility Networks*** develops mobile core and radio access network solutions, mobile messaging systems and service control platforms for network providers and operators. Our radio access network technologies include GSM, EDGE and WCDMA as well as WLAN, GPRS and broadband wireless. With respect to core networks, we develop both circuit- and packet-switched solutions, offering both evolutionary and revolutionary paths to all-IP networks. Our customers include mobile network operators from around the world.

**Broadband Systems** focuses on fast Internet networks, developing broadband DSL solutions for cost-effective, reliable and fast Internet access. Its customers include network providers and Internet service providers that serve both business and residential markets.

**Professional Mobile Radio** develops digital TETRA networks for radio communications. Customers include professional users, such as public safety and security organizations, as well as utility and transportation companies.

**Delivery Operations** consists of Product Operations and Delivery & Maintenance Services, and is responsible for advising on service provisioning and performance as well as implementing network operations.

### **Nokia Ventures Organization**

Nokia Ventures Organization exists to identify and develop new business ideas outside Nokia's current focus and to contribute to the growth and renewal of our existing core businesses. The division includes two established businesses: Nokia Internet Communications, which provides world-class IP security and VPN solutions for corporate enterprise and managed service provider networks, and Nokia Home Communications, which designs and manufactures digital communications solutions for the home environment. Nokia Ventures Organization also invests in Nokia Venture Partners, an independent venture capital firm investing in mobile and IP related start-up businesses. In addition, the division includes Insight and Foresight, which identifies new business opportunities; New Growth Businesses, which develops strategic new ideas into sustainable business; and the Nokia Early Stage Technology Fund, which provides seed financing for business ideas generated within Nokia.

Despite challenging market conditions in the corporate network security segment throughout 2002, sales for Nokia Internet Communications remained at approximately the same level as in 2001. However, lower-than-expected sales for Nokia Home Communications predominantly contributed to an overall decrease in sales at Nokia Ventures Organization.

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The following table sets forth net sales, operating profit (loss) and average number of employees for Nokia Ventures Organization during the past three years.

#### **Nokia Ventures Organization Net Sales, Operating Profit (Loss) and Average Number of Employees**

	<b>Year ended December 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>EUR million, except average number of employees</b>		
Net sales	459	585	854
Operating profit (loss)	(141)	(855)	(387)
Average number of employees	1,566	2,155	2,222

### **Nokia Internet Communications**

Nokia Internet Communications provides IP network security and VPN solutions designed to ensure the security and reliability of corporate enterprises and managed service-provider networks.

In 2002, revenue growth at Nokia Internet Communications continued to be adversely affected by the slowdown in information technology spending. While enterprises continue to rank spending on corporate network security as among their highest priorities, overall market growth in 2002 was flat.

Highlights for 2002 included the introduction of a record number of new products and solutions that both expanded Nokia's network security appliance portfolio and responded to emerging market opportunities. Extending mobility to enterprise workforces, protecting corporate e-mail content and providing firewall/VPN benefits to remote offices were areas that we addressed with new product offerings.

To address the need for new security applications to complement our own solutions, the Nokia Security Developers Alliance was launched in July 2002.

*Nokia Home Communications*

Nokia Home Communications develops digital satellite, terrestrial and cable television receivers for the home environment. During the year, Nokia began renewing its product portfolio with new receivers, such as the recently launched Nokia Mediamaster 230 S. Sales in 2002 for Nokia Home Communications clearly declined as the unit began a migration towards emerging horizontal markets with the launch of new types of terminals focused on horizontal terrestrial and satellite markets, providing digital viewers access to a broad range of digital services. Products, such as the Nokia Mediamaster 230 S, introduced Bluetooth-enabled interoperability to the home environment in the second half of 2002.

*Nokia Venture Partners*

With USD 610 million under management, Nokia Venture Partners continued to invest in mobile and IP related start-up businesses at an early stage, with investments typically ranging between USD 2 million and USD 10 million. The object of Nokia Venture Partners is to gain venture capital rate of returns and exposure to markets, technologies and business models beyond the reach of Nokia's current business unit strategies. One of Nokia Venture Partners' portfolio companies, PayPal, successfully staged an IPO in February 2002, and in October 2002, it was acquired by eBay.

***Research and Development***

Nokia believes that effective research and development is vital to remaining competitive in the industry. As of December 31, 2002, we employed 19,579 people in research and development centers in 14 countries, representing approximately 38% of Nokia's total workforce. During 2002, we increased our investments in research and development by 2% over 2001 (compared to an increase of 16% in 2001 over 2000) to EUR 3,052 billion, representing 10.2% of net sales (9.6% of net sales in 2001). We invest a substantial portion of our resources in research and development activities within our principal business units, as well as in the Nokia Research Center.

Nokia Mobile Phones' research and development strategy incorporates two aspects. First, we develop standard platforms incorporating characteristics and components that are often common across all mobile phone product lines. These platforms include industry standard components, such as microprocessors and semiconductors, which are partly purchased from outside suppliers and partly developed in house. The second aspect involves the development of high value-added software and radio technology designed according to specific system standards. We believe this two-stage strategy enables Nokia Mobile Phones to offer a full product range covering all major cellular standards with the minimum amount of specialization of components. As a result of this strategy, we have been able to outsource most of our components for our mobile phones, while concentrating our efforts primarily on the development of high value-added software. While Nokia develops most of its software in-house, some software elements, such as the Symbian operating system, are developed by outside partners.

Management believes that the mobile phone industry will be characterized by increasingly diverse product lines in the future, as a result of the introduction of new product standards and the development of different product features tailored to the specific needs and lifestyles of various user groups. Future research and development challenges will include the development of mobile phones for evolving digital standards and the introduction of new products incorporating new data transmission platforms and applications.

Nokia Networks' main research and development focus is on mobile networks and on the development of IP-based solutions, with the aim of facilitating the timely introduction of new solutions and enhance and upgrade existing products and solutions to meet the needs of operators and service providers. Several Nokia Networks products are based on Nokia-designed common platforms that are augmented with hardware and software designed to meet specific service requirements. Our use of standardized components enables us to avoid the extensive research and development costs necessary to develop proprietary hardware. The principle is to focus on our own core competencies and in other areas to cooperate with other industry leaders and universities. In October 2002, we commenced operations of the new global research and development center for 3G technology in Hangzhou, China.

An important aspect of our research and development activities relates to the safety of mobile phones. The World Health Organization, or WHO, has published an EMF Research Agenda, which recommends areas of further research that it believes must be explored in order to assess more accurately whether or not mobile phones pose a health risk. In 1998, Nokia and a number of other leading manufacturers pooled resources and created the Mobile Manufacturers Forum, a global association that supports research within a controlled framework in order to address the WHO's recommendations systematically.

Over the years, scientific research has been conducted with respect to the radio-frequency energy emitted by mobile phones and their base stations. Independent expert panels have reviewed the findings of this research and consistently concluded that there is no demonstrated health risk from these electromagnetic fields. We are, and will continue to be, committed to research into the use

of electromagnetic fields. By contributing to high-quality research programs globally, we support the development of a better scientific and public understanding of these issues.

Within Nokia Ventures Organization, research activities vary by business unit. Nokia Internet Communications focuses its research and development activities on network security. This includes TCP/IP networking, IPSec and operating system software, IP clustering and firewall technologies. Nokia Internet Communications also carries out development activities in network management, mobile VPN and connectivity areas.

Nokia Home Communications' research and development activities focus on in the creation of digital television receivers for the home environment. Nokia Home Communications is also investing in both basic technology research and development of new products based on current and evolving market standards. Key technology areas include digital TV standards, such as the Digital Video Broadcast (DVB) standard, Multimedia Home Platform (MHP) and Advanced Television Enhancement Forum (ATVEF) specification.

#### *Nokia Research Center*

The corporate research unit, Nokia Research Center, strives to enhance Nokia's technological competitiveness and renewal through world-class leadership in technology areas vital to the company's future success. Interacting closely with all Nokia business units, the research center drives and supports Nokia's evolving core businesses by developing new concepts, technologies, and applications. With the responsibility to focus beyond current product development, the research center aggressively develops emerging technologies, also acting as an incubator for new technology-oriented ventures.

To keep up to date with and influence the latest technological developments around the world, Nokia Research Center maintains strong global contacts. It actively participates in standardization work and various international R&D projects in cooperation with universities, research institutes, and other companies.

#### **Production**

Nokia operated 17 manufacturing facilities in nine countries around the world at December 31, 2002. Our principal supply requirements are for electronic components, such as semiconductors, microprocessors, micro controllers, memory devices and displays, which have a wide range of applications in our communications products. Our products also incorporate software provided by third parties. Although we have not experienced significant shortages of components to date, from time to time suppliers may extend lead times, limit supplies or increase prices due to capacity constraints or other factors.

#### *Nokia Mobile Phones*

We consider our mobile phone manufacturing to be a core competency and competitive advantage. Nokia Mobile Phones currently operates 10 manufacturing plants in nine countries. Our US plant primarily supplies the American markets, as do our manufacturing plants in Mexico and Brazil. Three major European plants, located in Finland, Germany and Hungary, principally supply the European market and non-European countries that have adopted the GSM standard. In addition, we have a manufacturing plant in the United Kingdom serving Nokia's UK subsidiary, Vertu. We have two plants in China and one in South Korea that primarily supply the Asian markets. We use outsourcing to complement our manufacturing activities. During 2002, outsourcing covered an estimated 15-20% of our manufacturing volume of mobile phones, and we do not expect it to increase materially in the future.

In the past several years, we have made significant capital investments in order to automate our mobile phone manufacturing facilities further. Each of our mobile phone plants deploys state-of-the-art technology and is highly automated. Although our plants generally manufacture for the technical standards of local geographic markets, each plant is capable of providing mobile phones for most of the world's major standards. As a

result of this capability, we believe we are able to respond rapidly to the needs of different geographic markets. In order to increase flexibility, we may also use contract manufacturing for accessories and mobile phone assembly.

Consistent with industry practice, we source a large portion of components for our mobile phones from a global network of suppliers. Although these components may experience some price volatility from time to time, we purchase the majority of our components through long-term contracts. Management believes that these business relationships are stable and typically involve a high degree of cooperation with respect to research and development, product design and manufacturing. See "Item 3.D Risk Factors We depend on our suppliers for the timely delivery of components and for their compliance with our supplier requirements, such as, most notably, our product quality standards. Their failure to do so could adversely affect our ability to deliver our products successfully and on time." Most raw materials that are used in Nokia mobile phone products, including semiconductor chips, keypads, displays, covers and plastic casings, are sourced and manufactured by third party suppliers. We then assemble these components and activate the phone with our own software.

We aim to manage our component inventory to achieve the level of production required to meet the demand for our products, while minimizing inventory-carrying costs. The inventory level of components that we maintain is a function of a number of factors, including estimates of demand for each product category, product price levels, the availability of raw materials, supply chain integration with suppliers, and the rate of technological change. From time to time, our inventory levels of components may differ from actual requirements.

#### *Nokia Networks*

Nokia Networks had seven production facilities at December 31, 2002: four in Finland and three in China. In line with our strategy to invest resources in key areas to improve efficiency, over 60% of Nokia Networks' production is currently outsourced, as well as some support activities.

Nokia generally prefers to have multiple sources for its components, but Nokia Networks sources some components for its telecommunications systems from a single or a small number of selected suppliers. As is the case with suppliers to Nokia Mobile Phones, management believes that these business relationships are stable and typically involve a high degree of cooperation with respect to research and development, product design and manufacturing in order to ensure optimal interoperability of products. See "Item 3.D Risk Factors We depend on our suppliers for the timely delivery of components and for their compliance with our supplier requirements, such as, most notably, our product quality standards. Their failure to do so could adversely affect our ability to deliver our products successfully and on time."

Some components and subassemblies for Nokia Networks' products, including Nokia-specific integrated circuits and radio frequency components, servers, subassemblies such as filters, combiners and power units, cabinets and Nokia-specific connectors, are sourced and manufactured by third party suppliers. Our strategy is to focus on core competencies in our own operations and to work together with world-class companies in areas outside these core areas. This strategy enhances our flexibility and reaction speed, and helps to further increase our competitiveness in the telecommunications infrastructure market. We then assemble components and subassemblies into final products and solutions.

Consistent with industry practice, we manufacture our telecommunications systems on a contract-by-contract basis.

#### *Nokia Ventures Organization*

Nokia Ventures Organization has outsourced the production of multimedia terminals and Internet security products to third party contract manufacturers with factories in China, Malaysia, Mexico and Romania. In addition, it participates in a joint venture to manufacture multimedia terminals in China. The other business units of Nokia Ventures Organization do not engage in manufacturing activities as their products are still under development.

#### *Marketing Channels*

Continuous strengthening of the Nokia brand is a critical component in our overall corporate strategy. According to a survey published in July 2002 by Interbrand, the Nokia brand was recognized by participants as the sixth most valued brand in the world. We have invested heavily in print and broadcast advertising, such as our "Connecting People" campaign, as well as sponsorship of a variety of sporting and leisure events, including the Nokia FIS snowboard world cup tour and the Nokia Sugar Bowl. We also promote our products by sponsoring movies, such as the recent hit *Minority Report*, in which Nokia phones feature among the lead characters.

Nokia Mobile Phones' consumer marketing utilizes a comprehensive mix of print and broadcast media, point-of-sale support material and the Internet. A major part of our handset sales are made via operators, distributors and independent retailers, as well as a small amount through NokiaUSA.com. Product marketing is done partly through our own campaigns and sales promotions and partly through initiatives driven by operator and distributor customers, such as the inclusion of a Nokia phone with an operator's promotional campaign.

As the popularity of mobile phones increases worldwide, manufacturers must address an extremely diverse audience with their marketing communications. Different dimensions of identified user segments, beyond geographic and cultural dimensions, must be considered. We believe that we are able to reach out to people with relevant messages because we have developed an expertise in understanding user needs and behaviors, incorporating a sound consumer segmentation methodology. This methodology evaluates a variety of factors relevant to our mobile phone users, including the benefits that users hope to derive from their mobile device, and their lifestyle, demographics and psychological profiles.

The core of Nokia Networks' marketing and sales channels comprise dedicated global account management teams for operator customers. Product marketing is carried out primarily through our own campaigns and promotions. These include, amongst others, our participation in the annual 3GSM conference in Cannes, direct e-marketing and bringing live demonstrations of the latest mobile network technologies to our operator customers.

### ***Corporate Responsibility***

Mobile communications has a lot to offer sustainable development in that it offers an opportunity to reduce energy consumption and the use of materials. In addition, it can stimulate economic development and social well being, gives people a voice and enables widespread information sharing.

As market leader and a leading world brand, our impact on society comes with responsibilities that go beyond providing useful, safe and quality products. For instance, how well will mobile communications help bridge the digital divide, how are environmental needs catered for in our product design and life-cycle thinking, how are working conditions protected within our own

company and in our supply chain, and how can we make mobile communications universal while respecting local economies and cultures.

We believe that it makes business sense to look after the markets we operate in, to anticipate risks, demonstrate company values, work at increasing employee satisfaction, enhance corporate governance principles, protect the Nokia brand and build a reputation for citizenship.

During 2002, we made clear progress in the area of corporate responsibility. Developments included the expansion of our global community involvement program (Make a Connection) to 12 countries, reaching over one million people; the introduction of a companywide diversity program aimed at preventing discrimination and increasing the productivity and innovation of teams; and further development and increased transparency in our product life-cycle management (related to our work in design for environment, supplier network management, manufacturing and end-of-life practices).

Understanding what different stakeholders want from us as a company is just as important as understanding customer needs for our products. Nokia believes that translating stakeholder expectations into business value is key to future success. In addition to our existing internal and external channels, in 2002, for the first time, we initiated discussion groups with employees and consumers in several countries on ethical issues, including the environment.

Nokia is actively participating in a number of international initiatives, such as those of Global Compact, UN ICT Task Force, International Youth Foundation, World Business Council for Sustainable Development and WWF. As a result of our performance in economic, environmental and social issues, and increased transparency in reporting, Nokia was again included in Socially Responsible Investment, or SRI, benchmarks, such as the Dow Jones Sustainability Indexes and the FTSE4Good.

In 2002, Nokia was the top stock held by SRI funds in Europe, according to an analysis of European SRI funds by the Sustainable Investment Research International Group (SiRi), a coalition of 12 national SRI research bodies.

### ***Employee Development The "Nokia Way"***

Fundamental to our success is the "Nokia Way" for all personnel. The Nokia Way is a philosophy of attracting and retaining the best people and maintaining continuous renewal. We strive to instill in each employee a set of four core values—customer satisfaction, respect for the individual, achievement, and continuous learning—that we believe are critical for a global organization such as Nokia to work together effectively. In addition, our management cultivates an attitude of trust, responsibility and open-mindedness, which allows them to build teams of independent entrepreneurs that are permitted to take chances and even make occasional mistakes. The result is a culture in which decisions can be, and are, made quickly, and employees are energized and driven by a desire to win. We believe that this type of corporate culture is essential for us to prevail in the rapidly changing mobile communications industry.

In a move to further attract, engage and retain a skilled workforce, Nokia in 2002 developed an employee value proposition framework. The adaptation and implementation of this has already started at country levels to reflect and respond to local employee needs and expectations. The four fundamentals of the proposition, together with the elements encompassed by each of them, are as follows:

***Nokia Way and Values:*** fact-based management/value-based leadership, code of conduct, equal opportunities, diversity, internal communications and feedback channels.

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***Performance-based rewarding:*** base pay and benefits, stock options, Nokia connecting people bonus and incentive payments.

***Professional and personal growth:*** career development, job rotation, training and performance management.

***Work life balance:*** health & safety (physical and mental), flexible working hours, telecommuting opportunities and leave.

## ***Competition***

### ***Nokia Mobile Phones***

Our principal competitors on a global basis currently include Motorola, Samsung, Siemens and SonyEricsson, although we also compete with a number of regional players and a variety of other companies.

The mobile phone market is very competitive. We face challenges from other established market participants, as well as from new entrants, including those that have traditionally focused on different segments of the consumer electronics industry. The competitive environment is characterized by rapid changes in both technology and markets. As well, with the expansion of Nokia's business into games, imaging and enterprise applications, we may encounter increased competition in our handset business from the consumer electronics and PC industries. See "Item 3.D Risk Factors—Changes in the communications industry are expected to increase competition and change the competitive landscape and may affect our sales and operating profit negatively."

Mobile phone manufacturers compete with one another from widely differing positions. Nokia alone has a market share of approximately 38%, based on our estimate of Nokia handset volumes sold in 2002 into the distribution channels as a percentage of estimated aggregate retail unit sales. This represents roughly the combined share of the three next biggest manufacturers.

We compete in different product markets based on a number of factors, including, among other things, price, technical performance, product features, availability, product quality, sales and technical support, and brand recognition. Our ability to compete successfully depends on factors both within and outside of our control in our most important markets. These include the successful and timely development of new products, product performance and quality, manufacturing efficiency, product availability, customer service, pricing, industry trends, economic factors and other country-specific or market-related factors, such as changing regulatory or government policies.

### ***Nokia Networks***

In the networks business, our principal competitors include Alcatel, Ericsson, Nortel, Motorola and Siemens. Competition among vendors is increasingly intense as operators make additional investments in GSM and select new vendors in connection with developing their 3G

businesses.

### ***Seasonality***

Our mobile phone sales are somewhat affected by seasonality. Historically, the first quarter of the year is characterized by slightly lower sales than the fourth quarter, due to the effect of holiday sales. The second quarter of the year is also typically another high season, as consumers in the Northern Hemisphere prepare for summer vacations. The third quarter is usually slower than the second and fourth quarters, as consumers postpone purchases until the holiday season.

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Our network business has also experienced some seasonality during the last few years. Sales have been higher in the last quarter of the year compared with the first quarter of the following year, due to operators' planning and budgeting reasons. However, this pattern might change as new markets evolve.

### ***Patents and Licenses***

The detailed designs of our products are based primarily on our own research and development, work and design and comply with all relevant public standards. We intensively seek to safeguard our investments in technology through adequate patent protection including design patents, trademark registrations and copyrights that are used to protect proprietary features of our products. In 2002, we filed new patent applications for more than 1,200 new inventions.

Nokia is a holder of several essential patents for various telecommunications standards. An essential patent covers a feature that is incorporated into a public standard that all manufacturers are required to meet. In accordance with the rules of standardization bodies such as the European Telecommunication Standardization Institute, we are committed to promoting open standards by granting licenses on a fair, reasonable and non-discriminatory basis. We have entered into several license agreements with other companies relating to essential patents and other patents. Many of these agreements are cross-license agreements with major telecommunications companies that cover broad product areas and allow Nokia to choose its preferred product design.

Despite the steps that we have taken to protect our intellectual property rights, we cannot be certain that any rights or pending applications will be granted or that the rights granted in connection with any future patents will be sufficiently broad to protect our technology. Any patents that are granted to us may be challenged, invalidated or circumvented, and any right granted under our patents may not provide competitive advantages for Nokia.

In addition, with the introduction of 3G, mobile data and other evolving technologies, such as those enabling multimedia services, our products increasingly include complex technological solutions that incorporate a variety of patented and proprietary technologies. A 3G mobile handset, for example, may incorporate three times as many components, including substantially more complex software, as our GSM phones. As the number of entrants in the market grows, as the Nokia product range becomes more diversified, and as the complexity of the technology and the overlap of product functionalities increase, the possibility of an inadvertent infringement and related intellectual property claim against us increases. There may be patents and patent owners relevant to our product lines that are unknown to us. In addition, although we endeavor to ensure that companies that work with us possess appropriate intellectual property rights, we recognize that we cannot fully avoid risks of intellectual property rights infringement created by companies with which we work in cooperative research and development activities. Similarly, we or our customers may face claims of infringement in connection with our customers' use of our products and solutions. It is therefore more likely that we will be required to obtain additional licenses or that some of the components in these handsets will be protected by intellectual property rights of which we are unaware, potentially causing us to infringe the rights of others inadvertently.

The business models for mobile services have not yet been established in many aspects. The unavailability of licenses for copyrighted content, delayed negotiations or restrictive copyright licensing terms may have an adverse effect on the cost or timing of content-related services by us, operators or third party service providers, and may also indirectly affect the sales of our handsets.

From time to time we are subject to patent claims from third parties. We believe that, based on industry practice, any necessary licenses or rights under patents that we may require can be obtained on terms that would not have a material adverse effect on our business, results of

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operations or financial condition. Nevertheless, necessary licenses may not be available on acceptable terms, if at all. The inability to obtain necessary licenses or other rights or the need to engage in litigation could have a material adverse effect on our business, results of operations and financial condition. See "Item 3.D Risk Factors As our products and solutions include complex technology involving patented and other proprietary technologies, we face a risk of claims that we have infringed third parties' intellectual property rights. These may result in costly and time-consuming litigation, the invalidation of intellectual property rights on which we depend or increased licensing costs for us to be able to utilize these rights."

#### **Government Regulation**

Our products are subject to various Federal Communications Commission, or FCC, regulations in the United States. FCC regulation of the commercial mobile radio service industry has a direct and substantial impact on our business. It is in our interest that the FCC maintains a regulatory environment that ensures the continued robust growth of the wireless sector in the United States. FCC type acceptance regulations require that our products meet specified radio frequency emission standards and not cause unallowable interference with other services. It is very important to our business that the FCC, along with other US government agencies, take actions to ensure that sufficient spectrum is made available to meet the demand for advanced, next generation, wireless services. In addition, a continued deregulatory and pro-competitive approach by the FCC and other agencies toward the Internet and the delivery of advanced communications services should allow us to expand our business operations by offering businesses and consumers new and innovative communications products and services.

EU regulation in many areas has a direct effect on the business of Nokia and our customers within the single market of the European Union. In February 2002, the Council of Ministers adopted a telecommunications package consisting of a general framework directive on electronic communications and services and three specific directives relating to authorization, access and interconnection, and universal service and users' rights. A fourth, and final, directive was adopted in July 2002, relating to privacy and data protection. Together these directives provide a new harmonized EU regulatory framework for all types of electronic communication networks and services that aims to increase competition in the communications sector. EU Member States have 15 months to implement these directives into their national laws, and are currently in the process of doing so. In addition, in recent years, a number of EU regulatory measures have been introduced to open telecommunications competition and to address consumer protection and environmental policy issues relating to the sector. For example, a directive was adopted in September 2002, aiming to reduce national regulatory obstacles by eliminating exclusive or special rights to electronic communications networks and services. We are in a continuous dialogue with the EU institutions through our experts, industry associations and our office in Brussels.

Our business is subject to direct and indirect regulation in each of the countries in which we or our customers do business. As a result, changes in various types of regulation could affect our business adversely. For example, it is in our interest that the Federal Communications Commission maintain a regulatory environment that ensures the continued growth of the wireless sector in the United States. In addition, changes in regulation affecting the construction of base stations and other network infrastructure could adversely affect the timing and costs of new network construction or expansion and the commercial launch and ultimate commercial success of these networks.

Moreover, the implementation of new technological or legal requirements, such as recycling requirements, could impact our products and solutions, manufacturing or distribution processes, and could affect the timing of product introductions, the cost of our production or products as well as their commercial success. Finally, tariff, environmental and other regulation that adversely

affects the pricing of our products and solutions as well as new services related to our products could affect our net sales and operating profit. The impact of these changes in regulation could affect our business adversely even though the specific regulations do not directly apply to us or our products and solutions.

#### **4.C Organizational Structure**

The following is a list of Nokia's significant subsidiaries as of December 31, 2002:

<b>Company</b>	<b>Country of Incorporation</b>	<b>Nokia Ownership Interest</b>	<b>Nokia Voting Interest</b>
Nokia Inc.	United States	100%	100%
Nokia GmbH	Germany	100%	100%
Nokia UK Limited	England & Wales	100%	100%

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Company	Country of Incorporation	Nokia Ownership Interest	Nokia Voting Interest
Nokia TMC Limited	South Korea	100%	100%
Beijing Capitel Nokia Mobile Telecommunications Ltd	China	50%	50%
Nokia Finance International B.V .	The Netherlands	100%	100%
Nokia Komárom Kft	Hungary	100%	100%
Nokia do Brazil Technologia Ltda	Brazil	100%	100%
Nokia Italia Spa	Italy	100%	100%
Nokia France S.A.	France	100%	100%
Dongguan Nokia Mobile Phones Company Ltd	China	70%	70%
Beijing Nokia Hang Xing Telecommunications Systems Co. Ltd	China	69%	69%

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#### 4.D Property, Plants and Equipment

At December 31, 2002, Nokia owned 17 manufacturing facilities in nine countries around the world. None of these facilities is subject to a material encumbrance. The following is a list of their location, use and capacity:

Country	Location and Product	Productive Capacity, Net (m <sup>2</sup> ) <sup>(1)</sup>
BRAZIL	NG Industrial Limitada, Manaus (mobile phones)	15,197
CHINA	Beijing Nokia Hang Xing Telecommunications Co Ltd, Beijing (switching systems, base station controllers, transcoders)	5,101
	Beijing Capitel Nokia Mobile Telecommunications Ltd, Beijing (mobile phones and base stations)	28,902
	Dongguan Nokia Mobile Phones Company Ltd, Dongguan (mobile phones)	9,973
	Nokia Citic Digital Technology Co (Beijing) Ltd, Beijing (multimedia terminals)	500
	Nokia (Suzhou) Telecommunications Co, Ltd, Suzhou (base stations and cellular network transmission products)	7,650
FINLAND	Nokia Mobile Phones, Salo (mobile phones)	43,394
	Nokia Networks, Espoo (switching systems, base station controllers, transcoders)	4,999
	Nokia Networks, Espoo (radio access products)	9,028
	Nokia Networks, Limingantulli (plug-in units for both GSM and WCDMA base station product families)	8,357
	Nokia Networks, Rusko (base stations)	13,633
GERMANY	Nokia Mobile Phones Produktions GmbH, Bochum (mobile phones)	26,019
HUNGARY	Nokia Komárom (mobile phones)	9,742
MEXICO	Nokia Mexico S.A. de CV, Tampas (mobile phone batteries, mobile phones)	9,102
REPUBLIC OF KOREA	Nokia TMC Ltd, Masan (mobile phones)	25,000
UNITED KINGDOM	Nokia UK Ltd, Fleet (mobile phones)	2,069
UNITED STATES	Nokia Inc. (Alliance), Fort Worth, Texas (mobile phones)	26,201

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- (1) Productive capacity equals the total area allotted to manufacturing and to the storage of manufacturing-related materials.

## **ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

### **5.A Operating Results**

The following discussion and analysis by management of our operating and financial results should be read in conjunction with our consolidated financial statements included in Item 18 of this Form 20-F. Our consolidated financial statements and the financial information discussed below have been prepared in accordance with IAS. For a discussion of the principal differences between IAS and US GAAP, see "Principal Differences between IAS and US GAAP" and note 36 to our consolidated financial statements.

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Business segment data in the following discussion and analysis is prior to inter-segment eliminations. See note 2 to our consolidated financial statements.

#### ***Introduction***

At Nokia, one of our top priorities is to continue to strengthen our leading market position in a profitable way. We believe that further market share gains are key to expanding our customer base and growing our future business potential. Our leading position also enhances the positive effects of our economies of scale, which we believe should strengthen our competitive position in the next generations of mobile communications. We have invested heavily in research and development, introducing new products and creating increased consumer recognition of the Nokia brand. In addition, we have expanded the global reach of our operations substantially by establishing manufacturing facilities, distribution centers and sales and support services in a number of our markets. We currently have manufacturing facilities in nine countries and research and development centers in 14 countries and supply our products in over 130 countries worldwide. In 2002, 54% of our net sales originated from Europe, 24% from Asia-Pacific and 22% from the Americas. Based on sales, the ten largest markets in 2002 were the United States, the United Kingdom, China, Germany, Italy, France, United Arab Emirates, Thailand, Brazil and Poland, representing 60% of total sales.

For further information regarding our business and operations please see "Item 4 Information on the Company."

#### ***Critical accounting policies***

Our accounting policies affecting our financial condition and results of operations are more fully described in note 1 to our consolidated financial statements included in Item 18 of this Form 20-F. Certain of Nokia's accounting policies require the application of judgment by management in selecting appropriate assumptions for calculating financial estimates, which inherently contain some degree of uncertainty. Management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the reported carrying values of assets and liabilities and the reported amounts of revenues and expenses that may not be readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Nokia believes the following are the critical accounting policies and related judgments and estimates used in the preparation of its consolidated financial statements.

#### ***Revenue recognition***

The majority of Nokia Networks' revenue is derived from projects providing a customer specific solution consisting of complex telecommunication equipment and services modified to customer needs.

Revenue is recognized from these projects on the percentage of completion basis. Completion is generally measured by reference to costs incurred to date as a percentage of estimated total project costs. The milestone output method is applied when the nature of the individual project indicates that a milestone method is the most applicable measure of progress.

The percentage of completion method relies on estimates of total expected contract revenue and costs, as well as the dependable measurement of the progress made towards completing the particular project. Recognized revenues and profit are subject to revisions during the project in the event that the assumptions regarding the overall project outcome are revised. The cumulative

impact of a revision in estimates is recorded in the period such revisions become known and estimable. Losses on projects in progress are recognized immediately when known and estimable.

Revenue recognition on initial 3G network contracts started in 2002 when Nokia Networks reached the relevant milestones for its single-mode and dual-mode WCDMA 3G systems.

Nokia's current sales and profit estimates for projects may change due to the early stage of a long-term project, new technology, changes in the project scope, changes in costs, changes in timing, changes in customers' plans, realization of penalties, and other corresponding factors.

Nokia Mobile Phones' and Nokia Ventures Organization's, as well as certain of Nokia Networks', revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed and determinable and collectibility is probable. This requires us to assess at the point of delivery whether these criteria have been met. Upon making such assessment, revenue is recognized. In particular, Nokia records estimated reductions to revenue for customer programs and incentive offerings, including special pricing agreements, price protection and other volume based discounts, mainly in the mobile phone business. Sales adjustments for volume based discount programs are estimated based largely on historical activity under similar programs. Price protection adjustments are based on estimates of future price reductions and certain agreed customer inventories at the date of the price adjustment.

#### *Customer financing*

We have extended a significant amount of customer financing to selected customers in our Nokia Networks business. In establishing the arrangements, management must assess the creditworthiness of the customer and the timing of cash flows expected to be received under the arrangement. However, should the actual financial position of our customers or general economic conditions differ from our assumptions, we may be required to re-assess the ultimate collectibility of such financings, which could result in a write-off of these balances in future periods and thus negatively impact our profits in future periods. Our assessment of the net recoverable value considers the collateral and security arrangements of the receivable as well as the likelihood and timing of estimated collections. See note 34(b) to our consolidated financial statements for a further discussion of long-term customer loans.

The carrying value of the customer financing extended to MobilCom was written down in 2002 to the estimated fair value of the subordinated convertible perpetual bonds of France Telecom that Nokia expects to receive as repayment for the loans to MobilCom. The most significant assumptions used in determining the estimated fair value of the bonds were the likelihood of approval of the transaction by the respective boards and shareholders of MobilCom and France Telecom, discount rates, creditworthiness of France Telecom, volatility of France Telecom's share price and expected interest rates to be received. Should the ultimate collectibility of the amounts due from MobilCom differ from the current carrying value, an additional adjustment to this balance could be required in future periods, potentially negatively impacting our future profits.

#### *Allowances for doubtful accounts*

We maintain allowances for doubtful accounts for estimated losses resulting from the subsequent inability of our customers to make required payments. If the financial conditions of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required in future periods. Management specifically analyzes accounts receivables and analyzes historical bad debt, customer concentrations, customer creditworthiness, current economic trends and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts.

#### *Inventory-related allowances*

We periodically review our inventory for obsolescence and declines in market value below cost and record an allowance against the inventory balance for any such declines. These reviews require management to estimate future demand for our products. Possible changes in these

estimates could result in revisions to the valuation of inventory.

*Warranty provisions*

We provide for the estimated cost of product warranties at the time revenue is recognized. Nokia's products are covered by product warranty plans of varying periods, depending on local practices and regulations. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers, our warranty obligations are affected by actual product failure rates (field failure rates) and by material usage and service delivery costs incurred in correcting a product failure. Our warranty provision is established on our best estimates of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. While we believe that our warranty provisions are adequate and that the judgment applied is appropriate, such amounts estimated to be due and payable could differ materially from what will actually transpire in the future. As our new advanced products incorporate complex, evolving technologies including next generation technologies, as we continue to introduce new products frequently, and as local practices and regulations may change, it will be increasingly difficult to anticipate our failure rates and length of warranty periods. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

*Provision for intellectual property rights, or IPR, infringements*

We provide for the estimated future settlements related to asserted and unasserted IPR infringements based on the probable outcome of each infringement. The ultimate outcome or actual cost of settling an individual infringement may vary from our estimates.

*Capitalized development costs*

We capitalize certain development costs when it is probable that a development project will be a success and certain criteria, including commercial and technological feasibility, have been met. These costs are then amortized on a systematic basis over their expected useful lives, which due to the constant development of new technologies is between two to five years. During the development stage, management must estimate the commercial and technological feasibility of these projects as well as their expected useful lives. Should a product fail to substantiate its estimated feasibility or life cycle, we may be required to write off excess development costs in future periods.

*Valuation of long-lived and intangible assets and goodwill*

We assess the carrying value of identifiable intangible assets, long-lived assets and goodwill annually, or more frequently if events or changes in circumstances indicate that such carrying value may not be recoverable. Factors we consider important, which could trigger an impairment review, include the following:

significant underperformance relative to expected historical or projected future results;

significant changes in the manner of our use of the acquired assets or the strategy for our overall business; and

significant negative industry or economic trends.

When we determine that the carrying value of intangible assets, long-lived assets or goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any impairment based on a projected discounted cash flow.

This review is based upon our projections of anticipated future cash flows. The most significant variables in determining cash flows are discount rates, terminal values and the number of years on which to base the cash flow projections. Management determines discount rates to be used based on the risk inherent in the related activity's current business model compared to Nokia's internal rate of return and industry comparisons. Terminal values are based on the expected life of products and forecasted life cycle and forecasted cash flows over that period. While we believe that our assumptions are appropriate, such amounts estimated could differ materially from what will actually occur in the future. For IAS these discounted cash flows are prepared at a cash generating unit level, and for US GAAP these cash flows are prepared at a reporting unit level. Consequently, an impairment could be required under IAS and not US GAAP or vice versa.

*Deferred taxes*

Management judgment is required in determining our provision for income taxes, deferred tax assets and liabilities and the extent to which deferred tax assets can be recognized. We recognize deferred tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences and unused tax losses can be utilized. We have considered future taxable income and tax planning strategies in assessing whether deferred tax assets should be recognized.

*Pensions*

The determination of our pension benefit obligation and expense for defined benefit pension plans is dependent on our selection of certain assumptions used by actuaries in calculating such amounts. Those assumptions are described in note 5 to our consolidated financial statements and include, among others, the discount rate, expected long-term rate of return on plan assets and annual rate of increase in future compensation levels. A portion of our plan assets is invested in equity securities. The equity markets have experienced volatility, which has affected the value of our pension plan assets. This volatility may make it difficult to estimate the long-term rate of return on plan assets. Actual results that differ from our assumptions are accumulated and amortized over future periods and therefore generally affect our recognized expense and recorded obligation in such future periods. Our assumptions are based on actual historical experience and external data regarding compensation and discount rate trends. While we believe that our assumptions are appropriate, significant differences in our actual experience or significant changes in our assumptions may materially affect our pension obligation and our future expense.

**Results of Operations**

The following table sets forth the net sales and operating profit for our business groups for the years indicated.

**Net Sales and Operating Profit by Business Group**

	Year ended December 31,					
	2002		2001		2000	
	Net Sales	Operating Profit/(Loss)	Net Sales	Operating Profit/(Loss)	Net Sales	Operating Profit/(Loss)
	EURm					
Nokia Mobile Phones	23,211	5,201	23,158	4,521	21,887	4,879
Nokia Networks	6,539	(49)	7,534	(73)	7,714	1,358
Nokia Ventures Organization	459	(141)	585	(855)	854	(387)
Common Group Functions		(231)		(231)		(74)
Eliminations	(193)		(86)		(79)	
<b>Total</b>	<b>30,016</b>	<b>4,780</b>	<b>31,191</b>	<b>3,362</b>	<b>30,376</b>	<b>5,776</b>

The following table sets forth the regional distribution of our net sales for the years indicated.

**Percentage of Net Sales by Region**

	Year ended December 31,		
	2002	2001	2000
Europe	54%	49%	52%
Asia-Pacific	24%	26%	23%
Americas	22%	25%	25%

Total	Year ended December 31,		
	100%	100%	100%

Nokia is not a capital intensive company in terms of fixed assets, but rather invests heavily in research and development, building the Nokia brand and marketing. In 2002, capital expenditures totaled EUR 432 million. During the past three years, principal capital expenditures related to office and manufacturing facilities, production lines, test equipment and computer hardware used primarily in research and development. For more information, see "Item 5.B Liquidity and Capital Resources." Research and development expenses consist primarily of costs related to developing mobile handsets and related software as well as telecommunications software and hardware. In 2002, these expenses were EUR 3,052 million. For further information regarding our research and development activities see "Item 4.B Business Overview Research and Development."

At the end of 2002, we employed 51,748 people world-wide, compared to 53,849 and 60,289 at December 31, 2001 and 2000, respectively. In 2002, our personnel decreased by a total of 2,101 mainly as a result of outsourcing and restructuring of some businesses. In 2001, we decreased our personnel by 6,440, also as a result of outsourcing and restructuring of some businesses.

### **2002 compared to 2001**

#### *Nokia Net Sales and Operating Profit*

The year 2002 was characterized by intense competition and a continued weakened global economy. Our net sales totaled EUR 30,016 million in 2002 and EUR 31,191 million in 2001, representing a decrease in net sales of 4% in 2002. This mainly reflected continuing difficult

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operating conditions in our network infrastructure business. Our gross margin in 2002 improved to 39.1% compared to 36.6% in 2001, reflecting primarily a decrease in product costs in Nokia Mobile Phones. Our operating profit increased by 42% to EUR 4,780 million in 2002, compared to EUR 3,362 million in 2001. Our operating margin was 15.9% in 2002, compared to 10.8% in 2001. We continued to invest significantly in research and development. Research and development expenses totaled EUR 3,052 million in 2002, an increase of 2% from 2001 (EUR 2,985 million). Research and development expenses represented 10.2% of net sales in 2002 compared to 9.6% of net sales in 2001.

During 2002, operating profit was negatively impacted by a net charge of EUR 265 million in relation to the obligations of MobilCom and by goodwill impairments of EUR 182 million primarily in the Nokia Networks business. The goodwill impairments relate to Nokia Networks' IP Mobility Networks business as well as to Nokia Internet Communications within Nokia Ventures Organization. We have evaluated the carrying value of goodwill arising from certain acquisitions to determine if the carrying value exceeds recoverable amounts. The impairments were calculated by comparing the discounted cash flows of the relevant business to the carrying value of assets for this business. The net charge related to MobilCom is discussed below under " Segment Results Nokia Networks" and "Item 5.B Liquidity and Capital Resources Customer Financing."

#### *Segment Results*

*Nokia Mobile Phones* Net sales of Nokia Mobile Phones were EUR 23,211 million in 2002, virtually flat compared to EUR 23,158 million in 2001. Healthy sales growth in Europe and continued growth in Asia-Pacific were offset by lower sales in the Americas. In addition, handset sales in the second half of 2002, while high in volume, tended towards the less expensive mass-market end of the product portfolio.

For 2002, Nokia sales volumes reached a record level of 152 million units compared with 140 million in 2001, representing faster than market growth of 9%, compared with 2001. Nokia again increased its market share for the fifth consecutive year reaching an estimated 38% for the full year 2002, based on the number of Nokia mobile phones sold into our distribution channels as a percentage of estimated aggregate retail unit sales. In 2002, Nokia shipped a record number of 33 new mobile phone models.

According to Nokia's preliminary estimates, the mobile phone market returned to growth in 2002 with overall market volumes reaching about 405 million units. This represents growth of more than 5% compared with volumes in 2001 of around 380 million units. Replacement purchases are estimated to have accounted for roughly half of the total industry sales volume in 2002 compared with 45% in 2001. Market volume continued to grow year on year in Europe and Asia Pacific, both rising by approximately 8%. Demand in the Americas is estimated to have grown by approximately 4%, compared with the previous year.

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Nokia Mobile Phones continued to invest in research and development. Nokia Mobile Phones' research and development costs totaled EUR 1,884 million (8.1% of Nokia Mobile Phones' net sales) in 2002 compared to EUR 1,599 million (6.9% of Nokia Mobile Phone's net sales) in 2001.

Nokia Mobile Phones' operating profit increased by 15% to EUR 5,201 million in 2002 compared to EUR 4,521 million in 2001. Nokia Mobile Phones' operating margin was 22.4% in 2002 and 19.5% in 2001. The higher operating margin in Nokia Mobile Phones in 2002 resulted primarily from lower product costs compared to 2001.

*Nokia Networks* Net sales of Nokia Networks were EUR 6,539 million in 2002 compared to EUR 7,534 million in 2001. Reduced investments by operators continued to have a significant negative impact resulting in an overall sales decline of 13% compared with 2001. Net sales in 2002

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included revenue related to single-mode WCDMA and dual-mode GSM/WCDMA network equipment, as the relevant milestones for such recognition were met during the year.

During 2002, the combined effects of a general economic slowdown and high 3G license costs induced most mobile network operators to focus increasingly on short-term cash flow generation and debt reduction while cutting back on their level of capital investments. As a result, the size of overall mobile network infrastructure market in 2002 decreased by approximately 20% compared with the previous year, while Nokia Network's accessible market contracted about 15% in 2002.

As the year progressed, steady developments were made in the 3G WCDMA network business. Despite a slower than previously anticipated rollout phase, towards the end of the year, the first WCDMA networks were taken into pre-commercial and commercial use. In September 2002, the first Nokia delivered WCDMA network was taken into test use, while the first commercial launch of a Nokia-based 3G network took place in December with J-Phone in Japan.

During the year, Nokia took measures to align its operations to better reflect current market conditions, reducing the number of employees in its delivery and maintenance services as well as in production. Nokia also streamlined its professional mobile radio unit to reflect the slower than expected growth of this market. Nokia Networks' research and development costs were EUR 995 million in 2002 (15.2% of Nokia Networks' net sales) and EUR 1,135 million in 2001 (15.1% of Nokia Networks' net sales).

Nokia Networks' operating loss decreased to EUR 49 million in 2002 compared to an operating loss of EUR 73 million in 2001. Nokia Networks' operating margin was -0.8% in 2002 and -1.0% in 2001. In 2002, Nokia Networks' operating loss was impacted by lower sales volume, compared to 2001, and clearly lower profitability of initial phase 3G contracts compared to the average profitability of GSM projects.

In addition, Nokia Networks' operating results were negatively impacted by a net charge of EUR 265 million to write down customer loans to MobilCom, a German operator, and to write off various other amounts related to MobilCom. This impairment was the result of financial difficulties of MobilCom. For a further discussion of the MobilCom loans, see "Item 5.B Liquidity and Capital Resources Customer Financing."

Operating results in 2002 were also negatively impacted by goodwill impairments of EUR 121 million in Nokia Networks' IP Mobility Network business. The impairment of Amber of EUR 104 million was due to a major negative change in future market outlook. The impairment of Rooftop of EUR 17 million was due to a decision to discontinue related products.

*Nokia Ventures Organization* Net sales from Nokia Ventures Organization totaled EUR 459 million in 2002 compared to EUR 585 million in 2001. Nokia Ventures Organization reported operating losses of EUR 141 million in 2002 compared to EUR 855 million in 2001. Operating results included a net gain of EUR 81 million from Nokia Venture Partners investments mainly resulting from the sale of its investment in PayPal. During 2002, operating results were negatively impacted by goodwill impairments of EUR 61 million related to Network Alchemy and Ramp Networks. Both impairments were due to decisions to discontinue product development. In 2002, the slowdown in information technology spending continued to impact expenditures on corporate network security resulting in flat growth in this industry.

*Common Group Expenses* This line item, which comprises Nokia Head Office, Nokia Research Center and other general functions' operating losses, totaled EUR 231 million in 2002, unchanged from 2001. During 2002, the company's investment in certain equity securities suffered a permanent decline in value resulting in an impairment of available-for-sale investments of EUR 55 million.

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*Net Financial Income*

Net interest and other financial income totaled EUR 156 million in 2002 compared to EUR 125 million in 2001. Net financial income in 2002 resulted from a positive net operating cash flow of EUR 5,814 million and a net debt to equity ratio of -61% at December 31, 2002, compared to EUR 6,547 million and a net debt to equity ratio of -41% at December 31, 2001. See "Exchange Rates." At year-end 2002, we had cash and cash equivalents of EUR 9,351 million compared to EUR 6,125 million at year-end 2001.

*Profit Before Taxes*

Profit before taxes and minority interests increased 41% and totaled EUR 4,917 million in 2002 compared to EUR 3,475 million in 2001. Taxes amounted to EUR 1,484 million and EUR 1,192 million in 2002 and 2001, respectively.

*Minority Interests*

Minority shareholders' interest in our subsidiaries' profits totaled EUR 52 million in 2002 compared to EUR 83 million in 2001.

*Net Profit and Earnings per Share*

Net profit in 2002 increased to EUR 3,381 million, compared to EUR 2,200 million in 2001, representing a year-on-year increase in net profit of 54% in 2002. Basic earnings per share increased to EUR 0.71 in 2002 compared to EUR 0.47 in 2001.

**2001 compared to 2000**

*Nokia Net Sales and Operating Profit*

The year 2001 was characterized by a competitive operating environment and compounded by a weakened global economy. Our net sales totaled EUR 31,191 million in 2001 and EUR 30,376 million in 2000, representing an increase in net sales of 3% in 2001. Our gross margin in 2001 was at approximately the same level as in 2000 (36.6% and 37.2%, respectively). Our operating profit decreased to EUR 3,362 million in 2001, compared to EUR 5,776 million in 2000. Our operating margin was 10.8% in 2001, compared to 19.0% in 2000. We continued to invest significantly in research and development. Research and development expenses totaled EUR 2,985 million in 2001, an increase of 16% from 2000 (EUR 2,584 million). Research and development expenses represented 9.6% of net sales in 2001 compared to 8.5% of net sales in 2000.

During 2001, operating profit was negatively impacted by a goodwill impairment of EUR 518 million, restructuring charges of EUR 261 million, increases in write-offs for Telsim and Dolphin receivables of EUR 714 million and impairment of minority investments of EUR 80 million. The goodwill impairment of EUR 518 million relates to Nokia Networks' Broadband Systems business and Nokia Internet Communications within Nokia Ventures Organization. We periodically review the carrying value of our assets and identified an impairment due to the impact of overall adverse economic conditions and the deterioration of the markets in which these businesses operate. The impairment was calculated by comparing the discounted cash flows of the relevant business to the carrying value of assets for that business. The impairments were recorded in connection with the restructuring of these businesses.

The EUR 261 million charged to income in 2001 for restructuring expenses in Nokia Networks' Broadband Systems business and Nokia Internet Communications within Nokia Venture Organization related primarily to inventory write-offs, redundancy and personnel costs and

operating lease costs for surplus space, and to a lesser extent to capacity alignment in Nokia Mobile Phones. Virtually all of these expenditures were incurred in 2001.

The increases in write-offs for Telsim and Dolphin receivables are discussed below under "Segment Results Nokia Networks."

*Segment Results*

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*Nokia Mobile Phones* Net sales of Nokia Mobile Phones were EUR 23,158 million in 2001 compared to EUR 21,887 million in 2000. However in 2001, strong sales growth in the first half was partially offset in the second half by weaker sales primarily in Europe and Asia-Pacific, resulting in an increase in net sales of 6% compared with 2000.

Nokia sold 140 million mobile phones in 2001, representing about 9% year-on-year growth. Contrary to the overall market, which experienced negative growth, our sales volumes continued to grow in all geographical regions, with growth strongest in Asia-Pacific.

This resulted in a significant rise in our global market share from around 32% in 2000 to an estimated share of about 37% in 2001. The shipment of 14 new models from a total of 22 new mobile phone introductions during the year boosted market share growth. In 2001, we increased our market share for the fourth consecutive year, almost doubling it from the level of 19% in 1997.

According to our estimates, global mobile phone market sales volumes in 2001 declined about 5% to approximately 380 million units. Replacement purchases are estimated to have accounted for about 45% of the total industry sales volumes. In 2001, the global subscriber base was estimated to have grown by 30% to about 930 million mobile phone users.

Market sales volumes continued to rise in Asia-Pacific in 2001 with 15% market growth. Demand in the Americas was estimated to have remained at approximately the level of the previous year; in Europe, market sales volumes declined to an estimated 23% during 2001. Nokia Mobile Phones' research and development costs totaled EUR 1,599 million (6.9% of Nokia Mobile Phones' net sales) in 2001 compared to EUR 1,306 million (6.0% of Nokia Mobile Phone's net sales) in 2000.

Nokia Mobile Phones' operating profit decreased to EUR 4,521 million in 2001 compared to EUR 4,879 million in 2000. Nokia Mobile Phones' operating margin was 19.5% in 2001 and 22.3% in 2000. The decrease in the Nokia Mobile Phones' operating margin in 2001 resulted from slow sales growth due to intense market competition.

*Nokia Networks* Net sales of Nokia Networks were EUR 7,534 million in 2001 compared to EUR 7,714 million in 2000. The first quarter of 2001 remained very strong in our network business. However, reduced investments by operators started to have a significant effect on sales growth in the second half of the year when sales fell sharply resulting in an overall sales decline of 2% compared with 2000.

However, throughout 2001, operators continued to invest in capacity, most notably in the United States and Asia where GSM was advancing steadily and thus strengthening its position as the dominant global 2G standard. In Europe, operators accelerated their preparations for the onset of next generation multimedia products and services.

During 2001, in response to adverse developments in the market and customer environment, we realigned parts of our organizational structure in a move to increase overall efficiencies. This included decisions in both manufacturing and R&D to focus resources on high value-added parts of the business while outsourcing others. This was in line with our ongoing strategy of focusing and building on core skills while teaming up with select global partners. Nokia Networks' research and

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development costs were EUR 1,135 million in 2001 (15.0% of Nokia Networks' net sales) and EUR 1,013 million in 2000 (13.1% of Nokia Networks' net sales).

Nokia Networks' operating profit decreased to an operating loss of EUR 73 million in 2001 compared to an operating profit of EUR 1,358 million in 2000. Nokia Networks' operating margin was -1.0% in 2001 and 17.6% in 2000. The decline in the operating margin was a result of intensified pricing pressure due to increased competition in GSM markets. During 2001, Nokia Networks' operating margin was negatively impacted by an impairment charge of EUR 714 million to write off Nokia Networks' customer loans of EUR 669 million related to a defaulted financing to Telsim, a GSM operator in Turkey, and EUR 45 million relating to the insolvency of Dolphin in the United Kingdom. With these additional amounts we have now written-off our total exposure to Telsim and Dolphin. For further information regarding the Telsim litigation see "Item 8.A.7 Litigation." Operating results in 2001 were also negatively impacted by a goodwill impairment of EUR 211 million and restructuring charges of EUR 116 million in Nokia Networks' Broadband Systems business. These resulted from a significant downturn in the market of the challenger broadband operators in the United States, which were the main customer group for Nokia Networks' Broadband Systems business. The business group's order inflow was EUR 8,204 million in 2001 and EUR 8,799 million in 2000, representing a year-on-year decrease of 7% in 2001.

*Nokia Ventures Organization* Commencing January 1, 2000, Nokia Ventures Organization has been segregated into a separate segment as a result of its increased activity. Prior to 2000, this business reported under Other Operations, which included Display Products, as well as the activities described below as common group functions. Net sales from Nokia Ventures Organization totaled EUR 585 million in 2001 compared

to EUR 854 million in 2000.

Nokia Ventures Organization reported operating losses of EUR 855 million in 2001 compared to EUR 387 million in 2000. During 2001, operating results were negatively impacted by a goodwill impairment of EUR 307 million related primarily to the acquisitions of Network Alchemy and Ramp Networks, restructuring charges of EUR 110 million mainly relating to Nokia Internet Communications, and an impairment of minority investments of EUR 6 million. IT investments in the corporate market continued at a very low level and resulted in a declining corporate network security market.

*Common Group Expenses* This line item, which comprises Nokia Head Office, Nokia Research Center and other general functions' operating losses, totaled EUR 231 million in 2001, compared to EUR 74 million in 2000. During 2001, the company's investment in certain equity securities suffered a permanent decline in value resulting in an impairment of minority investments of EUR 74 million.

#### *Net Financial Income*

Net interest and other financial income totaled EUR 125 million in 2001 compared to EUR 102 million in 2000. The generation of net financial income in 2001 resulted from a positive net operating cash flow of EUR 6,547 million and a net debt to equity ratio of minus 41%, at December 31, 2001, as well as reduced hedging expenses. See " Exchange Rates." At year-end 2001, we had cash and cash equivalents of EUR 6,125 million.

#### *Profit Before Taxes*

Profit before taxes and minority interests totaled EUR 3,475 million in 2001 compared to EUR 5,862 million in 2000. Taxes amounted to EUR 1,192 million and EUR 1,784 million in 2001 and 2000, respectively.

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#### *Minority Interests*

Minority shareholders' interest in our subsidiaries' profits totaled EUR 83 million in 2001 compared to EUR 140 million in 2000.

#### *Net Profit and Earnings per Share*

Net profit in 2001 decreased to EUR 2,200 million, compared to EUR 3,938 million in 2000, representing a year-on-year decrease in net profit of 44% in 2001. Basic earnings per share, adjusted to reflect the April 2000 four-for-one share split, decreased to EUR 0.47 in 2001 compared to EUR 0.84 in 2000.

#### *Related Party Transactions*

There have been no material transactions during the last three fiscal years to which any director, executive officer or 5% shareholder, or any relative or spouse of any of them, was party. There is no significant outstanding indebtedness owed to Nokia by any director, executive officer or 5% shareholder.

There are no material transactions with enterprises controlling, controlled by or under common control with Nokia or associate of Nokia.

See notes 31 and 32 to our consolidated financial statements included in Item 18 of this Form 20-F.

#### *Exchange Rates*

Nokia's business and results of operations are from time to time affected by changes in exchange rates, particularly between the euro, which replaced the Finnish markka as our reporting currency in 1999, and other currencies such as the US dollar, the Japanese yen and the UK pound sterling. See "Item 3.A Selected Financial Data Exchange Rate Data." Foreign currency denominated assets and liabilities, together with highly probable purchase and sale commitments, give rise to foreign exchange exposure. The introduction of the euro has decreased our transaction exposure. In general, appreciation of the euro relative to another currency has an adverse effect on Nokia's net sales and operating profit, while depreciation of the euro has a positive effect, with the exception of Japanese yen, being the only significant non-euro purchasing currency.

During 2002, the euro appreciated (average rate for the year compared to average rate for the previous year) approximately 6.5% against the US dollar and approximately 1.5% against the UK pound sterling. During 2001, the euro depreciated approximately 3.1% against the US dollar and appreciated approximately 1.7% against the UK pound sterling. In 2000, the euro depreciated approximately 13.1% against the US dollar and approximately 7.1% against the UK pound sterling. The change in value of the euro against the US dollar and the UK pound sterling had a slightly negative impact on Nokia's results of operations in 2002, and slightly positive effects in 2001 and 2000. In 2002 as well as 2001, the euro appreciated approximately 8.4% and 9.4%, respectively, against the Japanese yen, which had a slightly positive impact on our results of operations, due to the fact that Nokia had net purchases in Japanese yen. In 2000, the euro depreciated approximately 16.8%, against the Japanese yen, which had a slightly negative impact on our result of operations.

The continued strengthening of the euro, if prolonged against currencies in which we have revenues, particularly the US dollar, will have an increasingly significant impact on our net sales expressed in euros. In addition to the impact of exchange rate fluctuations on our results of operations discussed above, Nokia's balance sheet is also affected by the translation into euro for financial reporting purposes of the shareholders' equity of our foreign subsidiaries that are

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denominated in currencies other than the euro. In general, this translation increases our shareholders' equity when the euro depreciates, and affects shareholders' equity adversely when the euro appreciates against the relevant other currencies (year-end rate to previous year-end rate).

For a discussion on the instruments used by Nokia in connection with our hedging activities, see note 34 to our consolidated financial statements included in Item 18 of this Form 20-F. See also "Item 11. Quantitative and Qualitative Disclosures About Market Risk" and "Item 3.D Risk Factors Our net sales and costs are affected by fluctuations in the rate of exchange particularly between the euro, which is our reporting currency, and the US dollar and the Japanese yen as well as certain other currencies."

#### ***Economic and Monetary Union and the Euro***

In January 1999, 11 European Union member states Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Spain formed the EMU. The 11 EMU member states also introduced a new common currency: the euro. The fixed, irrevocable conversion rates between the euro and national EMU currencies were announced on December 31, 1998. These countries, as well as Greece, have adopted the euro as their national currency as of January 1, 2002.

Nokia implemented use of the euro in its internal operations from the beginning of January 1, 1999. We have also used the euro to report our results for periods beginning on or after the same date.

The comparative financial information in the selected financial data for the year ended December 31, 1998 has been converted into euro using the fixed conversion rate for Finnish markka to euro announced on December 31, 1998. Accordingly, the selected financial data depicts the same trends that would have been presented had they been presented in Finnish markka. However, because they were originally prepared using Finnish markka, they are not necessarily comparable to financial statements of other companies that originally prepared financial statements in a currency other than the Finnish markka and converted those currencies to euro.

#### ***Principal Differences Between IAS and US GAAP***

Nokia's consolidated financial statements are prepared in accordance with IAS.

Our net profit in 2002 under IAS was EUR 3,381 million, compared to EUR 2,200 million in 2001 and EUR 3,938 million in 2000. Under US GAAP, Nokia would have reported net income of EUR 3,603 million in 2002, compared to EUR 1,903 million in 2001 and EUR 3,847 million in 2000.

The principal differences between IAS and US GAAP that affect our net profit or loss, as well as our shareholders' equity, relate to the treatment of development costs, marketable securities, pension costs, provision for social security costs on stock options, stock compensation expense, identifiable intangible assets acquired, amortization and impairment of goodwill, translation of goodwill, net investment in foreign companies and certain cash flow hedges. See note 36 to our consolidated financial statements included in Item 18 of this Form 20-F for a description of the principal differences between IAS and US GAAP and for a description of the anticipated impact on the consolidated financial statements of the adoption of recently issued US GAAP accounting standards.

#### **5.B Liquidity and Capital Resources**

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At December 31, 2002, Nokia's cash and cash equivalents increased markedly to EUR 9,351 million, compared to EUR 6,125 million at December 31, 2001, primarily as a result of a significant decline in cash used in investing activities and continued successful working capital management. We

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hold our cash and cash equivalents predominantly in euros. Cash and cash equivalents totaled EUR 4,183 million at December 31, 2000.

Net cash from operating activities was EUR 5,814 million in 2002, compared to EUR 6,547 million in 2001 and EUR 3,509 million in 2000. Net cash generated from operating activities decreased primarily due to higher income tax payments in 2002 compared to 2001. In addition to normal advances for 2002 taxes, a significant amount of 2001 taxes became payable at the beginning of 2002.

Net cash used in investing activities in 2002 was EUR 868 million, compared to EUR 2,679 million in 2001 and EUR 2,531 million in 2000. Cash flow from investing activities in 2002 included EUR 339 million in proceeds from the sale of fixed assets and other investments, compared to EUR 379 million in 2001 and EUR 300 million in 2000. Capital expenditures for 2002 declined to EUR 432 million, compared to EUR 1,041 million in 2001 and EUR 1,580 million in 2000. Cash flows related to purchases of non-current available-for-sales investments decreased to EUR 99 million from EUR 323 million in 2001 and EUR 111 million in 2000. Major items of capital expenditure included office and manufacturing facilities, production lines, test equipment and computer hardware used primarily in research and development. Long-term loans made to customers were EUR 563 million in 2002, compared to EUR 1,129 million in 2001 and EUR 776 million in 2000. Long-term loans repaid by customers were EUR 314 million in 2002 compared to none in 2001 and 2000.

Net cash used in financing activities decreased to EUR 1,580 million in 2002, compared to EUR 1,895 million in 2001, primarily as a result of decreases in repayment of short-term borrowings and higher proceeds from stock option exercises. Net cash used in financing activities increased to EUR 1,895 million in 2001 compared to EUR 1,034 million in 2000, primarily as a result of increases in dividends paid and repayment of short-term borrowings.

At December 31, 2002, Nokia had EUR 187 million in long-term interest-bearing liabilities and EUR 377 million in short-term borrowings, offset by EUR 9,351 million in cash and bank deposits and current available-for-sale investments, resulting in a net cash balance of EUR 8,787 million, compared to EUR 5,087 million at the end of 2001. For further information regarding our long-term liabilities, including interest rate structure and currency mix, see note 23 to our consolidated financial statements included in Item 18 of this Form 20-F. Our ratio of net interest-bearing debt, defined as short-term and long-term debt less cash and cash equivalents, to equity, defined as shareholders' equity and minority interests, was -61%, -41% and -26% at December 31, 2002, 2001 and 2000, respectively. The change in 2002 resulted from both our increased profits and the improvements in our cash position.

The total dividends per share were EUR 0.28 for the year ended December 31, 2002, subject to shareholders' approval (EUR 0.27 and EUR 0.28 for the years ended December 31, 2001 and 2000, respectively, as adjusted to reflect the four-for-one share split effected in April 2000). See "Item 3.A Selected Financial Data Distribution of Earnings."

Nokia has no potentially significant refinancing requirements in 2003. Nokia expects to incur additional indebtedness from time to time as required to finance working capital needs. At December 31, 2002, Nokia had a USD 500 million US commercial paper program and a USD 500 million euro commercial paper program. In addition, at the same date, Nokia had a Finnish local commercial paper program totaling EUR 750 million. At December 31, 2002, we also had committed credit facilities totaling USD 2,600 million and a number of short-term uncommitted facilities. For further information regarding our short-term borrowings, including the average interest rate, see note 25 to our consolidated financial statements included in Item 18 of this Form 20-F.

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Nokia has historically maintained a high level of liquid assets. Management estimates that the cash and cash equivalents level of EUR 9,351 million at the end of 2002, together with Nokia's available credit facilities, cash flow from operations, funds available from long-term and short-term debt financings, as well as the proceeds of future equity or convertible bond offerings, will be sufficient to satisfy our future working capital needs, capital expenditure, research and development and debt service requirements at least through 2003. The ratings of our short and long-term debt from credit rating agencies at December 31, 2002, were:

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Short-term	Standard & Poor's	A-1
	Moody's	P-1
Long-term	Standard & Poor's	A
	Moody's	A1

We believe that Nokia will continue to be able to access the capital markets on terms and in amounts that will be satisfactory to us, and that we will be able to obtain bid and performance bonds, to arrange or provide customer financing as necessary to support our business and to engage in hedging transactions on commercially acceptable terms.

Nokia is not a capital intensive company in terms of fixed assets, but rather invests heavily in research and development, building the Nokia brand and marketing. In 2002, capital expenditures totaled EUR 432 million, a decrease of 59% compared to 2001 (EUR 1,041 million), and in 2001 the decrease was 34% compared to 2000 (EUR 1,580 million). This decrease over the three year period is a result of aligning our manufacturing capacity to match the slower market growth for mobile phones and lower demand for network infrastructure. Principal investments during the three years included office and manufacturing facilities, production lines, test equipment and computer hardware used primarily in research and development. We expect the amount of our capital expenditures during 2003 to be somewhat higher than 2002 and to be funded from our cash flow from operations.

### *Customer Financing*

Network operators sometimes require their suppliers, including us, to arrange or provide long-term financing as a condition to obtaining or bidding on infrastructure projects. We expect operators to continue to look for customer financing, and we expect this type of financing to continue to be an important means of competing in the communications networks market, but to a lesser extent and with lower importance than during past years. See "Item 3.D Risk Factors Customer financing to network operators can be a competitive requirement and could affect our net sales, operating profit, balance sheet and cash flow adversely."

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The following table sets forth Nokia's total customer financing (outstanding and committed) for the years indicated.

### *Customer Financing*

	At December 31,		
	2002	2001	2000
	EURm		
Financing commitments	857	2,955	305
Outstanding long-term loans (net of allowances and write-offs)	1,056	1,128	907
Outstanding financial guarantees and securities pledged	91	127	319
	2,004	4,210	1,531
Total <sup>(1)</sup>			

<sup>(1)</sup> Of the total committed and outstanding financing at December 31, 2002, EUR 1,573 million (79%) related to 3G network customers, compared to EUR 3,607 million (86%) in 2001 and nil in 2000.

See notes 7 and 34(b) to our consolidated financial statements included in Item 18 of this Form 20-F for additional information relating to our committed and outstanding customer financing.

In 2002, we reduced our total customer financing (outstanding and committed) by EUR 2,206 million compared to 2001. EUR 1.2 billion of customer financing commitments have been released in mutual agreement with the borrowers, and EUR 0.2 billion of outstanding loans have been repaid or financial guarantees released. We have also reduced our outstanding loans and commitments by EUR 0.4 billion pursuant to arrangements with banks, financial institutions and export credit agencies, or ECAs. Our intent is to further mitigate our total customer financing exposure, market conditions permitting. We are seeking to make further arrangements with financial institutions and investors to transfer credit risk we have incurred from the commitments and outstanding loans we have made as well as from the financial guarantees we have given.

In 2002, MobilCom, a German operator to which we had extended customer financing loans, experienced financial difficulties. We have entered into an agreement with MobilCom's shareholder France Telecom S.A. regarding the assignment to France Telecom of MobilCom's obligations to us under the loans and the subscription by us of France Telecom subordinated convertible perpetual bonds with a total face value of approximately EUR 0.8 billion as repayment for such loans. As a result, we recorded a net charge of EUR 265 million in 2002 to write down the loans receivable to their estimated recoverable amount and to write off various other amounts related to MobilCom. The estimated recoverable amount of the MobilCom loans is based on the current estimated fair value of the subordinated convertible perpetual bonds of France Telecom. The fair value of the bonds will be reassessed upon completion of the assignment of the loans to France Telecom and the issuance of the bonds. We expect the assignment and subscription to be completed in March 2003 after MobilCom and France Telecom have received approval from their respective boards and shareholders. We have also terminated the remaining financing commitment to MobilCom of approximately EUR 530 million, which is included in the EUR 1.2 billion reduction of our customer financing commitments.

As a strategic market requirement, we plan to continue to extend customer financing to a small number of selected customers. Nevertheless, should customer requirements, market or economic conditions change significantly, we may be required to increase the total amount of our customer financing.

We expect our customer financing commitments to be financed mainly through cash flow from operations as well as through the capital markets.

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The following table sets forth the amounts of Nokia's customer financing commitments and the periods in which these commitments will expire if they are not utilized pursuant to the terms of the related financing arrangements. Such amounts can also be available to customers in periods prior to expiration. The amounts represent the maximum amount of commitments.

*Customer Financing Commitments Expiration Per Period*

	<u>2003</u>	<u>2004-2005</u>	<u>2006</u>	<u>Total</u>
	EURm			
Customer financing commitments	26	831		857

All customer financing commitments are available under loan facilities negotiated with customers of Nokia Networks. Availability of the amounts is dependent upon the borrower's continuing compliance with stated financial and operational covenants and compliance with other administrative terms of the facility. The loans are primarily available to fund capital expenditure relating to purchases of network infrastructure equipment and services from Nokia Networks, though some portion of certain loans could be used to fund interest on the same facility, or working capital requirements. Certain loans are partially secured through either guarantees by the borrower's direct or indirect parent or other group companies, or shares and/or other assets of the borrower, its parent or other entities under common ownership.

*Contractual Obligations and Contingent Commitments*

The following table sets forth our contractual obligations for the periods indicated.

*Contractual Obligations Payments Due by Period*

	<u>2003</u>	<u>2004- 2005</u>	<u>2006- 2007</u>	<u>Thereafter</u>	<u>Total</u>
	EURm				
Long-term debt		187		67	254
Operating leases	189	213	147	155	704
Inventory purchases	923	23	3		949
Total	1,112	423	150	222	1,907

The following table sets forth the amounts of Nokia's contingent commitments for the periods indicated. The amounts represent the maximum principal amount of commitments.

*Contingent Commitments Expiration Per Period*

	2003	2004- 2005	2006- 2007	Thereafter	Total
	EURm				
Guarantees of Nokia's performance of certain network supply contracts	217	51	43	21	332
Financial guarantees and securities pledged on behalf of customers	56	33	2		91
Other				7	7
<b>Total</b>	<b>273</b>	<b>84</b>	<b>45</b>	<b>28</b>	<b>430</b>

Guarantees of Nokia's performance are provided to certain Nokia Networks customers in the form of bank guarantees, standby letters of credit and other similar instruments. These instruments entitle the customer to claim payment as compensation for non-performance by Nokia of its obligations under network infrastructure supply agreements. Depending on the nature of the

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instrument, compensation is payable either immediately upon request, or subject to independent verification of non-performance by Nokia.

Financial guarantees on behalf of customers represent guarantees relating to payment by certain Nokia Networks customers under specified loan facilities between such customers and their creditors. Nokia's obligations under such guarantees are released upon the earlier of expiration of the guarantee or early payment by the customer.

Please see notes 29 and 30 to our consolidated financial statements for further information regarding commitments and contingencies and leasing contracts, respectively.

**5.C Research and Development, Patents and Licenses**

Success in the communications industry requires continuous introduction of new products and applications based on the latest available technology. This places considerable demands on our research and development activities. Consequently, in order to maintain our competitiveness, we have made substantial research and development expenditures in each of the last three years. Our consolidated research and development costs for 2002 were EUR 3,052 million, an increase of 2% over 2001 (EUR 2,985 million) and an increase of 16% in 2001 compared to 2000 (EUR 2,584 million). These costs represented 10.2%, 9.6% and 8.5% of net sales in 2002, 2001 and 2000, respectively. To enable our future growth, we continued to invest in our worldwide research and development network, as well as increasing our collaboration with third parties. At December 31, 2002, we employed 19,579 people in research and development centers in 14 countries, representing approximately 38% of Nokia's total personnel. Research and development expenses of Nokia Mobile Phones as a percentage of its net sales were 8.1% in 2002, 6.9% in 2001 and 6.0% in 2000. In the case of Nokia Networks, research and development costs represented 15.2%, 15.1% and 13.1% of its net sales in 2002, 2001 and 2000, respectively. See "Item 4.B Business Overview Research and Development" and " Patents and Licenses."

**5.D Trend Information***General*

Our business and results of operations have been affected during the last several years by a number of important trends. The global communications market has experienced rapid growth, especially as the areas of voice and data transmission have converged and become digitized. The mobile communications market in particular has grown in line with the demand for, and use of, mobile phones. However, the mobile phone market showed an unprecedented growth slowdown in 2001, which was a year of technology transition for our industry. Although the economy and world events continued to create uncertainty, the mobile phone market began to show evidence of renewed growth in 2002, with volumes growing by more than 5% to an estimated 405 million units compared to 380 million units in 2001. Importantly, 2002 saw the arrival of feature-rich multimedia products offering new advanced mobile services. On the other hand, the operator-driven mobile network infrastructure market continued to show an overall decline in 2002, largely as a result of decreased capital expenditure by operators in a difficult



economic environment.

In technology, the year brought important developments impacting the industry overall as well as Nokia's own business and results. If 2001 was a year of technology transition, then 2002 can be characterized more as a year of testing and implementation. It was the year when digital convergence in mobility really came about, with completely new categories of devices, such as phones with integrated cameras, redefining the scope and scale of the market and expanding the potential for future growth.

We see multimedia messaging as one of the main drivers in the current technology shift, with the majority of mobile devices in our product plan for 2003 being MMS-enabled. At the end of 2002,

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around 100 major operators had already launched MMS and other advanced services based on openness, global roaming and interoperability. However, the impact of these new services on industry growth is expected to be gradual, spanning several years.

We see growth potential in new product categories, especially in games, imaging and the enterprise market, in which we can extend our strong brand, technology prowess and manufacturing capability and scalability.

The year 2002 also marked the initial rollout of 3G mobile communications technologies such as EDGE/WCDMA. This transition to new technologies provides increased capacity and quality for advanced mobile services as we move towards industry renewal. The transition from 2G to 3G is likely to span several years with volume sales of these new mobile devices dependent on the timely and successful build-out of 3G networks and the availability of related services offered by third parties.

#### ***Nokia Mobile Phones***

In 2003, Nokia expects total market volumes in mobile handsets to grow by 10% or slightly more, from an estimated 405 million units in 2002. Volume growth in 2003 is expected to be driven by the combined effects of an expanding subscriber base and a stabilizing replacement cycle. Just over a quarter of current global subscribers upgrade their handsets annually, which translates to a replacement cycle of roughly 2.5 years.

In 2002, Nokia estimates the global subscriber base to have grown to 1,125 million users and projects the number to exceed 1.5 billion users in 2005. During 2002, feature-rich multimedia products with color screens offering compelling new advanced mobile services came onto the market and drove demand as business people and consumers became increasingly motivated to upgrade existing devices or move towards multiple device ownership. The annual share of the replacement market is expected to represent more than 50% in 2003. We intend to capitalize on this trend by offering a continuous stream of new models with advanced functionality, to stimulate demand among consumers and business users. In 2002, Nokia Mobile Phones continued to renew its product line-up, launching a record 34 new products, of which 14 had color screens and multimedia capability.

#### ***Nokia Networks***

During 2002, we saw steady progress in the development of wideband technology. Despite a slower than previously anticipated rollout pace, the first WCDMA networks were taken into pre-commercial and commercial use towards the end of the year. Full commercial launches are expected in the early part of 2003.

In 2002, Nokia estimates that the total mobile network infrastructure market decreased by approximately 20%. Nokia Networks' accessible market contracted by around 15% in 2002. The outlook for the market continues to be challenging as operators focus on short-term cash flow generation and debt reduction while cutting back on capital investments.

Nokia does not expect conditions in the infrastructure industry to improve markedly during 2003. Nokia expects its own accessible market to decrease by 5 to 10%.

While operator investments have decreased, capacity needs, driven by increasing network traffic, have grown. Continued take-up of mobile data services will further increase pressure on existing networks. The global technologies of GSM, EDGE and WCDMA provide operators with the smoothest evolution to deliver the capacity needs in the most cost efficient manner.

Nokia sees the current industry environment as not requiring material increases in customer financing. We expect operators to continue to look for customer financing and we expect this type

of financing to continue to be an important means in competing in the communications networks market, but to a lesser extent and with lower importance than during the past years. See "Item 3.D Risk Factors Customer financing to network operators can be a competitive requirement and could affect our sales, operating profit, balance sheet and cash flow adversely" and "Item 5.B Liquidity and Capital Resources."

### *Nokia Ventures Organization*

The business models, technologies and products being developed within Nokia Ventures Organization are designed to extend and sustain our product and long-term business development. The precise impact of the Nokia Ventures Organization businesses on our consolidated results cannot be predicted due to the early stages of many of these initiatives and uncertainties relating to new business development.

In addition to generating revenue from independent new businesses, Nokia Ventures Organization is expected to bring a return on investment on its venture capital activities and increasingly contribute to the growth and renewal of Nokia's core business through the transfer of business product or feature ideas, as well as competencies and technologies.

Nokia expects growth in the Internet security industry to resume as corporations move to invest in protecting information on their networks. However, the current lack of visibility in Nokia's target markets for Internet Security and VPN makes any estimates of future performance difficult.

## **ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES**

### **6.A Directors and Senior Management**

Pursuant to the provisions of the Finnish Companies Act and our articles of association, the control and management of Nokia is divided among the shareholders in a general meeting, the Board of Directors and the Group Executive Board.

The current members of the Board of Directors were elected at the Annual General Meeting on March 21, 2002, in accordance with the proposal of the Nomination Committee. On the same date, the Chairman and Vice Chairman were elected by the Board members. Certain information with respect to these individuals is set forth below.

#### *Board of Directors*

Chairman Jorma Ollila, b. 1950

*Chairman and CEO  
and Chairman of the Group Executive Board of Nokia Corporation.  
Board member since 1995. Chairman since 1999.*

Master of Political Science (University of Helsinki), Master of Science (Econ.) (London School of Economics), Master of Science (Eng.) (Helsinki University of Technology).

President and CEO, and Chairman of the Group Executive Board of Nokia Corporation 1992-1999, President of Nokia Mobile Phones 1990-1992, Senior Vice President, Finance of Nokia 1986-1989.

Holder of various managerial positions at Citibank within corporate banking 1978-1985.

Vice Chairman of Otava Books and Magazines Group Ltd and member of the Board of Directors of Ford Motor Company and UPM-Kymmene Corporation.

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Vice Chairman Paul J. Collins, b. 1936

Member of The European Round Table of Industrialists.

*Board member since 1998. Vice Chairman since 2000.*

BBA (University of Wisconsin), MBA (Harvard Business School).

Vice Chairman of Citigroup Inc. 1998-2000, Vice Chairman and member of the Board of Directors of Citicorp and Citibank N.A. 1988-2000.

Holder of various executive positions at Citibank within investment management, corporate banking, corporate planning as well as finance and administration 1961-1988.

Member of the Board of Directors of BG Group, Genuity Corporation and Kimberly-Clark Corporation.

Georg Ehrnrooth, b. 1940

*Board member since 2000.*

Master of Science (Eng.) (Helsinki University of Technology).

President and CEO of Metra Corporation 1991-2000, President and CEO of Lohja Corporation 1979-1991.

Holder of various executive positions at Wärtsilä Corporation within production and management 1965-1979.

Chairman of the Board of Directors of Assa Abloy AB (publ) and Varma-Sampo Mutual Pension Insurance Company, Vice Chairman of the Board of Directors of Rautaruukki Corporation, member of the Board of Directors of Oy Karl Fazer Ab, Sandvik AB (publ), Sampo plc and Wärtsilä Corporation.

Chairman of The Center for Finnish Business and Policy Studies (EVA).

Dr. Bengt Holmström, b. 1949

*Paul A. Samuelson Professor of Economics at MIT, joint appointment at the MIT Sloan School of Management.*

*Board member since 1999.*

Bachelor of Science (Helsinki University), Master of Science (Stanford University), Doctor of Philosophy (Stanford University).

Edwin J. Beinecke Professor of Management Studies at Yale University 1985-1994.

Member of the Board of Directors of Kuusakoski Oy.

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Member of the American Academy of Arts and Sciences and Foreign Member of The Royal Swedish Academy of Sciences.

Per Karlsson, b. 1955

*Independent Corporate Advisor.*

*Board member since 2002.*

Degree in Economics and Business Administration (Stockholm School of Economics).

Independent corporate advisor 1992-present.

Executive Director, with mergers and acquisitions advisory responsibilities, at

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Enskilda M&A, Enskilda Securities (London) 1986-1992.

Corporate strategy consultant at the Boston Consulting Group (London) 1979-1986.

Board member of IKANO Holdings S.A.

Robert F. W. van Oordt, b. 1936

*Chairman of Rodamco Europe N.V.  
Board member since 1998.*

Drs of Economics (University of Amsterdam).

CEO of Rodamco Europe N.V. 2000-2001, Chairman of the Executive Board of NV Koninklijke KNP BT 1993-1996, Chairman of the Executive Board of Bühmann-Tetterode N.V. 1990-1993, Executive Vice President and COO and member of the Board of Directors of Hunter Douglas Group N.V. 1979-1989.

Consultant and partner with McKinsey & Company Inc. 1967-1979.

Chairman of Rodamco Europe N.V., member of the Supervisory Board of Draka Holding N.V., member of the Board of Directors of Fortis Bank N.V., Schering-Plough Corporation and N.V. Umicore S.A.

Dame Marjorie Scardino, b. 1947

*Chief Executive and member of the Board of Directors of Pearson plc. Board member since 2001.*

BA (Baylor), JD (University of San Francisco).

Chief Executive of The Economist Group 1993-1997, President of the North American Operations of The Economist Group 1985-1993.

Lawyer 1976-1985 and publisher of the Georgia Gazette newspaper 1978-1985.

Vesa Vainio, b. 1942

*Board member since 1993.*

LL.M. (University of Helsinki).

Chairman (1998-1999 and 2000-2002) and Vice Chairman (1999-2000) of the Board of Directors of Nordea AB (publ). Chairman of the Executive Board and CEO of Merita Bank Ltd and CEO of Merita Ltd 1992-1997.

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President and CEO of Kymmene Corporation 1991-1992.

Holder of various other executive positions in Finnish industry 1972-1991.

Chairman of the Board of Directors of UPM-Kymmene Corporation and Vice Chairman of the Board of Directors of Wärtsilä Corporation.

Chairman of the Board of The Central Chamber of Commerce of Finland.

Arne Wessberg, b. 1943

*Chairman of the Board of Directors and President of Yleisradio Oy (Finnish Broadcasting Company).  
Board member since 2001.*

Studies in economics in the University of Tampere (1963-1966).

Member of the Board of Trustees of IIC 1996-1998 and 1993-1995.

Holder of various positions at Yleisradio Oy (Finnish Broadcasting Company) as a reporter and editor (1971-1976), in different executive roles (1979-1994), and as President (1994-present).

Chairman of the Board of Directors of Digita Oy.

President of the European Broadcasting Union (EBU) and member of the Board of Directors of the International Council of NATAS.

On January 23, 2003, we announced the proposal of the Nomination Committee to the Annual General Meeting convening on March 27, 2003 regarding the election of the members of the Board of Directors. The Nomination Committee will propose that all of the present members be re-elected for terms ending at the close of the Annual General Meeting in 2004.

### **Group Executive Board**

Our articles of association provide for a Group Executive Board, which is responsible for managing the operations of Nokia. The Chairman and the members of the Group Executive Board are elected by the Board of Directors. Only the Chairman of the Group Executive Board can be a member of both the Board of Directors and the Group Executive Board. The current members of our Group Executive Board are set forth below.

Chairman Jorma Ollila, b. 1950

*Chairman and CEO of Nokia Corporation.  
Group Executive Board member since 1986.  
Chairman since 1992.  
Joined Nokia 1985.*

Master of Political Science (University of Helsinki), Master of Science (Econ.) (London School of Economics), Master of Science (Eng.) (Helsinki University of Technology).

President and CEO, and Chairman of the Group Executive Board of Nokia Corporation 1992-1999, President of Nokia Mobile Phones 1990-1992, Senior Vice President, Finance of Nokia 1986-1989.

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Member of the Board of Directors of Ford Motor Company, Otava Books and Magazines Group Ltd and UPM-Kymmene Corporation. Member of The European Round Table of Industrialists.

Pekka Ala-Pietilä, b. 1957

*President of Nokia Corporation.  
Group Executive Board member since 1992.  
Joined Nokia 1984.*

Master of Science (Econ.) (Helsinki School of Economics and Business Administration).

Executive Vice President and Deputy to the CEO of Nokia Corporation and President of Nokia Communications Products 1998-1999, President of Nokia Mobile Phones 1992-1998, Vice President, Product Marketing of Nokia Mobile Phones 1991-1992, Vice President, Strategic Planning of Nokia Mobile Phones 1990-1991.

Member of the Supervisory Board of SAP AG, Member of the Science and Technology Policy Council of Finland, member of the Board of the Finnish-American Chamber of Commerce, Member of the Board of the Economic Information Bureau.

Dr. Matti Alahuhta, b. 1952

*President of Nokia Mobile Phones.*

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*Group Executive Board member since 1993.  
With Nokia 1975-1982, rejoined 1984.*

Doctor of Science (Technology) (Helsinki University of Technology).

President of Nokia Telecommunications 1993-1998, Executive Vice President of Nokia Telecommunications 1992, Senior Vice President, Public Networks of Nokia Telecommunications 1990-1992.

Member of the Board of Directors of Finnair Oyj (until December 31, 2002)  
Chairman of the Board of The Federation of Finnish Metal, Engineering and Electrotechnical Industries, Vice Chairman of the Board of the Confederation of Finnish Industry and Employers, member of the Executive Committee of The International Institute for Management Development (IMD).

Sari Baldauf, b. 1955

*President of Nokia Networks.  
Group Executive Board member since 1994.  
Joined Nokia 1983.*

Master of Science (Business Administration) (Helsinki School of Economics and Business Administration).

Executive Vice President of Nokia APAC 1997-1998, President, Cellular Systems of Nokia Telecommunications 1988-1996, Vice President, Business Development of Nokia Telecommunications 1987-1988.

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Member of the Board of International Youth Foundation and member of The National Committee for the Information Society Issues and member of the Board of Foundation for Economic Education.

Dr. J. T. Bergqvist, b. 1957

*Executive Vice President and General Manager, IP Mobility Nokia Networks,  
Group Executive Board Member since July 1, 2002. Joined Nokia 1983.*

Doctor of Science (Technology) (Helsinki University of Technology).

Senior Vice President, Radio Access Systems of Nokia Telecommunications 1997-2000, Vice President, Cellular Transmission Business, Network and Access Systems of Nokia Telecommunications 1995-1996, Area General Manager, Area Management of Nokia Telecommunications 1993-1994, Area General Manager, Marketing of Nokia Cellular Systems 1990-1992

Olli-Pekka Kallasvuo, b. 1953

*Executive Vice President, Chief Financial Officer of Nokia Corporation.  
Group Executive Board member since 1990.  
With Nokia 1980-81, rejoined 1982.*

LL.M. (University of Helsinki).

Executive Vice President of Nokia Americas and President of Nokia Inc. 1997-1998, Executive Vice President, CFO of Nokia 1992-1996, Senior Vice President, Finance of Nokia 1990-1991.

Chairman of the Board of Directors of F-Secure Corporation, Nextrom Holding S.A., Nokian Tyres plc and Sampo plc.

Pertti Korhonen, b. 1961

*Executive Vice President, Nokia Mobile Software.  
Group Executive Board member since July 1, 2002.  
Joined Nokia 1986.*

Master of Science (Electronics Eng.) (University of Oulu).

Senior Vice President, Global Operations, Logistics and Sourcing of Nokia Mobile Phones 1999-2001, Senior Vice President, Global Operations and Logistics of Nokia Mobile Phones 1998-1999, Vice President, Logistics of Nokia Mobile Phones 1996-1998, Vice President, Manufacturing Europe of Nokia Mobile Phones 1993-1996, Project Executive of Nokia Mobile Phones UK Ltd, 1991-1993, Vice President, R&D of Nokia Mobile Phones, Oulu 1990-1991.

Member of the Board of Directors, QPR Software Oyj.

Dr. Yrjö Neuvo, b. 1943

*Executive Vice President, CTO of Nokia Mobile Phones.  
Group Executive Board member since 1993.  
Joined Nokia 1993.*

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Master of Science (Eng.), Licentiate of Science (Technology) (Helsinki University of Technology), Ph.D. (EE) (Cornell University).

Senior Vice President, Product Creation of Nokia Mobile Phones 1994-1999, Senior Vice President, Technology of Nokia 1993-1994, National Research Professor of The Academy of Finland 1984-1992, Professor of Tampere University of Technology 1976-1992, Visiting Professor of University of California, Santa Barbara 1981-1982.

Vice Chairman of the Board of Directors of Vaisala Corporation.

Member of Finnish Academy of Technical Sciences, The Finnish Academy of Science and Letters, and Academiae Europae, Foreign member of Royal Swedish Academy of Engineering Sciences, and Fellow of the Institute of Electrical and Electronics Engineers.

Veli Sundbäck, b. 1946

*Executive Vice President, Corporate Relations and Trade Policy of Nokia Corporation.  
Group Executive Board member since 1996.  
Joined Nokia 1996.*

LL.M. (University of Helsinki).

Secretary of State at the Ministry for Foreign Affairs 1993-1995, Under-Secretary of State for External Economic Relations at the Ministry for Foreign Affairs 1990-1993.

Chairman of the Board of Directors of Huhtamäki Oyj.

Vice Chairman of the Board of the International Chamber of Commerce, Finnish Section, Chairman of the Trade Policy Committee of The Confederation of Finnish Industry and Employers and Chairman of the Board of the Finland-China Trade Association.

Anssi Vanjoki, b. 1956

*Executive Vice President, Nokia Mobile Phones.  
Group Executive Board member since 1998.  
Joined Nokia 1991.*

Master of Science (Econ.) (Helsinki School of Economics and Business Administration).

Senior Vice President, Europe & Africa of Nokia Mobile Phones 1994-1999, Vice President, Sales of Nokia Mobile Phones 1991-1994, 3M Corporation 1980-1990.

Governor of European Foundation of Quality Management.

Of Nokia's strategic countries, Matti Alahuhta is responsible for Nokia's operations in Japan, Sari Baldauf for China and Olli-Pekka Kallasvuo for the United States.

## 6.B Compensation

### *Compensation of the Members of the Board of Directors and the Group Executive Board*

#### *Board of Directors*

For the year ended December 31, 2002, the aggregate compensation of the eight non-executive members of the Board of Directors was approximately EUR 0.6 million. Non-executive members of the Board of Directors do not receive bonuses. The remuneration for members of our Board of Directors for each term expiring at the close of the next Annual General Meeting is resolved annually by our Annual General Meeting, after being proposed by the Nomination Committee of our Board.

The following table depicts the total annual remuneration paid to the members of our Board of Directors, as resolved by the Annual General Meetings in the respective years. Since the fiscal period 1999, approximately 60% of each Board member's annual retainer has been paid in cash, with the balance in shares of our stock, acquired from the market.

Year	Chairman		Vice Chairman		Other Members	
	Gross Annual Retainer (EUR 1,000)	Shares Received <sup>(1)</sup>	Gross Annual Retainer (EUR 1,000)	Shares Received <sup>(1)</sup>	Gross Annual Retainer (EUR 1,000)	Shares Received <sup>(1)</sup>
2000	109	840	85	640	61	460
2001	130	1,530	100	1,178	75	882
2002	130	2,650	100	2,038	75	1,529

(1) As part of the Gross Annual Retainer for that year.

#### *Group Executive Board*

For the year ended December 31, 2002, the aggregate compensation of the 10 members of the Group Executive Board, including Mr. Ollila, was approximately EUR 7.9 million. Of this amount, approximately EUR 2.7 million was paid pursuant to bonus arrangements for the 2002 calendar year. The bonuses of the members of the Group Executive Board are paid as a percentage of annual base salary based on Nokia's Short-Term Incentive Plan, which is described below under " Report of the Personnel Committee of the Board."

Recommendations for the compensation of Messrs. Ollila and Ala-Pietila are presented by the Personnel Committee to the Board of Directors for final approval. Compensation for other members of the Group Executive Board is approved by the Personnel Committee.

The compensation of our five most highly paid executive officers in 2002 is detailed in the following table.

Name and Principal Position	Salary (EUR)	Bonus <sup>(1)</sup> (EUR)	Other Annual Compensation	Other Compensation (EUR)
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Jorma Ollila <sup>(2)</sup> Chairman and Chief Executive Officer	1,386,666	1,384,967	*	130,000
Pekka Ala-Pietila President	662,090	271,192	*	
Matti Alahuhta President of Nokia Mobile Phones	591,719	297,265	*	
Olli Pekka Kallasvuo <sup>(3)</sup> Executive Vice President and Chief Financial Officer	520,788	285,072	*	42,142
Sari Baldauf President of Nokia Networks	476,705	60,875	*	

(1) Bonuses were paid under Nokia's Short Term Incentive Plan, which is described above under " Compensation of the Members of the Board of Directors and the Group Executive Board Group Executive Board."

(2) "Other Compensation" for Mr. Ollila includes EUR 130,000 for his services as Chairman of the Board, of which EUR 78,000 was paid in cash and the balance paid in 2,650 Nokia shares.

(3) "Other Compensation" for Mr. Kallasvuo includes a payment for the 20-year anniversary of his employment with Nokia, in accordance with the service award policy for Finnish-based employees.

\* Each executive listed received benefits and perquisites in 2002 not exceeding the lesser of EUR 50,000 or 10% of the executive's total compensation.

Our executives participate in the Finnish TEL pension system, which provides for a retirement benefit based on years of service and earnings according to the prescribed statutory system. Under the Finnish TEL pension system, base pay, incentives and other taxable fringe benefits are included in the definition of earnings, although gains realized from stock options are not. The Finnish TEL pension scheme provides for early retirement benefits at age 60 and full retirement benefits at age 65. The current TEL provisions cap the total pension benefit at 60% of the pensionable earnings amount.

For Mr. Ollila, Mr. Ala-Pietila, Dr. Alahuhta, Mr. Kallasvuo and Ms. Baldauf, Nokia offers a full retirement benefit at age 60. The full retirement benefit is based on the executive's pensionable earnings at age 60, and assuming that the executive continues service with Nokia through age 65. Nokia does not offer any such benefit to any other members of the Group Executive Board.

### ***Report of the Personnel Committee of the Board***

The Personnel Committee of the Board of Directors has provided the following report on executive compensation paid or awarded to executive officers for 2002:

*The Personnel Committee of the Board of Directors, with the assistance of the company's Human Resources Department, administers the executive compensation programs of the company. All of the members of the Personnel Committee are independent directors of the company and none are former executives of the company.*

### Compensation Philosophy and Objectives

*The executive compensation programs of the company include base salary and short-term incentives. Additionally, in order to align the interests of the executives with those of the shareholders, the company offers long-term incentives in the form of equity-based incentives.*

*The company operates in the extremely competitive and rapidly evolving high technology industry. The Committee believes that the compensation programs for the executive officers should be designed to attract, retain, and motivate talented executive officers who are responsible for the success of the company.*

#### Compensation Components and Determination

*The awards to executive officers are based on the performance of the company to pre-established financial targets, key quality measures and other contributions of strategic importance to the company. In addition to performance against pre-established targets, the Committee may also decide to use its discretion when determining final awards.*

*The Committee considers the compensation practices of other relevant companies in the same or similar industries and the compensation levels of the executive officers in these relevant companies when it makes decisions regarding the compensation for the company's executive officers. The relevant companies include both high-technology and telecommunications firms that are headquartered in Europe and the United States.*

*Annual Cash Compensation for the CEO and Group Executive Board Members includes base salary and short-term incentives.*

*Base salary levels for the CEO and the Group Executive Board are reviewed once each year. Base salaries are considered for adjustment on the basis of the executive's performance for the year and a comparison of that executive's annual cash compensation compared to comparable positions in the other relevant companies in the same or similar industries.*

*Short Term Incentive Payments are paid twice each year based on performance for each of Nokia's short term plans which end on June 30, and December 31 of each year. Short Term Incentive Payments are primarily determined based on a formula that considers the company's performance to pre-established targets for Net Sales, Operating Profit and Net Working Capital efficiency measures. Certain executives may have objectives related to quality, technology innovation, new product revenue, or other objectives of key strategic importance, which may require a discretionary assessment of performance by the Committee.*

*Stock Option awards for the CEO and Group Executive Board members are determined on the basis of each executive's performance and a comparison of that executive's LTI compensation to comparable positions in other competitor companies. Stock options are awarded primarily to align the interests of the executives to those of the shareholders. 2002 stock options were granted in May, 2002 at fair market value and will expire at the end of 2007. Twenty five percent of the stock options granted in 2002 will be exercisable on July 1, 2003 and an additional 6.25% will be exercisable each calendar quarter thereafter, so that the 2002 stock option grant will be fully exercisable on July 1, 2006.*

#### Other Activities

*In 2002, the Committee reviewed the company's Executive Management Development and Succession Plans.*

## 6.C Board Practices

### *The Board of Directors*

The Board decides on matters that, in relation to the Group's activities, are significant in nature. Such matters include confirmation of the strategic guidelines, approval of the periodic plans and decisions on major investments and divestments. The Board appoints the CEO, the President, the Chairman and the members of Nokia's Group Executive Board. The Board also determines the remuneration of the CEO and the President.

The roles and responsibilities of the Board, its Chairman and its committees are defined in the Board's Rules of Procedure. The Board's committees consist of the Audit Committee, the Personnel Committee and the Nomination Committee. The Board regularly reviews the Board's Rules of Procedure in order to ensure that they appropriately address the work of the Board and comply with what the Board believes to be best practices of corporate governance.

Pursuant to the articles of association, Nokia Corporation has a Board of Directors composed of a minimum of seven and a maximum of ten members. The members of the Board are elected for a term of one year at each Annual General Meeting, which convenes each March or April. Since the Annual General Meeting held on March 21, 2002, the Board has consisted of nine members. Nokia's CEO, Mr. Jorma Ollila, also serves as the Chairman of the Board. The other members of the Board are all non-executive and independent. "Independent" means that the members of the Board have no material relationships with Nokia apart from Board membership. The Board convened nine times during 2002.

The Board elects a Chairman and a Vice Chairman from among its members for one term at a time. On March 21, 2002 the Board resolved that Jorma Ollila should continue to act as Chairman and that Paul J. Collins should continue to act as Vice Chairman. The Board also appoints the members and the chairmen for its committees from among its non-executive members for one term at a time.

We also have a company Code of Conduct which is equally applicable to all of our employees, directors and management and is accessible at our website, [www.nokia.com](http://www.nokia.com).

#### ***Committees of the Board of Directors***

**The Audit Committee** must consist of a minimum of three independent and qualified non-executive members of the Board. Since March 21, 2002, the Committee has consisted of the following four members of the Board, each of whom is independent and qualified: Robert F.W. van Oordt (Chairman), Georg Ehrnrooth, Per Karlsson and Arne Wessberg.

The purpose of the Audit Committee is to assist the Board in fulfilling its responsibilities to oversee the accounting and financial reporting processes of Nokia. These include the oversight of the quality and integrity of Nokia's consolidated financial statements and related disclosure, the performance of its internal control and risk management and audit functions. The Committee further oversees the performance, qualifications and independence of the external auditor. Under Finnish law, our external auditor is elected by our shareholders at the Annual General Meeting. The Audit Committee holds meetings at least four times per year according to the schedule approved by it at the first meeting following the Committee's nomination. The Committee also meets with representatives of management and the external auditor at least twice annually. The Audit Committee held four meetings in 2002.

**The Personnel Committee** must consist of a minimum of three members of the Board. Since March 21, 2002, the Personnel Committee has consisted of the following four members of the

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Board, each of whom is independent: Paul J. Collins (Chairman), Bengt Holmström, Marjorie Scardino and Vesa Vainio.

The Personnel Committee's purpose is to oversee the personnel policies and practices of Nokia. It also assists the Board in discharging its responsibilities relating to the compensation of Nokia's executives. It has overall responsibility for evaluating, resolving and making recommendations to the Board regarding the compensation of top executives, incentive compensation plans and policies affecting executives, as well as all equity-based plans and other significant incentive plans at Nokia. The Committee is also responsible for ensuring that the compensation programs are performance-based, properly motivate management and support Nokia's overall corporate strategies. In addition, the Committee is responsible for the review of senior management's development and succession plans. The Personnel Committee convened three times in 2002.

**The Nomination Committee** must consist of three to five members of the Board. Since March 21, 2002, the Nomination Committee has consisted of the following three members of the Board, each of whom is independent: Paul J. Collins (Chairman), Bengt Holmström and Vesa Vainio.

The Nomination Committee prepares proposals for the general meetings in respect of the composition, remuneration principles, and remuneration of the Board to be approved by the shareholders. It also monitors significant developments in the law and practice of corporate governance and proposes necessary actions in respect thereof. The Nomination Committee held two meetings in 2002.

#### ***Service Contracts of the Chairman and CEO and of the President***

We have a service contract with each of Jorma Ollila and Pekka Ala-Pietilä, each of an indefinite duration. The Board has also agreed with Mr. Ollila on the continuation of his services as CEO of Nokia through 2006.

Mr. Ollila's contract has provisions for severance payments for up to 24 months of compensation (both base compensation and bonus) in the event of his termination of employment for reasons other than cause, including a change of control. Mr. Ollila will also be allowed to retain a portion of his unvested 1999C options proportionate to the length of his service, in the event his employment is terminated prior to the April 1, 2003 vesting date for the 1999C stock options. As previously mentioned, Mr. Ollila is further entitled to a full statutory pension from the date he turns 60 years of age, instead of the statutory age of 65.

Mr. Ala-Pietila's contract has provisions for severance payments for up to 18 months of compensation (both base compensation and bonus) in the event of his termination of employment for reasons other than cause, including a change of control. Mr. Ala-Pietila will also be allowed to retain a portion of his unvested 1999C options proportionate to the length of his service, in the event his employment is terminated prior to the April 1, 2003 vesting date for the 1999C stock options. As previously mentioned, Mr. Ala-Pietila is entitled to a full statutory pension from the date he turns 60 years of age, instead of the statutory age of 65.

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## 6.D Employees

At December 31, 2002, Nokia employed 51,748 people, compared with 53,849 at December 31, 2001 and 60,289 at December 31, 2000. The average number of personnel for 2002, 2001 and 2000 was 52,714, 57,716, and 58,708, respectively, divided according to their activity and geographical location as follows:

	2002	2001	2000
Nokia Mobile Phones	26,090	27,320	27,353
Nokia Networks	18,463	22,040	23,508
Nokia Ventures Organization	1,566	2,155	2,222
Common Group Functions	6,595	6,201	5,625
<b>Nokia Group</b>	<b>52,714</b>	<b>57,716</b>	<b>58,708</b>
Finland	22,615	23,653	24,495
Other European countries	12,057	14,045	14,365
Americas	10,093	11,215	11,491
Asia-Pacific	7,949	8,803	8,357
<b>Nokia Group</b>	<b>52,714</b>	<b>57,716</b>	<b>58,708</b>

Management believes that we have a good relationship with our employees and with the labor unions. Less than 50% of our employees are unionized.

## 6.E Share Ownership

The following tables set forth the number of shares and ADSs beneficially held by members of the Board of Directors and the Group Executive Board as of December, 31, 2002.

### Board of Directors

	Shares <sup>(1)</sup>	ADSs
Jorma Ollila <sup>(2)</sup>	67,656	
Paul J. Collins		105,344
Georg Ehrnrooth <sup>(3)</sup>	302,871	
Bengt Holmström	4,999	
Per Karlsson <sup>(3)</sup>	5,829	
Robert F.W. van Oordt	4,359	
Marjorie Scardino		2,411
Vesa Vainio	15,659	
Arne Wessberg	2,411	
<b>Total</b>	<b>403,784</b>	<b>107,755</b>

- (1) The number of shares includes not only shares acquired as compensation for services rendered as a member of the Board of Directors, but also shares acquired by any other means.
- (2) For Mr. Ollila's holdings of stock options, see the table under Stock Option Ownership below.
- (3) Mr. Ehrnrooth's and Mr. Karlsson's holdings include both shares held personally and shares held through a company.

*Group Executive Board*

	<b>Shares</b>
Pekka Ala-Pietilä	9,600
Matti Alahuhta	49,200
Sari Baldauf	103,200
J.T. Bergqvist	12,800
Olli-Pekka Kallasvuo	25,000
Pertti Korhonen	2,300
Yrjö Neuvo	74,540
Veli Sundbäck	110,000
Anssi Vanjoki	106,000
<b>Total</b>	<b>492,640</b>

On December 31, 2002, the aggregate interest of the members of the Board of Directors and the Group Executive Board in our outstanding share capital was 1,004,179 shares and ADSs, representing less than 1% of the issued share capital and voting rights in Nokia Corporation.

*Stock Option Ownership*

The following tables provide certain information relating to stock options held by members of the Group Executive Board as of December 31, 2002. These stock options were issued pursuant to the Nokia Stock Option Plans 1997, 1999 and 2001. For a description of our stock option plans, including information regarding the expiration date of the options under these plans, please see " Nokia Stock Option Plans" and " Other Employee Plans Related to Equity."

	Number of shares represented by exercisable options as of December 31, 2002				Number of shares represented by unexercisable options as of December 31, 2002			
	1997 C <sup>(1)</sup>	1999 A <sup>(2)</sup>	1999 B <sup>(2)</sup>	2001 A and B <sup>(3)</sup>	1999 C <sup>(4)</sup>	2001 B <sup>(3)</sup>	2001 C <sup>(5)</sup>	2002 A and B
<b>Exercise price per share<sup>(6)</sup></b>	<b>EUR 3.23</b>	<b>EUR 16.89</b>	<b>EUR 56.28</b>	<b>EUR 36.75</b>	<b>EUR 29.12</b>	<b>EUR 36.75</b>	<b>EUR 26.67</b>	<b>EUR 17.89</b>
Jorma Ollila	0	1,200,000	1,056,000	312,500	544,000	687,500	500,000	1,000,000
Pekka Ala-Pietilä	0	720,000	475,200	78,125	244,800	171,875	125,000	250,000
Matti Alahuhta	80,000	340,000	369,600	31,250	190,400	68,750	50,000	175,000
Sari Baldauf	80,000	420,000	369,600	31,250	190,400	68,750	50,000	175,000
J.T. Bergqvist	0	100,000	92,400	12,500	47,600	27,500	20,000	70,000
Olli-Pekka Kallasvuo	0	300,000	369,600	31,250	190,400	68,750	50,000	175,000
Pertti Korhonen	0	42,000	94,120	9,375	27,880	20,625	15,000	70,000
Yrjö Neuvo	0	280,000	264,000	21,875	136,000	48,125	35,000	70,000
Veli Sundbäck	0	400,000	264,000	12,500	136,000	27,500	20,000	40,000
Anssi Vanjoki	0	280,000	264,000	21,875	136,000	48,125	35,000	100,000

- (1) Each 1997 C option originally granted entitles the holder to subscribe for 16 shares of Nokia stock. These options expired on January 31, 2003.
- (2) Each 1999 A and B option originally granted entitles the holder to subscribe for four shares of Nokia stock.
- (3) Each 2001 A and B option originally granted entitles the holder to subscribe for one share of Nokia stock. The 2001 A and B options were 25% exercisable on July 1, 2002. An additional 6.25% of the original grant amount becomes exercisable each calendar quarter thereafter, so that the options will be fully exercisable on July 1, 2005. As of December 31, 2002, of the original grant of 2001 A and B options, 31.25% was vested and exercisable.
- (4) Each 1999 C option originally granted entitles the holder to subscribe for four shares of Nokia stock. The 1999 C options will be fully exercisable on April 1, 2003.

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- (5) Each 2001 C option originally granted entitles the holder to subscribe for one share of Nokia stock. The 2001 C options were 25% exercisable on January 1, 2003 and an additional 6.25% will be exercisable each calendar quarter thereafter, so that the options will be fully exercisable on January 1, 2006.
- (6) The exercise price per share for the 1997 C options has been adjusted for share splits that took place in 1998, 1999 and April 2000. The exercise price per share for the 1999 A, B and C options has been adjusted for the share split that took place in April 2000.

On December 31, 2002, the aggregate holdings of exercisable stock options of members of the Group Executive Board called for approximately 8.4 million shares, representing less than 1% of the issued share capital and voting rights in Nokia Corporation.

	Options sold or exercised in 2002		Number of shares represented by outstanding options as of December 31, 2002		Total potential realizable value of "In the Money" shares represented by outstanding options as of December 31, 2002 <sup>(2)</sup>	
	Number of Underlying Shares	Value Realized <sup>(1)</sup> (EUR Thousands)	Exercisable	Unexercisable	Exercisable	Unexercisable
					(EUR Thousands)	
Jorma Ollila	800,000	13,586	2,568,500	2,731,500	0	0
Pekka Ala-Pietilä	400,000	6,180	1,273,325	791,675	0	0
Matti Alahuhta	240,000	4,055	820,850	484,150	954	0
Sari Baldauf	240,000	4,017	900,850	484,150	954	0
J. T Bergqvist	192,000	2,605	204,900	165,100	0	0
Olli-Pekka Kallasvuo	332,000	5,522	700,850	484,150	0	0
Pertti Korhonen	117,000	2,011	145,495	133,505	0	0
Yrjö Neuvo	200,000	2,226	565,875	289,125	0	0
Veli Sundbäck	560,000	9,369	676,500	223,500	0	0
Anssi Vanjoki	290,800	4,568	565,875	319,125	0	0

- (1) "Value realized" represents the total gross value received in respect of options sold over the Helsinki Exchanges. In 2002, none of the individuals listed in the table exercised any options.
- (2) The "total potential realizable value" of the stock options is based on the difference between the exercise price of the options (post split) and the closing market price of Nokia shares on the Helsinki Exchanges as of December 31, 2002 of EUR 15.15.

On December 31, 2002, the total outstanding exercisable stock options held by all participants in the Nokia stock option plans, including the Group Executive Board, called for 104.2 million shares, with a total potential realizable value on December 31, 2002 of EUR 85.6 million. On December 31, 2002, there were outstanding unexercisable stock options for a total of 112.4 million shares, with a potential realizable value of EUR 0.7 million on December 31, 2002. The potential realizable value for both the outstanding exercisable and unexercisable stock options is based on the difference between the exercise price of the stock options (post split) and the closing market price of Nokia shares on the Helsinki Exchanges as of December 31, 2002 of EUR 15.15.

#### ***Insiders' Trading in Securities***

The Board has established a policy in respect of trading in securities. The policy is in line with the Guidelines for Insiders issued by the Helsinki Exchanges.

#### ***Stock Ownership Guidelines for Executive Management***

The goal of our long-term, equity-based incentive awards is to recognize progress towards the achievement of our strategic objectives, and to focus executives on building value for shareholders. In addition to stock option grants, we encourage stock ownership by our top executives. In

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January 2001, we introduced a stock ownership commitment guideline with minimum recommendations tied to annual fixed salaries. For the members of the Group Executive Board, the recommended minimum investment in our shares corresponds to two times the member's annual base salary, to be fulfilled within five years of the introduction of the guideline.

#### ***Nokia Stock Option Plans***

For a summary of the existing Nokia stock option plans, in some of which the Group Executive Board members participate, please see note 21 to our consolidated financial statements included in Item 18 of this Form 20-F.

#### ***Other Employee Plans Related to Equity***

Unlike our other stock option plans, the plans described below do not result in an increase of our share capital.

In 1999 we introduced a stock option plan available to our employees in the United States and Canada: the Nokia Holding Inc. 1999 Stock Option Plan. For more information on this plan, see note 21 to our consolidated financial statements included in Item 18 of this Form 20-F.

In 2000, we introduced an Employee Share Purchase Plan, which permits all full-time Nokia employees located in the United States to acquire Nokia ADSs at a 15% discount. The ADSs to be purchased are funded through monthly payroll deductions from the salary of the participants, and the ADSs are purchased on a monthly basis. As of December 31, 2002, a total of 1,008,846 ADSs had been purchased under the plan since its inception, and there were a total of approximately 1,000 participants.

In connection with the acquisition of Ipsilon, we assumed Ipsilon's 1995 stock option plan. The former employees, officers and directors of Ipsilon are eligible to participate in this plan. We intend to issue no more options pursuant to this plan. As of December 31, 2002, options to purchase 611,890 ADSs were outstanding at an average exercise price of USD 25.37 per ADS.

In connection with the acquisition of certain US corporations, we have replaced stock options held by the employees, officers or consultants of the acquired corporations immediately prior to the respective acquisition with stock options that entitle those persons to purchase Nokia ADSs. The maximum aggregate number of ADSs that may be issued under these arrangements is 7,050,000. As of December 31, 2002 options to purchase 3,360,567 ADSs were outstanding at an average exercise price of USD 15.81 per ADS.

## **ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS**

### **7.A Major Shareholders**

No persons are known by Nokia to hold currently more than 5% of the voting securities of Nokia Corporation. As far as we know, Nokia is not directly or indirectly owned or controlled by another corporation or by any government, and there are no arrangements that may result in a change of control of Nokia. During the past three years, the only shareholder we have known to hold 5% of our voting securities has been Janus Capital Corporation, which informed us on December 9, 1999 that its holdings of Nokia shares exceeded 5% of our total share capital. Janus Capital Corporation informed us on July 26, 2001 that its ownership position had decreased below 5% of our total share capital. Its address is 100 Fillmore Street, Denver, Colorado, 80206-4923, United States.

As at December 31, 2002, 1,210,922,515 ADSs (equivalent to the same number of shares or approximately 25.3% of the total outstanding shares) were outstanding and held of record by 22,453 registered holders in the United States. We are aware that many ADSs are held of record by

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brokers and other nominees, and accordingly the above numbers are not necessarily representative of the actual number of persons who are beneficial holders of ADSs or the number of ADSs beneficially held by such persons. Based on information available from ADP, the number of beneficial owners of ADSs as of December 31, 2002 was approximately 1.4 million.

As at December 31, 2002, there were approximately 129,508 holders of record of our shares. Of these holders, around 703 had registered addresses in the United States and held a total of some 8,930,124 of our shares, approximately 0.19% of the total outstanding shares. In addition, certain accounts of record with registered addresses other than in the United States hold our shares, in whole or in part, beneficially for United States persons.

#### **7.B Related Party Transactions**

There have been no material transactions during the last three fiscal years to which any director, executive officer or 5% shareholder, or any relative or spouse of any of them, was a party. There is no significant outstanding indebtedness owed to Nokia by any director, executive officer or 5% shareholder.

There are no material transactions with enterprises controlling, controlled by or under common control with Nokia or associates of Nokia.

See note 31 to our consolidated financial statements included in Item 18 of this Form 20-F.

#### **7.C Interests of Experts and Counsel**

Not applicable.

### **ITEM 8. FINANCIAL INFORMATION**

#### **8.A Consolidated Statements and Other Financial Information**

**8.A.1** See Item 18 for our audited consolidated financial statements.

**8.A.2** See Item 18 for our audited consolidated financial statements, which cover the last three financial years.

**8.A.3** See pages F-1 and F-2 for the audit reports of our accountants, each entitled "Report of Independent Accountants."

**8.A.4** Not applicable.

**8.A.5** Not applicable.

**8.A.6** See note 2 to our consolidated financial statements included in Item 18 of this Form 20-F for the amount of our export sales.

**8.A.7 Litigation** We are party to routine litigation incidental to the normal conduct of our business. Our management does not believe that liabilities related to these proceedings, in the aggregate, are likely to be material to our financial condition or results of operations.



We and several other mobile phone manufacturers, distributors and network operators have been named as defendants in a series of class action suits filed in various US jurisdictions. These cases have been consolidated and are now before a US federal district court in Baltimore, Maryland, United States. The actions have been brought on behalf of a purported class of persons in the United States as a whole consisting of all individuals that purchased cellular phones without a headset. In general, the complaints in the actions allege that the defendants should have included a headset with every hand-held cellular telephone as a means of reducing any potential health

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risk associated with the telephone's use, and assert causes of action based on negligence, fraud and misrepresentation. The relief sought by the complaint includes unspecified amounts of compensation for phone and headset costs, and attorneys' fees.

We have also been named as a defendant along with other mobile phone manufacturers and network operators in five lawsuits by individual plaintiffs who allege that the radio emissions from mobile phones caused or contributed to each plaintiff's brain tumor. The cases have been removed from the state courts where they were filed and are now before a US federal district court in Baltimore, Maryland, United States.

We believe that the allegations described above are without merit, and intend to defend these actions vigorously. The courts that have reviewed similar matters to date have found that there is no reliable scientific basis for the plaintiffs' claims.

One of our customers in Turkey, Telsim Mobil Telekomunikasyon Hiz. A.S., has defaulted on its obligations under a financing arrangement secured by us. In accordance with the terms of the financing documentation, the matter has been submitted to arbitration proceedings, which we are vigorously pursuing to recover all amounts due to us. In addition, we have pending, in conjunction with co-plaintiff Motorola Credit Corporation, a lawsuit against individual members of the Uzan family and certain Uzan controlled corporations. The lawsuit alleges that the defendants violated the Racketeering Influenced and Corrupt Organizations Act (United States) by fraudulently inducing us and Motorola, through a pattern of fraudulent and illegal conduct, to provide financing to Telsim, which is owned and controlled by the Uzans and their affiliates. We wrote off our total financing exposure to Telsim prior to 2002.

Based upon the information currently available, management does not expect the resolution of any of the matters discussed above to have a material adverse effect on our financial condition or results of operations.

**8.A.8** See "Item 3.A Selected Financial Data Distribution of Earnings" for a discussion of our dividend policy.

## **8.B Significant Changes**

No significant changes have occurred since the date of our consolidated financial statements included in this Form 20-F. See "Item 5.D Trend Information."

## **ITEM 9. THE OFFER AND LISTING**

### **9.A Offer and Listing Details**

Our capital consists of shares traded on the Helsinki Exchanges under the symbol "NOK1V." American Depositary Shares, or ADSs, each representing one of our shares are traded on the New York Stock Exchange under the symbol "NOK." The ADSs are evidenced by American Depositary Receipts, or ADRs, issued by Citibank, N.A., as Depositary under the Amended and Restated Deposit Agreement dated as of March 28, 2000, among Nokia, Citibank, N.A. and registered holders from time to time of ADRs. ADSs were first issued in July 1994.

The table below sets forth, for the periods indicated, the reported high and low quoted prices for our shares on the Helsinki Exchanges and the high and low quoted prices for the shares, in the form of ADSs, on the New York Stock Exchange. In each of 1998 and 1999, Nokia effected a two-for-one share split, effective in public trading on April 16, 1998, and April 12, 1999, respectively. In 2000, Nokia effected a four-for-one share split, effective in public trading on

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April 10, 2000. Price per share and price per ADS figures for 1998 and 1999 have been adjusted accordingly.

	Helsinki Exchanges				New York Stock Exchange	
	Price per K share		Price per A share		Price per ADS	
	High	Low	High	Low	High	Low
	EUR		EUR		USD	
<b>1998</b>	13.41	3.89	13.41	3.87	15.60	4.26
<b>1999<sup>(1)</sup></b>			45.00	13.74	47.77	15.94
<b>2000</b>			64.88	35.81	61.88	29.44
<b>2001</b>						
First Quarter			46.50	23.40	44.69	21.34
Second Quarter			39.40	25.10	35.01	21.25
Third Quarter			27.25	14.35	22.62	12.95
Fourth Quarter			28.96	16.50	25.53	15.20
Full Year			46.50	14.35	44.69	12.95
<b>2002</b>						
First Quarter			29.45	22.39	26.90	19.41
Second Quarter			23.45	12.42	20.94	12.00
Third Quarter			15.57	11.10	15.14	10.76
Fourth Quarter			19.97	13.35	20.15	12.98
Full Year			29.45	11.10	26.90	10.76
<b>Most recent six months</b>						
August 2002			15.04	11.10	14.77	10.76
September 2002			15.17	12.48	14.61	12.42
October 2002			17.38	13.35	16.95	12.98
November 2002			19.86	15.84	19.48	15.99
December 2002			19.97	15.05	20.15	15.50
January 2003			16.16	12.90	17.23	13.97

(1) K and A shares were consolidated on April 9, 1999 into one class of shares.

### 9.B Plan of Distribution

Not applicable.

### 9.C Markets

The principal trading markets for the shares are the New York Stock Exchange, in the form of ADSs, and the Helsinki Exchanges, in the form of shares. In addition, the shares are listed on the London, Frankfurt, Stockholm and Paris stock exchanges.

### 9.D Selling Shareholders

Not applicable.

### 9.E Dilution

Not applicable.

**9.F Expenses of the Issue**

Not applicable.

**ITEM 10. ADDITIONAL INFORMATION****10.A Share Capital**

Not applicable.

**10.B Memorandum and Articles of Association*****Registration***

Nokia is organized under the laws of the republic of Finland and registered under the business identity code 0112 038 - 9. Nokia's corporate purpose under Article 1 of the articles of association is to engage in the telecommunications industry and other sectors of the electronics industry, including the manufacture and marketing of telecommunications systems and equipment, mobile phones, consumer electronics and industrial electronic products. We also may engage in other industrial and commercial operations, as well as securities trading and other investment activities.

***Director's Voting Powers***

Under Finnish law, a director shall refrain from taking any part in the consideration of a contract or other issue that may provide any material benefit to him. There is no age limit requirement for directors, and there are no requirements under Finnish law that a director must own a minimum number of shares in order to qualify to act as a director. Under Finnish law, a company may lend funds to a director only out of the distributable profits and against sufficient collateral. However, lending for the purpose of acquiring the company's shares is not permitted.

***Share Rights, Preferences and Restrictions***

For a description of dividend rights attaching to our shares, see "Item 3.A Selected Financial Data Distribution of Earnings." Dividend entitlement lapses after ten years, if a dividend remains unclaimed for that period, in which case the unclaimed dividend will be retained by Nokia.

Each share confers the right to one vote. Votes may be used at general meetings called by the Board of Directors. According to Finnish law, a company generally must hold an Annual General Meeting once a year. In addition, the board is obliged to call an extraordinary general meeting at the request of shareholders representing a minimum of one tenth of all outstanding shares. The members of the board are elected for a term of one year at each Annual General Meeting.

Under Finnish law, shareholders may attend and vote at a general meeting in person or by proxy. It is not customary in Finland for a company to issue forms of proxy to its shareholders. Accordingly, Nokia does not do so. However, registered holders and beneficial owners of ADSs are issued forms of proxy by the Depositary.

To attend and vote at a general meeting, a shareholder must be registered in the register of shareholders in the Finnish book-entry system. A registered holder or a beneficial owner of the ADSs, like other beneficial owners whose shares are registered in the company's register of shareholders in the name of a nominee, may vote his shares provided that he arranges to have his name entered in the temporary register of shareholders as of the record date of the meeting.

According to an amendment to Finnish law effective as of January 1, 2001, the record date is the tenth calendar day preceding the meeting. To be entered into the temporary register of

shareholders as of the record date of the meeting, a holder of ADSs must provide the Depository, or have his broker or other custodian provide the Depository, on or before the voting deadline as well as the blocking deadline if any, as defined in the proxy material issued by the Depository, a proxy including the name, address, and social security number or another corresponding personal identification number of, and the number of shares to be voted by, the holder of the ADSs, in addition to voting instructions. The register of shareholders as of the record date of each general meeting is public until the end of the respective meeting.

As a further prerequisite for attending and voting at a general meeting, shareholders must give notice to Nokia of their intention to attend no later than the date and time specified by the Board of Directors in the notice of the meeting. By completing and returning the form of proxy provided by the Depository, a holder of ADSs authorizes the Depository to give this notice.

Each of our shares confers equal rights to share in our profits, and in any surplus in the event of our liquidation.

Under Finnish law, the rights of shareholders related to shares are as stated by law and in our articles of association. Amendment of the articles of association requires a decision of the general meeting, supported by two-thirds of the votes cast and two-thirds of the shares represented at the meeting.

#### *Disclosure of Shareholder Ownership*

According to the Securities Market Act of 1989, as amended, a shareholder shall disclose his ownership to the company and the Financial Supervision when it reaches, exceeds or goes below 1/20, 1/10, 3/20, 1/5, 1/4, 1/3, 1/2 or 2/3 of all the shares outstanding. The term "ownership" includes ownership by the shareholder, as well as selected related parties.

#### *Purchase Obligation*

Our articles of association require a shareholder that holds one-third or one-half of all of our shares to purchase the shares of all other shareholders that request that he do so, at a price generally based on the historical weighted average trading price of the shares. A shareholder of this magnitude also is obligated to purchase any subscription rights, stock options, warrants or convertible bonds issued by the company if so requested by the holder.

Under the Securities Market Act of 1989, as amended, a shareholder whose holding exceeds two-thirds of the total voting rights in a company shall, within one month, offer to purchase the remaining shares of the company, as well as any subscription rights, warrants, convertible bonds or stock options issued by the company. The purchase price shall be the market price of the securities in question. The market price is determined, among other things, on the basis of the average of the prices paid for the security in public trading during the preceding twelve months, and any higher price paid by the shareholder, as well as any other special circumstances.

Under the Companies Act of 1978, as amended, a shareholder whose holding exceeds nine-tenths of the total number of shares or voting rights in Nokia has both the right and the obligation to purchase all the shares of the minority shareholders for the current price. The current price is determined, among other things, on the basis of the recent market price of the shares. The purchase procedure under the Companies Act differs, and the purchase price may differ, from the purchase procedure and price under the Securities Market Act, as discussed above.

#### *Pre-Emptive Rights*

In connection with any offering of shares, the existing shareholders have a pre-emptive right to subscribe for shares offered in proportion to the amount of shares in their possession. However, a

general meeting of shareholders may vote, by a majority of two-thirds of the votes cast and two-thirds of the shares represented at the meeting, to waive this pre-emptive right provided that, from the company's perspective, important financial grounds exist.

Under the Act on the Control of Foreigners' Acquisition of Finnish Companies of 1992, clearance by the Ministry of Trade and Industry is required for a non-resident of Finland, directly or indirectly, to acquire one-third or more of the voting power of a company. The Ministry of Trade and Industry may refuse clearance where the acquisition would jeopardize important national interests, in which case the matter is referred to the Council of State. These clearance requirements are not applicable if, for instance, the voting power is acquired in an issuance of shares

that is proportional to the holder's ownership of the shares. Moreover, the clearance requirements do not apply to residents of countries in the European Economic Area or countries that have ratified the Convention on the Organization for Economic Cooperation and Development.

### **10.C Material Contracts**

Nokia is not party to any material contract other than those entered into in the ordinary course of business.

### **10.D Exchange Controls**

There are currently no Finnish laws which may affect the import or export of capital, or the remittance of interest or other payments.

### **10.E Taxation**

#### ***General***

The taxation discussion set forth below is intended only as a descriptive summary and does not purport to be a complete analysis or listing of all potential tax effects relevant to ownership of our shares represented by ADSs.

The statements of United States and Finnish tax laws set out below are based on the laws in force as of the date of this Form 20-F and may be subject to any changes in US or Finnish law, and in any double taxation convention or treaty between the United States and Finland, occurring after that date.

For purposes of this summary, beneficial owners of ADSs that are considered residents of the United States for purposes of the current income tax convention between the United States and Finland, referred to as the "Treaty," and that are entitled to the benefits of the Treaty under the "Limitation on Benefits" provisions contained in the Treaty, are referred to as "US Holders." Beneficial owners that are citizens or residents of the United States, corporations created in or organized under US law, and estates or trusts (to the extent their income is subject to US tax either directly or in the hands of beneficiaries) generally will be considered to be residents of the United States under the Treaty. Special rules apply to US Holders that are also residents of Finland and to citizens or residents of the United States that do not maintain a substantial presence, permanent home, or habitual abode in the United States. For purposes of this discussion, it is assumed that the Depositary and its custodian will perform all actions as required by the deposit agreement with the Depositary and other related agreements between the Depositary and Nokia.

If a partnership holds ADSs, the tax treatment of a partner will depend upon the status of the partner and activities of the partnership. If a US holder is a partner in a partnership that holds ADSs, the holder is urged to consult its own tax advisor regarding the specific tax consequences of owning and disposing of its ADSs.

Because this summary is not exhaustive of all possible tax considerations such as situations involving persons that are dealers or whose functional currency is not the US dollar, who may be subject to special rules that are not discussed herein holders of shares or ADSs that are US Holders are advised to satisfy themselves as to the overall United States federal, state and local tax consequences, as well as to the overall Finnish and other applicable non-US tax consequences, of their ownership of ADSs and the underlying shares by consulting their own tax advisors. This summary does not discuss the treatment of ADSs that are held in connection with a permanent establishment or fixed base in Finland.

For the purposes of both the Treaty and the United States Internal Revenue Code of 1986, as amended, referred to as the Code, US Holders of ADSs will be treated as the owners of the underlying shares that are represented by those ADSs. The US federal income tax consequences to US Holders of ADSs, as discussed below, apply as well to US Holders of shares.

The holders of ADSs will, for Finnish tax purposes, be treated as the owners of the shares that are represented by the ADSs. The Finnish tax consequences to the holders of shares, as discussed below, also apply to the holders of ADSs.

#### ***Taxation of Cash Dividends***

For US federal income tax purposes, the gross amount of dividends paid to US Holders of ADSs, including any related Finnish withholding tax, will be treated as ordinary dividend income to the extent paid or deemed paid out of the current or accumulated earnings and profits of Nokia (as determined under US federal income tax principles). To the extent that an amount received by a US holder exceeds the allocable share of current

and accumulated earnings and profits of Nokia, such excess will be applied first, to reduce such US holder's tax basis in his shares or ADSs and then, to the extent it exceeds the US holder's tax basis, it will constitute gain from a deemed sale or exchange of such shares or ADSs. Dividends of this type will not be eligible for the dividends received deduction allowed to corporations under Section 243 of the Code. The amount includable in income will equal the US dollar value of the payment, determined at the time such payment is received by the custodian, regardless of whether the payment is in fact converted into US dollars. Generally, any gain or loss resulting from currency exchange rate fluctuations during the period between the time such payment is received and the date the dividend payment is converted into US dollars will be treated as ordinary income or loss to such holder.

Under the Finnish Act on Taxation of Non-residents' Income and Wealth, non-residents of Finland are generally subject to a withholding tax at a rate of 29% payable on dividends paid by a company. However, pursuant to the Treaty, dividends paid to US Holders will generally be subject to Finnish withholding tax at a reduced rate of 15% of the gross amount of such dividend.

Subject to conditions and limitations, Finnish withholding taxes will be treated as foreign taxes eligible for credit against a US Holder's US federal income tax liability. Dividends received with respect to the ADSs will generally constitute foreign source passive income for foreign tax credit purposes, but in some circumstances may constitute financial services income or general limitation basket income. In lieu of a credit, a US Holder of ADSs may elect to deduct all of his foreign taxes.

Further, in accordance with the imputation system of taxation of dividends, the Finnish corporate income tax paid by a company can, in the case of a shareholder that is a resident of Finland and, therefore, liable for Finnish income tax, be credited against the Finnish income tax of the shareholder to the extent that it relates to the dividends distributed to the shareholder. However, the tax paid by a company cannot be credited against the Finnish income taxes, if any, of a US Holder.

#### ***Tax on Sale or Exchange***

A US Holder will recognize taxable gain or loss on the sale or exchange of ADSs. If the ADSs are held as a capital asset, this gain or loss will be long-term capital gain or loss if, at the time of the sale or exchange, the ADSs have been held for more than one year. Any capital gain or loss, for foreign tax credit purposes, generally will constitute US source gain or loss. In the case of a US Holder that is an individual, any capital gain generally will be subject to US federal income tax at preferential rates if specified minimum holding periods are met. The deductibility of capital losses is subject to significant limitations.

The sale by a US Holder of the ADSs or the underlying shares, other than an individual that, by reason of his residence in Finland for a period exceeding six months, is or becomes liable for Finnish income tax according to the relevant provisions of Finnish tax law, generally will not be subject to income tax in Finland, in accordance with Finnish tax law and the Treaty.

#### ***Finnish Capital Taxes***

Under the Treaty, the holding of ADSs or the underlying shares by US Holders generally will not subject a US Holder to Finnish tax on net capital.

#### ***Finnish Transfer Tax***

Transfers of shares will be, and transfers of ADSs may be, subject to the Finnish transfer tax only when one of the parties to the transfer is subject to Finnish taxation under the Finnish Income Tax Act by virtue of being a resident of Finland or a Finnish branch of a non-Finnish credit institution. In case the Finnish Transfer Tax Act is applicable, transfer tax, however, would not be payable on stock exchange transfers. Otherwise, the transfer tax would be payable at the rate of 1.6% of the transfer value of the security traded.

#### ***Finnish Inheritance and Gift Taxes***

A transfer of an underlying share by gift or by reason of the death of a US Holder and the transfer of an ADS are not subject to Finnish gift or inheritance tax provided that none of the deceased person, the donor, the beneficiary of the deceased person or the recipient of the gift is resident in Finland.

#### ***Non-Residents of the United States***

Beneficial owners of ADSs that are not US Holders will not be subject to US federal income tax on dividends received with respect to ADSs unless this dividend income is effectively connected with the conduct of a trade or business within the United States. Similarly, non-US Holders generally will not be subject to US federal income tax on the gain realized on the sale or disposition of ADSs, unless (a) the gain is effectively connected with the conduct of a trade or business in the United States or (b) in the case of an individual, that individual is present in the United States for 183 days or more in the taxable year of the disposition and other conditions are met.

#### ***US Information Reporting and Backup Withholding***

Dividend payments with respect to shares or ADSs and proceeds from the sale, exchange or redemption of shares or ADSs may be subject to information reporting to the Internal Revenue Service and possible US backup withholding at the current rate of 30%. Backup withholding will not apply to you, however, if you furnish a correct taxpayer identification number or certificate of foreign status and make any other required certification or if you are otherwise exempt from backup withholding. Amounts withheld as backup withholding may be credited against your US

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federal income tax liability, and you may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the Internal Revenue Service and furnishing any required information.

You should consult your own tax advisor regarding the application of the information reporting and backup withholding rules, including the final regulations.

#### **10.F Dividends and Paying Agents**

Not applicable.

#### **10.G Statement by Experts**

Not applicable.

#### **10.H Documents on Display**

The documents referred to in this report can be read at the Securities and Exchange Commission's public reference facilities at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549.

#### **10.I Subsidiary Information**

Not applicable.

#### **10.J Matters Related to Auditors**

PricewaterhouseCoopers Oy has served as Nokia's independent public accountants for each of the fiscal years in the three-year period ended December 31, 2002. The auditors are elected annually by the Annual General Meeting.

The following table presents the aggregate fees for professional audit services and other services rendered by PricewaterhouseCoopers to Nokia in 2002 and 2001.

#### ***Fees Paid to PricewaterhouseCoopers***

	<b>2002</b>	<b>2001</b>
	<b>EURm</b>	<b>EURm</b>
Audit Fees <sup>(1)</sup>	3.6	5.4
Audit-related Fees	1.2	0.8

	2002	2001
Tax Fees	6.7	8.4
All Other Fees <sup>(2)</sup>	1.5	12.9
<b>Total</b>	<b>13.0</b>	<b>27.5</b>

- (1) Included within "Audit Fees" for 2002 are EUR 0.8 million of accrued audit fees for the 2002 year-end audit that were not billed until 2003. Included within "Audit Fees" for 2001 are EUR 2.6 million of fees billed in 2001 related to the 2000 year-end audit and EUR 0.7 million of accrued audit fees for the 2001 year-end audit that were not billed until 2002.
- (2) Included within "All Other Fees" in 2002 and 2001 are EUR 0.9 million and EUR 11.6 million, respectively, related to services provided by PwC Consulting, which was sold to IBM in 2002.

## ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Nokia's overall risk management philosophy is based on having a corporate-wide view on key risks including strategic, operational, financial and hazard risks. Risk management in Nokia means a systematic and pro-active way to analyze, review and manage all opportunities, threats and risks related to the Group's activities.

The principles documented in the Group's risk policy and accepted by the Nokia Board require that risk management is integrated into each business process. Business or function owners always have risk ownership. Key risks are reported to the Group level to enable Group-wide risk management. There are specific risk-management policies covering, for example, treasury and customer finance risks.

### Financial Risks

The key financial targets for Nokia are growth, profitability, operational efficiency and a strong balance sheet. The objective for the treasury function is twofold: to guarantee cost-efficient funding for the Group at all times, and to identify, evaluate and hedge financial risks in close co-operation with the business groups. There is a strong focus in Nokia on creating shareholder value. The treasury function supports this aim by minimizing the adverse effects caused by fluctuations in the financial markets on the profitability of the underlying businesses and by managing the balance sheet structure of the Group.

Nokia has Treasury Centers in Geneva, Singapore/Beijing and Dallas/Sao Paolo, and a Corporate Treasury unit in Espoo. This international organization enables Nokia to provide the Group companies with financial services according to local needs and requirements.

The treasury function is governed by policies approved by top management. These policies provide principles for overall financial risk management and determine the allocation of responsibilities for financial risk management in Nokia. These policies cover specific areas such as foreign exchange risk, interest rate risk, the use of derivative financial instruments as well as liquidity and credit risk. Treasury policies in Nokia are risk-averse. Business groups have detailed standard operating procedures supplementing the treasury policies in financial risk management-related issues.

### Market risk

#### *Foreign exchange risk*

Nokia operates globally and is thus exposed to foreign exchange risk arising from various currency combinations. Foreign currency-denominated assets and liabilities, together with expected cash flows from highly probable purchases and sales, give rise to this foreign exchange risk exposure. We manage this exposure against various local currencies because of our substantial production and sales outside the Eurozone.



Due to changes in the business environment, currency combinations may also change within the financial year. The most significant non-euro sales currencies during 2002 were the US dollar, the British pound and the Australian dollar. In general, the appreciation of the euro against other currencies has an adverse effect on Nokia's sales and operating profit in the medium to long-term, while the depreciation of the euro has a positive effect. The only significant non-euro purchasing currencies are the US dollar and the Japanese yen.

The following diagram shows a break-down by currency of our underlying foreign exchange transaction exposure at December 31, 2002:

According to the foreign exchange policy guidelines of the Group, we hedge material foreign exchange transaction risk exposure. This exposure is mainly hedged with derivative financial instruments such as forward foreign exchange contracts and foreign exchange options. The majority of financial instruments that we use to hedge foreign exchange risk have a duration of less than a year. The Group does not hedge forecasted foreign currency cash flows beyond two years.

We use the Value-at-Risk, or VaR, methodology to assess the foreign exchange risk related to the treasury management of the Group's exposure. The VaR figure represents the potential losses for a portfolio resulting from adverse changes in market factors using a specified time period and confidence level based on historical data. To correctly take into account the non-linear price function of certain derivative instruments, Nokia uses Monte Carlo simulation. Volatilities and correlations are calculated from a one-year set of daily data. The VaR figures assume that the forecasted cash flows materialize as expected. The VaR figures for the Group transaction foreign exchange exposure, including hedging transactions and Treasury exposures for netting and risk management purposes, with a one-week horizon and 95% confidence level, are shown in Table 1, below.

**Table 1**

*Transaction foreign exchange position Value-at-Risk*

VaR	2002	2001
	EURm	EURm
At December 31	5.9	16.0
Average for the year	14.3	20.2
Range for the year	4.9-27.6	16.0-32.7

Since Nokia has subsidiaries outside the Eurozone, the euro-denominated value of the shareholder's equity of Nokia is also exposed to fluctuations in exchange rates. Equity changes caused by movements in foreign exchange rates are shown as a translation difference in our consolidated financial statements included in Item 18 of this Form 20-F. Nokia uses, from time to time, foreign exchange contracts and foreign currency-denominated loans to hedge its equity exposure arising from foreign net investments.

**Interest rate risk**

The Group is exposed to interest rate risk through market value fluctuations of balance sheet items (i.e. price risk) and through changes in interest income or expenses (i.e. re-investment risk). Interest rate risk mainly arises through interest-bearing liabilities and assets. Estimated future changes in cash flows and balance sheet structure also expose the Group to interest rate risk.

Group companies are responsible for managing their short-term liquidity position, whereas the interest rate exposure of the Group is monitored and managed in Treasury. Due to the current balance sheet structure of Nokia, we emphasize managing the interest rate risk of investments.

Nokia uses the VaR methodology to assess and measure the interest rate risk in investment portfolio, which are benchmarked against a one-year investment horizon. The VaR figure represents the potential losses for a portfolio resulting from adverse changes in market factors using a specified time period and confidence level based on historical data. For interest rate risk VaR, Nokia uses variance-covariance methodology. Volatilities and correlations are calculated from a one-year set of daily data. The VaR-based interest rate risk figures for an investment portfolio with a one-week horizon and 95% confidence level are shown in Table 2, below.

**Table 2***Treasury investment portfolio Value-at-Risk*

VaR	2002	2001
	EURm	EURm
At December 31	5.4	6.4
Average for the year	5.1	4.2
Range for the year	3.1-8.7	1.8-8.1

**Equity price risk**

Nokia has certain strategic minority investments in publicly traded companies. These investments are classified as available-for-sale. The fair value of the equity investments on December 31, 2002 was EUR 137 million (EUR 169 million in 2001).

There are currently no outstanding derivative financial instruments designated as hedges of these equity investments. The VaR figures for equity investments, shown in Table 3, below, have been calculated using the same principles as for interest rate risk.

**Table 3***Equity investments Value at Risk*

VaR	2002	2001
	EURm	EURm
At December 31	6.5	8.6
Average for the year	8.8	6.4
Range for the year	5.5-19.0	3.0-11.8

In addition to the equity holdings in publicly traded companies referred to above, Nokia invests in private equity through Nokia Venture Funds. The fair value of these private equity investments at December 31, 2002 was USD 54 million (USD 130 million in 2001). Nokia is also exposed to equity price risk on social security costs relating to our stock option plans. Nokia hedges this risk by entering into cash settled equity swap and option contracts.

Not applicable.

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## PART II

### ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

### ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

### ITEM 15. CONTROLS AND PROCEDURES

Our Chairman and Chief Executive Officer and our Executive Vice President, Chief Financial Officer, after evaluating the effectiveness of the Group's disclosure controls and procedures (as defined in US Exchange Act Rules 13a-14(c)) within 90 days of the date of this Form 20-F, have concluded that, as of such date, the Group's disclosure controls and procedures were effective to ensure that material information relating to the Group was made known to them by others within the Group particularly during the period in which this Form 20-F was being prepared.

There were no significant changes in the Group's internal controls or in other factors that could significantly affect these controls subsequent to the date our Chairman and Chief Executive Officer and our Executive Vice President, Chief Financial Officer completed their evaluation, nor were there any significant deficiencies or material weaknesses in the Group's internal controls requiring corrective actions.

### ITEM 16. [RESERVED]

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## PART III

### ITEM 17. FINANCIAL STATEMENTS

Not applicable.

### ITEM 18. FINANCIAL STATEMENTS

The following financial statements are filed as part of this Annual Report on Form 20-F:

Consolidated Financial Statements	
Report of Independent Accountants	F-1
Consolidated Profit and Loss Accounts	F-2

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Consolidated Cash Flow Statements	F-4
Consolidated Statements of Changes in Shareholders' Equity	F-6
Notes to the Consolidated Financial Statements	F-7

### ITEM 19. EXHIBITS

- \*1. Articles of Association of Nokia Corporation.
- 6. See note 28 to our consolidated financial statements included in Item 18 of this Form 20-F for information on how earnings per share information was calculated
- 8. List of significant subsidiaries.
- 10(a).1 Consent of Independent Accountants.
- 10(a).2 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

\*  
Incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 2000.

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### GLOSSARY OF TERMS

**Access network:** A network for the delivery of voice, data, text and images to end users.

**ADSL (Asymmetric Digital Subscriber Line):** A transmission system that supports high bit rates over existing copper twisted pair access networks, providing a high bit rate channel from the network toward an ATM end system and a lower bit rate channel from the ATM end system toward the network.

**All-IP Network:** An integrated telecommunications network that uses IP for the transport of all user data and signalling data.

**Analogue:** A signaling technique in which signals are conveyed by continuously varying the frequency, amplitude or phase of the transmission.

**Base station:** Fixed transceiver (transmitter and receiver) equipment used for communicating with mobile phones in a mobile network. A base station may cover one or more cells or a part of a cell.

**Bluetooth:** Short range radio technology that expands wireless connectivity to personal and business mobile devices by enabling users to connect their mobile phones, computers, printers, digital cameras, network access points and other electronic devices to one another without cables.

**Broadband network:** A network that delivers higher bandwidth by using transmission channels capable of supporting data rates greater than the primary rate of 9.6 Kbit/s.

**Circuit switching:** Electronic communications via a dedicated channel, or circuit, for the duration of the communication.

**CDMA (Code Division Multiple Access):** A continuous digital transmission technology that uses a coding system to mix discrete voice signals together during transmission and then separates the signals at the end of transmission.

**CDMA 2000:** A wireless technology that is based on the CDMA platform and can provide ISDN-like speeds of up to 144 Kbps.

**Cellular network:** A mobile telephone network consisting of switching centers (digital exchanges), radio base stations and transmission equipment. A cellular telephone network services an area that is divided into a number of smaller regions, called cells. This facilitates a continuous connection between the base stations and the mobile phones. The connection is maintained even if the mobile phone user moves

from the area covered by one base station to the area of another base station.

**Core network:** A combination of exchanges and the basic transmission equipment that together form the basis for network services.

**DSL (Digital Subscriber Line):** A method of transmission utilized to transmit high-speed data on any existing copper line or local loop to a subscriber's telephone or other end user device.

**Digital:** A signaling technique in which a signal is encoded into digits for transmission.

**DVB (Digital Video Broadcasting):** A standard for digital satellite, cable and terrestrial video broadcasting.

**EDGE (Enhanced Data Rates for Global Evolution):** A technology to boost cellular network capacity and increase data rates of existing GSM networks to as high as 473 kbit/s.

**ETSI (European Telecommunications Standards Institute) Standards:** Standards produced by the ETSI that contain technical specifications laying down the characteristics required for a telecommunications product.

**GPRS (General Packet Radio Services):** A service that provides packet switched data, primarily for second generation GSM networks.

**GSM (Global System for Mobile Communications):** A digital cellular network that operates in the 900 MHz frequency band, the frequency adopted for use in most European and Asian countries, as well as the 1800 MHz band.

**GSM 1900 system:** A GSM-based cellular system that operates in the 1900 MHz frequency band (also referred to as PCS 1900 or DCS 1900).

**IP (Internet Protocol):** A network layer protocol that offers a connectionless Internetwork service and forms part of the TCP/IP protocol.

**ISP (Internet Service Provider):** A company that provides access to the Internet and World Wide Web via a fixed or mobile network.

**Iu Interface:** An interface standardized by the Third Generation Partnership Program. It enables multi-vendor interconnection between a core network and a radio network.

**LAN (Local Area Network):** A computer network that spans a small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves. A system of LANs connected in this way is called a wide-area network (WAN).

**MMS (Multimedia Messaging Services):** Enables mobile phone users to send and receive messages with rich content, such as images, polyphonic ring tones, audio clips and even short videos. MMS is an open standard defined by the Open Mobile Alliance (OMA).

**MSP (Managed Service Provider):** A company that manages information technology services for other companies by delivering outsourced IT management and problem resolution for e-business and mission-critical systems. MSPs ordinarily provide and manage their services remotely using an interactive Web page as the user interface.

**OMA (Open Mobile Alliance):** Delivers open standards for the mobile industry, helping to create interoperable services which work across countries, operators and mobile terminals and are driven by users' needs. To expand the mobile market, companies supporting the Open Mobile Alliance will work to stimulate the fast and wide adoption of a variety of new, enhanced mobile information, communication and entertainment services. The Open Mobile Alliance includes all key elements of the wireless value chain, and contributes to the timely and efficient introduction of services and applications.

**Packet:** Part of a message transmitted over a packet switched network.

**Packet switching:** A technique that enables digitized data to be chopped up into a number of packets sometimes called datagrams and sent out over various network routes to their location.

**Platform, platform concept:** A basic system on which different applications can be developed.

**TCP/IP (Transmission Control Protocol/Internet Protocol):** A public transmission protocol, originally defined by the US Department of Defense, that offers message routing and reliable data transmission.

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**TDMA (Time Division Multiple Access):** A digital transmission technology that breaks voice signals into sequential pieces of a defined length, places each piece into an information conduit at specific intervals and then reconstructs the pieces at the end of the conduit.

**TDMA SCDMA (Time Division Synchronous Code Division Multiple Access):** A proposed Chinese standard for high-speed mobile communications networks.

**TETRA (Terrestrial Trunked Radio):** An open digital trunked radio standard defined by ETSI to meet the needs of the most demanding professional mobile radio users.

**3G:** Third generation communications technology.

**VPN (Virtual Private Network):** A private network built using a public network as a base.

**WAP (Wireless Application Protocol):** A global, license-free and platform-independent protocol designed for Internet content and advanced telephony services on digital cellular phones and other wireless terminals.

**WCDMA (Wideband Code Division Multiple Access):** A digital transmission technology based on CDMA and planned to be used as the air interface access method in third generation mobile systems.

**WLAN (Wireless Local Area Network):** A local area network using wireless connections, such as radio, microwave or infrared links, in place of physical cables.

**xDSL:** Various forms of Digital Subscriber Line technologies.

**XHTML (Extensible HyperText Markup Language):** XHTML is the markup language used in WAP 2.0 specification, which is now a part of the OMA WAP 2.0 Release. XHTML bridges the divide between WAP and WWW worlds, providing an open platform for global content creation.

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## REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of  
NOKIA CORPORATION

We have audited the accompanying consolidated balance sheets of Nokia Corporation and its subsidiaries as of December 31, 2002 and 2001, and the related consolidated statements of profit and loss, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

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We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nokia Corporation and its subsidiaries at December 31, 2002 and 2001, and the consolidated results of their operations and their consolidated cash flows for each of the three years in the period ended December 31, 2002 in conformity with International Accounting Standards.

International Accounting Standards vary in certain respects from accounting principles generally accepted in the United States of America. The application of the latter would have affected the determination of consolidated net profit for each of the three years in the period ended December 31, 2002, and the determination of consolidated shareholders' equity at December 31, 2002 and 2001, to the extent summarized in Note 36 to the consolidated financial statements.

Espoo, Finland  
January 23, 2003

/s/ PRICEWATERHOUSECOOPERS OY

PricewaterhouseCoopers Oy  
Authorized Public Accountants

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### Nokia Corporation and Subsidiaries

#### Consolidated Profit and Loss Accounts

Notes	Financial year ended December 31		
	2002	2001	2000
	EURm	EURm	EURm
<b>Net sales</b>	<b>30,016</b>	31,191	30,376
Cost of sales	<b>(18,278)</b>	(19,787)	(19,072)
Research and development expenses	<b>(3,052)</b>	(2,985)	(2,584)
Selling, general and administrative expenses	<b>6, 7 (3,239)</b>	(3,523)	(2,804)
Customer finance impairment charges, net	<b>7 (279)</b>	(714)	
Impairment of goodwill	<b>7 (182)</b>	(518)	
Amortization of goodwill	<b>9 (206)</b>	(302)	(140)
<b>Operating profit</b>	<b>2, 3, 4, 5, 6, 7, 9 4,780</b>	3,362	5,776
Share of results of associated companies	<b>32 (19)</b>	(12)	(16)
Financial income and expenses	<b>10 156</b>	125	102
<b>Profit before tax and minority interests</b>	<b>4,917</b>	3,475	5,862
Tax	<b>11 (1,484)</b>	(1,192)	(1,784)
Minority interests	<b>(52)</b>	(83)	(140)
<b>Net profit</b>	<b>3,381</b>	2,200	3,938
	<b>2002</b>	<b>2001</b>	<b>2000</b>
<b>Earnings per share</b>	<b>28 EUR</b>	<b>EUR</b>	<b>EUR</b>

## Financial year ended December 31

Basic	0.71	0.47	0.84
Diluted	0.71	0.46	0.82

Average number of shares (000's shares)	28	2002	2001	2000
Basic		4,751,110	4,702,852	4,673,162
Diluted		4,788,042	4,787,219	4,792,980

See Notes to Consolidated Financial Statements.

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## Nokia Corporation and Subsidiaries

## Consolidated Balance Sheets

		December 31	
	Notes	2002	2001
		EURm	EURm
<b>ASSETS</b>			
<b>Fixed assets and other non-current assets</b>			
Capitalized development costs	12	1,072	893
Goodwill	12	476	854
Other intangible assets	12	192	237
Property, plant and equipment	13	1,874	2,514
Investments in associated companies	14	49	49
Available-for-sale investments	15	238	399
Deferred tax assets	24	731	832
Long-term loans receivable	16	1,056	1,128
Other non-current assets		54	6
		5,742	6,912
<b>Current assets</b>			
Inventories	17, 19	1,277	1,788
Accounts receivable, net of allowances for doubtful accounts (2002: EUR 300 million, 2001: EUR 217 million)	18, 19	5,385	5,719
Prepaid expenses and accrued income	18	1,156	1,480
Other financial assets		416	403
Available-for-sale investments	15, 34	7,855	4,271
Bank and cash	34	1,496	1,854
		17,585	15,515
<b>Total assets</b>		<b>23,327</b>	<b>22,427</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>			
<b>Shareholders' equity</b>			
Share capital	21	287	284
Share issue premium		2,225	2,060
Treasury shares, at cost		(20)	(21)
Translation differences		135	326



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		December 31	
Fair value and other reserves	20	(7)	20
Retained earnings	22	11,661	9,536
		14,281	12,205
<b>Minority interests</b>		173	196
<b>Long-term liabilities</b>	23		
Long-term interest-bearing liabilities		187	207
Deferred tax liabilities	24	207	177
Other long-term liabilities		67	76
		461	460
<b>Current liabilities</b>			
Short-term borrowings	25	377	831
Accounts payable		2,954	3,074
Accrued expenses	26	2,611	3,477
Provisions	27	2,470	2,184
		8,412	9,566
Commitments and contingencies	29		
<b>Total shareholders' equity and liabilities</b>		23,327	22,427

See Notes to Consolidated Financial Statements.

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**Nokia Corporation and Subsidiaries**

**Consolidated Cash Flow Statements**

		Financial year ended December 31		
	Notes	2002	2001	2000
		EURm	EURm	EURm
<b>Cash flow from operating activities</b>				
Net profit		3,381	2,200	3,938
Adjustments, total	33	3,151	4,132	2,805
Net profit before change in net working capital		6,532	6,332	6,743
Change in net working capital	33	955	978	(1,377)
Cash generated from operations		7,487	7,310	5,366
Interest received		229	226	255
Interest paid		(94)	(155)	(115)
Other financial income and expenses		139	99	(454)
Income taxes paid		(1,947)	(933)	(1,543)
<b>Net cash from operating activities</b>		5,814	6,547	3,509

Financial year ended December  
31**Cash flow from investing activities**

Acquisition of Group companies, net of acquired cash (2002: EUR 6 million, 2001: EUR 12 million, 2000: EUR 2 million)	(10)	(131)	(400)
Purchase of non-current available-for-sale investments	(99)	(323)	(111)
Additions to capitalized development costs	(418)	(431)	(393)
Long-term loans made to customers	(563)	(1,129)	(776)
Proceeds from repayment and transfers of long-term loans receivable	314		
Proceeds from (+) / payment of (-) other long-term receivables	(32)	84	
Proceeds from (+) / payment of (-) short-term loans receivable	(85)	(114)	378
Capital expenditures	(432)	(1,041)	(1,580)
Proceeds from disposal of shares in Group companies, net of disposed cash	93		4
Proceeds from sale of non-current available-for-sale investments	162	204	75
Proceeds from sale of fixed assets	177	175	221
Dividends received	25	27	51
<b>Net cash used in investing activities</b>	<b>(868)</b>	<b>(2,679)</b>	<b>(2,531)</b>

**Cash flow from financing activities**

Proceeds from stock option exercises	163	77	72
Purchase of treasury shares	(17)	(21)	(160)
Capital investment by minority shareholders	26	4	7
Proceeds from long-term borrowings	100	102	
Repayment of long-term borrowings	(98)	(59)	(82)
Proceeds from (+) / repayment of (-) short-term borrowings	(406)	(602)	133
Dividends paid	(1,348)	(1,396)	(1,004)
<b>Net cash used in financing activities</b>	<b>(1,580)</b>	<b>(1,895)</b>	<b>(1,034)</b>

**Foreign exchange adjustment**

	(163)	(43)	80
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**Net increase in cash and cash equivalents**

	3,203	1,930	24
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<b>Cash and cash equivalents at beginning of period</b>	<b>6,125</b>	<b>4,183</b>	<b>4,159</b>
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<b>Cash and cash equivalents at end of period</b>	<b>9,328</b>	<b>6,113</b>	<b>4,183</b>
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Change in net fair value of current available-for-sale investments	23	12	
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**As reported on balance sheet**

	<b>9,351</b>	<b>6,125</b>	<b>4,183</b>
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**Movement in cash and cash equivalents:**

At beginning of year, as previously reported	6,125	4,183	4,159
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On adoption of IAS 39, remeasurement of current available-for-sale investments to fair value		42	
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At beginning of year, as restated	6,125	4,225	4,159
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Net fair value gains (+) / losses (-) on current available-for-sale investments	23	(30)	
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Net increase in cash and cash equivalents	3,203	1,930	24
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As reported on balance sheet	9,351	6,125	4,183
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At end of year, comprising:

Bank and cash		1,496	1,854	1,409
Current available-for-sale investments	34	7,855	4,271	2,774
		9,351	6,125	4,183

The figures in the consolidated cash flow statement cannot be directly traced from the balance sheet without additional information as a result of acquisitions and disposals of subsidiaries and net foreign exchange differences arising on consolidation.

See Notes to Consolidated Financial Statements.

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## Nokia Corporation and Subsidiaries

## Consolidated Statements of Changes in Shareholders' Equity

	Number of shares	Share capital	Share issue premium	Treasury shares	Translation differences <sup>(1)</sup>	Fair value and other reserves <sup>(1)</sup>	Retained earnings	Total
	(000's)							
<b>Group, EURm</b>								
Balance at December 31, 1999	4,652,679	279	1,079	(24)	243		5,801	7,378
Share issue related to acquisitions	10,021	1	484					485
Stock options exercised	32,128	2	70					72
Stock options issued on acquisitions			75					75
Stock options exercised related to acquisitions			(13)					(13)
Acquisition of treasury shares	(3,252)			(160)				(160)
Reissuance of treasury shares	557			27				27
Dividend							(931)	(931)
Translation differences					104			104
Change in accounting policy							(206)	(206)
Other increase, net							39	39
Net profit							3,938	3,938
Balance at December 31, 2000	4,692,133	282	1,695	(157)	347		8,641	10,808
Effect of adopting IAS 39						(56)		(56)
Balance at January 1, 2001, restated	4,692,133	282	1,695	(157)	347	(56)	8,641	10,752
Share issue related to acquisitions	18,329	1	331					332
Stock options exercised	23,057	1	76					77
Stock options issued on acquisitions			20					20
Stock options exercised related to acquisitions			(10)					(10)
Acquisition of treasury shares	(995)			(21)				(21)

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	Number of shares	Share capital	Share issue premium	Treasury shares	Translation differences <sup>(1)</sup>	Fair value and other reserves <sup>(1)</sup>	Retained earnings	Total
Reissuance of treasury shares	3,778		(52)	157				105
Dividend							(1,314)	(1,314)
Translation differences					65			65
Net investment hedge losses					(86)			(86)
Cash flow hedges, net						76		76
Available-for-sale investments, net						0		0
Other increase, net							9	9
Net profit							2,200	2,200
<b>Balance at December 31, 2001</b>	<b>4,736,302</b>	<b>284</b>	<b>2,060</b>	<b>(21)</b>	<b>326</b>	<b>20</b>	<b>9,536</b>	<b>12,205</b>
Stock options exercised	50,377	3	160					163
Stock options exercised related to acquisitions			(17)					(17)
Tax benefit on stock options exercised			22					22
Acquisition of treasury shares	(900)			(17)				(17)
Reissuance of treasury shares	983			18				18
Dividend							(1,279)	(1,279)
Translation differences					(285)			(285)
Net investment hedge gains					94			94
Cash flow hedges, net of tax						60		60
Available-for-sale investments, net of tax						(87)		(87)
Other increase, net							23	23
Net profit							3,381	3,381
<b>Balance at December 31, 2002</b>	<b>4,786,762</b>	<b>287</b>	<b>2,225</b>	<b>(20)</b>	<b>135</b>	<b>(7)</b>	<b>11,661</b>	<b>14,281</b>

(1) Accumulated other comprehensive income comprises translation differences and fair value and other reserves.

Dividends declared per share were EUR 0.28 for 2002 (EUR 0.27 for 2001 and EUR 0.28 for 2000), subject to shareholders' approval.

See Notes to Consolidated Financial Statements.

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## Notes to the Consolidated Financial Statements

### 1. Accounting principles

#### Basis of presentation

The consolidated financial statements of Nokia Corporation ("Nokia" or "the Group"), a Finnish limited liability company with domicile in Helsinki, are prepared in accordance with International Accounting Standards (IAS). The consolidated financial statements are presented in millions of euros (EURm) and are prepared under the historical cost convention except as disclosed in the accounting policies below. The notes to the consolidated financial statements also conform with Finnish Accounting legislation. On January 23, 2003, the Group's Board of Directors

authorized these financial statements for issue.

In 2001 the Group adopted IAS 39, Financial Instruments: Recognition and Measurement (IAS 39). The effects of adopting the standard are summarized in the consolidated statement of changes in shareholders' equity, and further information is disclosed in the accounting policies, Fair Valuing Principles and Hedge Accounting and in Notes 15, 20 and 34. In accordance with IAS 39, the comparative financial statements for the year ended December 31, 2000 have not been restated.

#### **Use of estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### **Principles of consolidation**

The consolidated financial statements include the accounts of Nokia's parent company ("Parent Company"), and each of those companies in which it either owns, directly or indirectly through subsidiaries, over 50% of the voting rights, or over which it has control of their operating and financial policies. The Group's share of profits and losses of associated companies (generally 20% to 50% voting rights or over which the Group has significant influence) is included in the consolidated profit and loss account in accordance with the equity method of accounting.

All inter-company transactions are eliminated as part of the consolidation process. Minority interests are presented separately in arriving at the net profit. They are also shown separately from shareholders' equity and liabilities in the consolidated balance sheet.

Profits realized in connection with the sale of fixed assets between the Group and associated companies are eliminated in proportion to share ownership. Such profits are deducted from the Group's equity and fixed assets and released in the Group accounts over the same period as depreciation is charged.

The companies acquired during the financial periods presented have been consolidated from the date on which control of the net assets and operations was transferred to the Group. Similarly the result of a Group company divested during an accounting period is included in the Group accounts only to the date of disposal.

#### **Goodwill**

Acquisitions of companies are accounted for using the purchase method of accounting. Goodwill represents the excess of the purchase cost over the fair value of assets less liabilities of acquired companies. Goodwill is amortized on a straight-line basis over its expected useful life. Useful lives

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vary between two and five years depending upon the nature of the acquisition. Expected useful lives are reviewed at each balance sheet date and, where these differ significantly from previous estimates, amortization periods are changed accordingly.

The Group assesses the carrying value of goodwill annually or, more frequently, if events or changes in circumstances indicate that such carrying value may not be recoverable. If such indication exists the recoverable amount is determined for the cash-generating unit, to which goodwill belongs. This amount is then compared to the carrying amount of the cash-generating unit and any impairment loss is recognized if the recoverable amount is less than the carrying amount. Impairment losses are recognized immediately in the profit and loss account.

#### **Transactions in foreign currencies**

Transactions in foreign currencies are recorded at the rates of exchange prevailing at the dates of the individual transactions. For practical reasons, a rate that approximates the actual rate at the date of the transaction is often used. At the end of the accounting period the unsettled balances on foreign currency receivables and liabilities are valued at the rates of exchange prevailing at the year-end. Foreign exchange gains and losses related to normal business operations are treated as adjustments to sales or to cost of sales. Foreign exchange gains and losses associated with financing are included as a net amount under financial income and expenses.

#### **Foreign Group companies**

In the consolidated accounts all items in the profit and loss accounts of foreign subsidiaries are translated into euro at the average exchange rates for the accounting period. The balance sheets of foreign Group companies are translated into euro at the rates of exchange ruling at the year-end with the exception of goodwill arising on the acquisition of a foreign company which is translated to euro at historical rates. Differences resulting from the translation of profit and loss account items at the average rate and the balance sheet items at the closing rate are also treated as an adjustment affecting consolidated shareholders' equity. On the disposal of all or part of a foreign Group company by sale, liquidation, repayment of share capital or abandonment, the cumulative amount or proportionate share of the translation difference is recognized as income or as expense in the same period in which the gain or loss on disposal is recognized.

### **Fair valuing principles**

At January 1, 2001 the Group adopted IAS 39. The impact of adopting the standard on shareholders' equity is quantified in note 20. Under IAS 39, the Group classifies its investments in marketable debt and equity securities and investments in unlisted equity securities into the following categories: held-to-maturity, trading, or available-for-sale depending on the purpose for acquiring the investments. All investments of the Group are currently classified as available-for-sale. Available-for-sale investments are fair valued by using quoted market rates, discounted cash flow analyses and other appropriate valuation models at the balance sheet date. Certain unlisted equities for which fair values cannot be measured reliably are reported at cost less impairment. All purchases and sales of investments are recorded on the trade date, which is the date that the Group commits to purchase or sell the asset.

The fair value changes of available-for-sale investments are recognized in shareholders' equity. When the investment is disposed of, the related accumulated fair value changes are recycled from shareholders' equity into the profit and loss account. An impairment is recorded when the

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carrying amount of an available for sale investment is greater than the estimated fair value and there is objective evidence that the asset is impaired. The cumulative net loss relating to that investment is removed from equity and recognized in the profit and loss account for the period. If, in a subsequent period, the fair value of the investment increases and the increase can be objectively related to an event occurring after the loss was recognized, the loss is reversed, with the amount of the reversal included in the profit and loss account.

Fair values of forward rate agreements, interest rate options and futures contracts are calculated based on quoted market rates at the balance sheet date. Interest rate and currency swaps are valued by using discounted cash flow analyses. The changes in the fair values of these contracts are reported in the profit and loss account.

Fair values of cash settled equity derivatives are calculated by revaluing the contract at year-end quoted market rates. Changes in the fair value are reported in the profit and loss account.

Forward foreign exchange contracts are valued with the forward exchange rate. Changes in fair value are calculated by comparing this with the original amount calculated by using the contract forward rate prevailing at the beginning of the contract. Currency options are valued at the balance sheet date by using the Garman & Kohlhagen option valuation model. Changes in the fair value on these instruments are reported in the profit and loss account except to the extent they qualify for hedge accounting.

Embedded derivatives are identified and monitored in the Group and fair valued at the balance sheet date. In assessing the fair value of embedded derivatives the Group uses a variety of methods, such as option pricing models and discounted cash flow analysis, and makes assumptions that are based on market conditions existing at each balance sheet date. The fair value changes are reported in financial income and expenses in the profit and loss account.

### **Hedge accounting**

#### *Hedging of anticipated foreign currency denominated sales and purchases*

The Group is applying hedge accounting for "Qualifying hedges". Qualifying hedges are those properly documented cash flow hedges of the foreign exchange rate risk of future anticipated foreign currency denominated sales and purchases that meet the requirements set out in IAS 39. The cash flow being hedged must be "highly probable" and must ultimately impact the profit and loss account. The hedge must be highly effective both prospectively and retrospectively.

The Group claims hedge accounting in respect of certain forward foreign exchange contracts and options, or option strategies, which have zero net premium or a net premium paid, and where the critical terms of the bought and sold options within a collar or zero premium structure are the same and where the nominal amount of the sold option component is no greater than that of the bought option.

For qualifying foreign exchange forwards the change in fair value is deferred in shareholders' equity to the extent that the hedge is effective. For qualifying foreign exchange options the change in intrinsic value is deferred in shareholders' equity to the extent that the hedge is effective. Changes in the time value are at all times taken directly as adjustments to sales or to cost of sales in the profit and loss account.

Accumulated fair value changes from qualifying hedges are released from shareholders' equity into the profit and loss account as adjustments to sales and cost of sales, in the period when the

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hedged cash flow affects the profit and loss account. If the hedged cash flow is no longer expected to take place, all deferred gains or losses are released into the profit and loss account as adjustments to sales and cost of sales, immediately. If the hedged cash flow ceases to be highly probable, but is still expected to take place, accumulated gains and losses remain in equity until the hedged cash flow affects the profit and loss account.

Changes in the fair value of any derivative instruments that do not qualify under hedge accounting under IAS 39 are recognized immediately in the profit and loss account.

#### *Foreign currency hedging of net investments*

The Group also applies hedge accounting for its foreign currency hedging on net investments. Qualifying hedges are those properly documented hedges of the foreign exchange rate risk of foreign currency-denominated net investments that meet the requirements set out in IAS 39. The hedge must be effective both prospectively and retrospectively.

The Group claims hedge accounting in respect of forward foreign exchange contracts, foreign currency-denominated loans, and options, or option strategies, which have zero net premium or a net premium paid, and where the terms of the bought and sold options within a collar or zero premium structure are the same.

For qualifying foreign exchange forwards the change in fair value that reflects the change in spot exchange rates is deferred in shareholders' equity. The change in fair value that reflects the change in forward exchange rates less the change in spot exchange rates is recognized in the profit and loss account. For qualifying foreign exchange options the change in intrinsic value is deferred in shareholders' equity. Changes in the time value are at all times taken directly to the profit and loss account. If a foreign currency-denominated loan is used as a hedge, all foreign exchange gains and losses arising from the transaction are recognized in shareholders' equity.

Accumulated fair value changes from qualifying hedges are released from shareholders' equity into the profit and loss account only if the legal entity in the given country is sold or liquidated.

#### **Revenue recognition**

Sales from the majority of the Group are recognized when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed and determinable and collectibility is probable.

Sales and cost of sales from contracts involving solutions achieved through modification of telecommunications equipment are recognized on the percentage of completion method when the outcome of the contract can be estimated reliably. Completion is generally measured by reference to cost incurred to date as a percentage of estimated total project costs. The milestone output method is applied when the nature of the individual projects indicates that a milestone method is the most applicable measure of progress.

The percentage of completion method relies on estimates of total expected contract revenue and costs, as well as dependable measurement of the progress made towards completing that project. Recognized revenues and profits are subject to revisions during the project in the event that the assumptions regarding the overall project outcome are revised. The cumulative impact of a revision in estimates is recorded in the period such revisions become known and estimable. Losses on projects in progress are recognized immediately when known and estimable.

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#### **Shipping and handling costs**

The costs of shipping and distributing products are included in cost of sales.

**Research and development**

Research and development costs are expensed in the financial period during which they are incurred, except for certain development costs which are capitalized when it is probable that a development project will be a success, and certain criteria, including commercial and technological feasibility, have been met. Capitalized development costs are amortized on a systematic basis over their expected useful lives between two and five years.

**Other intangible assets**

Expenditure on acquired patents, trademarks and licenses is capitalized and amortized using the straight-line method over their useful lives, but not exceeding 20 years. Where an indication of impairment exists, the carrying amount of any intangible asset is assessed and written down to its recoverable amount. Costs of software licenses associated with internal-use software are capitalized. These costs are included within other intangible assets and are amortized over a period not to exceed three years.

**Pensions**

The Group companies have various pension schemes in accordance with the local conditions and practices in the countries in which they operate. The schemes are generally funded through payments to insurance companies or to trustee-administered funds as determined by periodic actuarial calculations.

The Group's contributions to defined contribution plans and to multi-employer and insured plans are charged to the profit and loss account in the period to which the contributions relate.

For defined benefit plans, principally the reserved portion of the Finnish TEL system, pension costs are assessed using the projected unit credit method: the cost of providing pensions is charged to the profit and loss account so as to spread the regular cost over the service lives of employees. The pension obligation is measured as the present value of the estimated future cash outflows using interest rates on government securities that have terms to maturity approximating the terms of the related liabilities. Actuarial gains and losses outside the corridor are recognized over the average remaining service lives of employees.

**Property, plant and equipment**

Property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is recorded on a straight-line basis over the expected useful lives of the assets as follows:

Buildings and constructions	20-33 years
Machinery and equipment	3-10 years

Land and water areas are not depreciated.

Maintenance, repairs and renewals are generally charged to expense during the financial period in which they are incurred. However, major renovations are capitalized and included in the carrying amount of the asset when it is probable that future economic benefits in excess of the originally

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assessed standard of performance of the existing asset will flow to the Group. Major renovations are depreciated over the remaining useful life of the related asset.

Gains and losses on the disposal of fixed assets are included in operating profit/loss.

**Leases**

The Group has entered into various operating leases the payments under which are treated as rentals and charged to the profit and loss account on a straight-line basis over the lease terms.

**Inventories**



Inventories are stated at the lower of cost or net realizable value. Cost is determined on a first in first out (FIFO) basis. Net realizable value is the amount that can be realized from the sale of the inventory in the normal course of business after allowing for the costs of realization.

In addition to the cost of materials and direct labor, an appropriate proportion of production overheads is included in the inventory values.

An allowance is recorded for obsolescence.

#### **Cash and cash equivalents**

The Group manages its short-term liquidity through holdings of cash and highly liquid interest-bearing securities (included as current available-for-sale investments in the balance sheet). For the purposes of the cash flow statement, these are shown together as cash and cash equivalents.

#### **Accounts receivable**

Accounts receivable are carried at the original invoice amount to customers less an estimate made for doubtful receivables based on a periodic review of all outstanding amounts. Bad debts are written off when identified.

#### **Borrowings**

Borrowings are classified as originated loans and are recognized initially at an amount equal to the proceeds received, net of transaction costs incurred. In subsequent periods, they are stated at amortized cost using the effective yield method; any difference between proceeds (net of transaction costs) and the redemption value is recognized in the profit and loss account over the period of the borrowings.

#### **Loans to customers**

Loans to customers are recorded at amortized cost. Loans are subject to regular and thorough review as to their collectibility and as to available collateral; in the event that any loan is deemed not fully recoverable, provision is made to reflect the shortfall between the carrying amount and the present value of the expected cash flows. Interest income on loans to customers is included within other operating income.

#### **Income taxes**

Current taxes are based on the results of the Group companies and are calculated according to local tax rules.

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Deferred tax assets and liabilities are determined, using the liability method, for all temporary differences arising between the tax basis of assets and liabilities and their carrying values for financial reporting purposes. Currently enacted tax rates are used in the determination of deferred income tax.

Under this method the Group is required, in relation to an acquisition, to make provision for deferred taxes on the difference between the fair values of the net assets acquired and their tax bases.

The principal temporary differences arise from intercompany profit in inventory, depreciation on property, plant and equipment, untaxed reserves and tax losses carried forward. Deferred tax assets relating to the carry forward of unused tax losses are recognized to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilized.

#### **Stock options**

Stock options are granted to employees. The options are granted with a fixed exercise price set on a date outlined in the plan. When the options are exercised, the proceeds received, net of any transaction costs, are credited to share capital (nominal value) and share premium. Tax benefits on options exercised in the United States are credited to share issue premium. Treasury shares are acquired by the Group to meet its obligations under employee stock compensation plans. When treasury shares are issued on exercise of stock options any gain or loss is recognized in share issue premium.

#### **Provisions**

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate of the amount can be made. Where the Group expects a provision to be reimbursed, the reimbursement would be recognized as an asset but only when the reimbursement is virtually certain.

The Group recognizes the estimated liability to repair or replace products still under warranty at the balance sheet date. The provision is calculated based on historical experience of the level of repairs and replacements.

The Group recognizes the estimated liability for non-cancellable purchase commitments for inventory in excess of forecasted requirements at each balance sheet date.

The Group recognizes a provision for the estimated future settlements related to asserted and unasserted Intellectual Property Rights (IPR) infringements, based on the probable outcome of each case as of each balance sheet date.

The Group recognizes a provision for social security costs on unexercised stock options granted to employees at the date options are granted. The provision is measured based on the fair value of the options, and the amount of the provision is adjusted to reflect the changes in the Nokia share price.

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## **Dividends**

Dividends proposed by the Board of Directors are not recorded in the financial statements until they have been approved by the shareholders at the Annual General Meeting.

## **Earnings per share**

The Group calculates both basic and diluted earnings per share in accordance with IAS 33, Earnings per share (IAS 33). Under IAS 33, basic earnings per share is computed using the weighted average number of shares outstanding during the period. Diluted earnings per share is computed using the weighted average number of shares outstanding during the period plus the dilutive effect of stock options outstanding during the period.

## **2. Segment information**

Nokia is organized on a worldwide basis into three primary business segments: Nokia Mobile Phones, Nokia Networks, and Nokia Ventures Organization. Nokia's reportable segments are strategic business units that offer different products and services for which monthly financial information is provided to the Board.

Nokia Mobile Phones develops, manufactures and supplies mobile phones and wireless data products, including a complete range of mobile phones for all major digital and analog standards worldwide.

Nokia Networks is a leading provider of mobile and IP network infrastructure and related services. Nokia Networks aims to be a leader in IP mobility core, radio and broadband access for network providers and operators.

Nokia Ventures Organization exists to create new businesses outside the natural development path of the company's core activities. The unit comprises venture capital activities, incubation, and a portfolio of new ventures, including two more mature businesses: Nokia Internet Communications and Nokia Home Communications.

Common Group Functions consists of common research and general Group functions.

The accounting policies of the segments are the same as those described in Note 1. Nokia accounts for intersegment revenues and transfers as if the revenues or transfers were to third parties, that is, at current market prices. Nokia evaluates the performance of its segments and allocates resources to them based on operating profit.

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No single customer represents 10% or more of Group revenues.

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	Nokia Mobile Phones	Nokia Networks	Nokia Ventures Organization	Common Group Functions	Total reportable segments	Eliminations	Group
	EURm	EURm	EURm	EURm	EURm	EURm	EURm

**2002**

**Profit and Loss Information**

Net sales to external customers	22,997	6,538	441	40	30,016		30,016
Net sales to other segments	214	1	18	(40)	193	(193)	
Depreciation and amortization	546	542	33	190	1,311		1,311
Impairment and customer finance charges		400	83	55	538		538
Operating profit	5,201	(49)	(141)	(231)	4,780		4,780
Share of results of associated companies				(19)	(19)		(19)

**Balance Sheet Information**

Capital expenditures <sup>(1)</sup>	224	93	8	107	432		432
Segment assets <sup>(2)</sup>	4,888	6,163	114	965	12,130	(26)	12,104
of which:							
Investments in associated companies				49	49		49
Unallocated assets <sup>(3)</sup>							11,223
<b>Total assets</b>							<b>23,327</b>
Segment liabilities <sup>(4)</sup>	5,080	1,861	188	225	7,354	(24)	7,330
Unallocated liabilities <sup>(5)</sup>							1,543
<b>Total liabilities</b>							<b>8,873</b>

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**2001**

**Profit and Loss Information**

Net sales to external customers	23,107	7,521	563		31,191		31,191
Net sales to other segments	51	13	22		86	(86)	
Depreciation and amortization	642	511	115	162	1,430		1,430
Impairment and customer finance charges		925	307	80	1,312		1,312
Operating profit	4,521	(73)	(855)	(231)	3,362		3,362
Share of results of associated companies				(12)	(12)		(12)

**Balance Sheet Information**

Capital expenditures <sup>(1)</sup>	377	288	23	353	1,041		1,041
Segment assets <sup>(2)</sup>	6,087	6,597	260	1,104	14,048	(160)	13,888
of which:							
Investments in associated companies				49	49		49

Unallocated assets <sup>(3)</sup>							8,539
<b>Total assets</b>							<b>22,427</b>
Segment liabilities <sup>(4)</sup>	4,867	2,084	283	258	7,492	(132)	7,360
<b>Unallocated liabilities<sup>(5)</sup></b>							<b>2,666</b>
<b>Total liabilities</b>							<b>10,026</b>

**2000**

**Profit and Loss Information**

Net sales to external customers	21,844	7,708	824		30,376		30,376
Net sales to other segments	43	6	30		79	(79)	
Depreciation and amortization	467	354	102	86	1,009		1,009
Operating profit	4,879	1,358	(387)	(74)	5,776		5,776
Share of results of associated companies				(16)	(16)		(16)

(1) Including goodwill and capitalized development costs, capital expenditures amount to EUR 860 million in 2002 (EUR 2,064 million in 2001). The goodwill and capitalized development costs consist of EUR 41 million in 2002 (EUR 59 million in 2001) for Nokia Mobile Phones, EUR 377 million in 2002 (EUR 801 million in 2001) for Nokia Networks, EUR 1 million in 2002 (EUR 163 million in 2001) for Nokia Ventures Organization and EUR 9 million in 2002 (EUR 0 million in 2001) for Common Group Functions.

(2) Comprises intangible assets, property, plant and equipment, investments, inventories and accounts receivable as well as prepaid expenses and accrued income except those related to interest and taxes.

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(3) Unallocated assets including prepaid expenses and accrued income related to taxes and deferred tax assets (EUR 853 million in 2002 and EUR 1,106 million in 2001).

(4) Comprises accounts payable, deferred income, accrued expenses and provisions except those related to interest and taxes.

(5) Unallocated liabilities including prepaid income and accrued expenses related to taxes and deferred tax liabilities (EUR 248 million in 2002 and EUR 1,077 million in 2001).

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
<b>Net sales to external customers by geographic area by location of customer</b>			
Finland	353	453	494
USA	4,665	5,614	5,312
Great Britain	3,111	2,808	2,828

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
China	2,802	3,418	3,065
Germany	1,849	2,003	2,579
Other	17,236	16,895	16,098
	<u>          </u>	<u>          </u>	<u>          </u>
Total	30,016	31,191	30,376
	<u>          </u>	<u>          </u>	<u>          </u>

	<u>2002</u>	<u>2001</u>
	EURm	EURm

**Segment assets by geographic area**

Finland	4,913	5,087
USA	1,777	2,279
Great Britain	627	519
China	1,107	1,668
Germany	431	611
Other	3,249	3,724
	<u>          </u>	<u>          </u>
Total	12,104	13,888
	<u>          </u>	<u>          </u>

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm

**Capital expenditures by market area**

Finland	188	477	587
USA <sup>(1)</sup>	71	151	279
Great Britain	27	34	75
China	47	131	157
Germany	21	37	133
Other <sup>(1)</sup>	78	211	349
	<u>          </u>	<u>          </u>	<u>          </u>
Total	432	1,041	1,580
	<u>          </u>	<u>          </u>	<u>          </u>

(1) Including goodwill and capitalized development costs, capital expenditures amount to EUR 860 million in 2002 (EUR 2,064 million in 2001 and EUR 2,990 million in 2000). The goodwill and capitalized development costs consist of EUR 1 million in USA in 2002 (EUR 582 million in 2001 and EUR 567 in 2000) and EUR 427 million in other areas in 2002 (EUR 441 million in 2001 and EUR 843 in 2000).

**3. Percentage of completion**

Contract sales recognized under the percentage of completion method were approximately EUR 5.9 billion in 2002 (EUR 6.7 billion in both 2001 and 2000). Billings in advance of contract revenues, included in advance payments, were EUR 108 million at December 31, 2002 (EUR 146 million in 2001 and EUR 97 million in 2000). Contract revenues recorded prior to billings were EUR 573 million at December 31, 2002 (EUR 319 million in 2001 and EUR 418 million in 2000).

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Revenue recognition on initial 3G network contracts started in 2002 when Nokia Networks reached the relevant milestones for its single-mode and dual-mode WCDMA 3G systems.

### 4. Personnel expenses

	2002	2001	2000
	EURm	EURm	EURm
Wages and salaries	2,531	2,388	2,378
Pension expenses, net	224	193	54
Other social expenses	385	524	456
	3,140	3,105	2,888
Personnel expenses as per profit and loss account			

Pension expenses comprise EUR 167 million in 2002 (EUR 196 million in 2001 and EUR 93 million in 2000) in respect of multi-employer, insured and defined contribution plans.

	2002	2001	2000
	EURm	EURm	EURm
Remuneration of the Chairman and the other members of the Board of Directors, Group Executive Board and Presidents and Managing Directors*	19	16	17
* Incentives included in remuneration	4	2	4

Pension commitments for the management:

The retirement age of the management of the Group companies is between 60-65 years.

For the Chief Executive Officer and the President of the Parent Company the retirement age is 60 years.

### 5. Pensions

The most significant pension plans are in Finland and are comprised of the Finnish state TEL system with benefits directly linked to employee earnings. These benefits are financed in two distinct portions. The majority of benefits are financed by contributions to a central pool with the majority of the contributions being used to pay current benefits. The other part comprises reserved benefits which are pre-funded through the trustee-administered Nokia Pension Foundation. The pooled portion of the TEL system is accounted for as a defined contribution plan and the reserved portion as a defined benefit plan. The foreign plans include both defined contribution and defined benefit plans.

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The amounts recognized in the balance sheet relating to single employer defined benefit schemes are as follows:

	2002		2001	
	Domestic Plans	Foreign Plans	Domestic Plans	Foreign Plans
	EURm	EURm	EURm	EURm
Fair value of plan assets	636	126	664	123
Present value of funded obligations	(539)	(261)	(530)	(236)
Surplus/(Deficit)	97	(135)	134	(113)

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	2002		2001	
Unrecognized net actuarial (gains)/losses	45	63	4	48
Prepaid/(Accrued) pension cost in balance sheet	142	(72)	138	(65)

The amounts recognized in the profit and loss account are as follows:

	2002	2001	2000
	EURm	EURm	EURm
Current service cost	58	49	40
Interest cost	47	40	36
Expected return on plan assets	(61)	(75)	(78)
Net actuarial losses (gains) recognized in year	2	(16)	(24)
Past service cost	11		
Curtailment		(1)	
Total, included in personnel expenses	57	(3)	(26)

Movements in prepaid pension costs recognized in the balance sheet are as follows:

	2002	2001
	EURm	EURm
Prepaid pension costs at beginning of year	73	55
Net income (expense) recognized in the profit and loss account	(57)	3
Contributions paid	54	15
Prepaid pension costs at end of year	70*	73*

\*

Included within prepaid expenses and accrued income.

The principal actuarial weighted average assumptions used were as follows:

	2002		2001	
	Domestic	Foreign	Domestic	Foreign
	%	%	%	%
Discount rate for determining present values	5.50	5.58	5.80	5.85
Expected long term rate of return on plan assets	7.25	6.56	7.50	6.49
Annual rate of increase in future compensation levels	3.50	3.09	4.00	3.05
Pension increases	2.30	2.29	2.80	2.87

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5. Pensions (Continued)

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The prepaid pension cost above is made up of a prepayment of EUR 150 million (EUR 146 million in 2001) and an accrual of EUR 80 million (EUR 73 million in 2001).

The domestic pension plan assets include Nokia securities with fair values of EUR 125 million in 2002 (EUR 332 million in 2001).

The foreign pension plans' assets include a loan provided to Nokia by the Group's German pension fund of EUR 66 million (EUR 66 million in 2001). See Note 31.

The actual return on plan assets was EUR (66) million in 2002 (EUR (253) million in 2001).

### 6. Selling and marketing expenses, administration expenses and other operating income and expenses

	2002	2001	2000
	EURm	EURm	EURm
Selling and marketing expenses	(2,579)	(2,363)	(2,103)
Administration expenses	(701)	(737)	(754)
Other operating expenses	(292)	(605)	(225)
Other operating income	333	182	278
	(3,239)	(3,523)	(2,804)

Other operating income for 2002 includes a gain of EUR 106 million relating to the sale of Nokia Venture Partner's investment in PayPal within Nokia Ventures Organization. Other operating expenses for 2002 are composed of various items which are individually insignificant.

Other operating expenses for 2001 include restructuring charges of EUR 166 million.

Other operating income for 2000 includes a pension credit of EUR 55 million relating to the change in accounting method for the Finnish pension plans. Other operating expenses for 2000 are composed of various items which are individually insignificant.

The Group expenses advertising and promotion costs as incurred. Advertising and promotional expenses were EUR 1,174 million in 2002 (EUR 849 million in 2001 and EUR 853 million in 2000).

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### 7. Impairment

	Nokia Mobile Phones	Nokia Networks	Nokia Venture Organization	Common Group Functions	Group
2002	EURm	EURm	EURm	EURm	EURm
Customer finance impairment charges, net		279			279
Impairment of goodwill		121	61		182
Impairment of available-for-sale investments			22	55	77
		400	83	55	538

2001

	EURm	EURm	EURm	EURm	EURm
--	------	------	------	------	------



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2002	Nokia Mobile Phones	Nokia Networks	Nokia Venture Organization	Common Group Functions	Group
Customer finance impairment charges		714			714
Impairment of goodwill		211	307		518
Impairment of available-for-sale investments			6	74	80
<b>Total</b>		<b>925</b>	<b>313</b>	<b>74</b>	<b>1,312</b>

During 2002, Nokia recorded net customer financing impairment charges of EUR 279 million. Of this amount, EUR 292 million was an impairment of loans receivable with a carrying value of approximately EUR 0.8 billion from MobilCom, a customer of Nokia Networks, as a result of financial difficulties of MobilCom. Such loans have been reduced to their estimated recoverable amounts, based on the estimated fair value of the subordinated convertible perpetual bonds of France Telecom S.A., a shareholder of MobilCom, that Nokia expects to receive as repayment for the loans to MobilCom pursuant to an agreement with France Telecom. The estimated fair value will be reassessed upon approval from the respective boards and shareholders of MobilCom and France Telecom. Also in 2002, Nokia received EUR 13 million as partial recovery of amounts written off in 2001 related to Dolphin.

During 2001, Nokia recorded an impairment charge of EUR 714 million to cover Nokia Networks' customer loans by EUR 669 million related to a defaulted financing to Telsim, a GSM operator in Turkey, and EUR 45 million relating to the insolvency of Dolphin in the UK. These charges resulted in a write-down of the company's total customer financing exposure to Telsim and Dolphin.

In 2002, Nokia has evaluated the carrying value of goodwill arising from certain acquisitions by determining if the carrying values of the net assets of the cash generating unit to which the goodwill belongs exceeds the recoverable amounts of that unit. In the Nokia Networks business, Nokia recorded an impairment charge of EUR 104 million on goodwill related to the acquisition of Amber Networks. The recoverable amount for Amber Networks has been derived from the value in use discounted cash flow projections which cover the estimated life of the Amber platform technology, using a discount rate of 15%. The remaining goodwill of EUR 207 million is being amortized over the expected useful life. The impairment is a result of significant declines in the market outlook for products under development. In the Nokia Networks business in 2001, Nokia recognized a goodwill impairment charge of EUR 170 million related to the acquisition of Nokia DiscoveryCom, as a result of a decision to discontinue the related product development.

In 2002 and 2001, Nokia recognized impairment losses of EUR 36 million and EUR 88 million, respectively, on goodwill related to the acquisition of Ramp Networks. In 2002 and 2001, Nokia recognized impairment losses of EUR 25 and EUR 181 million, respectively, on goodwill related to the acquisition of Network Alchemy. Both of these entities are part of the Nokia Internet

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Communications business unit of Nokia Ventures Organization. For the impairments in 2001 the recoverable amounts were calculated based on value in use discounted cash flow projections using a discount rate of 13%. The impairments in 2001 resulted from the restructuring of these businesses. In 2002, the remaining goodwill balances were written off as a result of decisions to discontinue the related product development.

Nokia recognized other minor goodwill impairment charges totaling EUR 17 million in 2002 (EUR 78 million in 2001).

During 2002 the company's investments in certain equity securities suffered a permanent decline in fair value resulting in impairment charges of EUR 77 million relating to non-current available-for-sale investments (EUR 80 million in 2001).

## 8. Acquisitions

In 2002, Nokia increased its voting percentage of 39.97% and holding percentage of 59.97% in Nextrom Holding S.A. to a voting percentage of 86.21% and a holding percentage of 79.33%. These increases resulted from a rights offering by Nextrom in June 2002 and by acquiring new registered and bearer shares in an offering by Nextrom in December 2002 both totaling EUR 13 million. The fair value of net assets acquired was EUR 4 million giving rise to goodwill of EUR 9 million.

In August 2001 Nokia acquired Amber Networks, a networking infrastructure company, for EUR 408 million, which was paid in Nokia stock and Nokia stock options. The fair value of net assets acquired was EUR (13) million giving rise to goodwill of EUR 421 million.

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In January 2001 Nokia acquired in a cash tender offer Ramp Networks, a provider of purpose built Internet security appliances, for EUR 147 million. The fair value of net assets acquired was EUR (16) million giving rise to goodwill of EUR 163 million.

In October 2000 Nokia increased its ownership of the Brazilian handset manufacturing joint venture NG Industrial (NGI) from 51% to 100% by acquiring all the shares of NGI held by Gradiente Telecom S.A. for EUR 492 million in cash. The fair value of net assets acquired was EUR 43 million giving rise to goodwill of EUR 449 million.

In August 2000 Nokia acquired DiscoveryCom, a company which provides solutions that enable communications service providers to rapidly install and maintain Broadband Digital Subscriber Line (DSL) services for fast Internet access. The acquisition price was EUR 223 million, which was paid in Nokia stock and Nokia stock options. The fair value of net assets acquired was EUR (4) million giving rise to goodwill of EUR 227 million.

In March 2000 Nokia acquired Network Alchemy, a provider of IP Clustering solutions for EUR 336 million, which was paid in Nokia stock and Nokia stock options. The fair value of net assets acquired was EUR (2) million giving rise to goodwill of EUR 338 million.

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### 9. Depreciation and amortization

	2002	2001	2000
	EURm	EURm	EURm
<b>Depreciation and amortization by asset category</b>			
Intangible assets			
Capitalized development costs	233	169	118
Intangible rights	65	65	50
Goodwill	206	302	140
Other intangible assets	28	34	29
Property, plant and equipment			
Buildings and constructions	37	31	27
Machinery and equipment	737	811	615
Other tangible assets	5	18	30
	<b>1,311</b>	<b>1,430</b>	<b>1,009</b>
<b>Total</b>	<b>1,311</b>	<b>1,430</b>	<b>1,009</b>
<b>Depreciation and amortization by function</b>			
Cost of sales	314	367	298
R&D	473	427	244
Selling, marketing and administration	211	264	230
Other operating expenses	107	70	97
Goodwill	206	302	140
	<b>1,311</b>	<b>1,430</b>	<b>1,009</b>
<b>Total</b>	<b>1,311</b>	<b>1,430</b>	<b>1,009</b>

### 10. Financial income and expenses

	2002	2001	2000
	EURm	EURm	EURm
<b>Income from available-for-sale investments</b>			
Dividend income	25	27	70

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
Interest income	230	215	212
Other financial income	27	24	17
Exchange gains and losses	(29)	(25)	(1)
Interest expense	(43)	(82)	(115)
Other financial expenses	(54)	(34)	(81)
	<u>          </u>	<u>          </u>	<u>          </u>
Total	<b>156</b>	125	102
	<u>          </u>	<u>          </u>	<u>          </u>

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**11. Income taxes**

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
Current tax	(1,423)	(1,542)	(1,852)
Deferred tax	(61)	350	68
	<u>          </u>	<u>          </u>	<u>          </u>
Total	<b>(1,484)</b>	(1,192)	(1,784)
	<u>          </u>	<u>          </u>	<u>          </u>
Finland	(1,102)	(877)	(1,173)
Other countries	(382)	(315)	(611)
	<u>          </u>	<u>          </u>	<u>          </u>
Total	<b>(1,484)</b>	(1,192)	(1,784)
	<u>          </u>	<u>          </u>	<u>          </u>

The differences between income tax expense computed at statutory rates (29% in Finland in 2002, 2001 and 2000) and income tax expense provided on earnings are as follows at December 31:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
Income tax expense at statutory rate	1,431	1,011	1,689
Deduction for write-down of investments in subsidiaries		(37)	(28)
Amortization of goodwill	59	87	40
Impairment of goodwill	70	197	
Provisions without income tax benefit/expense	(10)	5	53
Taxes for prior years	8	23	53
Taxes on foreign subsidiaries' net income in excess of income taxes at statutory rates	(59)	(106)	(29)
Operating losses with no current tax benefit	6	16	25
Other	(21)	(4)	(19)
	<u>          </u>	<u>          </u>	<u>          </u>
Income tax expense	<b>1,484</b>	1,192	1,784
	<u>          </u>	<u>          </u>	<u>          </u>

At December 31, 2002 the Group had loss carryforwards, primarily attributable to foreign subsidiaries of EUR 425 million (EUR 75 million in 2001 and EUR 109 million in 2000), most of which will expire between 2006 and 2022.

Certain of the Group companies' income tax returns for periods ranging from 1998 through 2001 are under examination by tax authorities. The Group does not believe that any significant additional taxes in excess of those already provided for will arise as a result of the examinations.

**12. Intangible assets**

	<b>2002</b>	<b>2001</b>
	<b>EURm</b>	<b>EURm</b>
<b>Capitalized development costs</b>		
Acquisition cost January 1	1,314	1,097
Additions	418	431
Write-downs	(25)	(214)
Accumulated amortization December 31	(635)	(421)
	<b>1,072</b>	<b>893</b>
<b>Goodwill</b>		
Acquisition cost January 1	1,601	1,570
Additions	10	592
Disposals		(43)
Impairment charges (Note 7)	(182)	(518)
Accumulated amortization December 31	(953)	(747)
	<b>476</b>	<b>854</b>
<b>Other intangible assets</b>		
Acquisition cost January 1	533	459
Additions	75	111
Disposals	(72)	(33)
Translation differences	(12)	(4)
Accumulated amortization December 31	(332)	(296)
	<b>192</b>	<b>237</b>

**13. Property, plant and equipment**

	<b>2002</b>	<b>2001</b>
	<b>EURm</b>	<b>EURm</b>
<b>Land and water areas</b>		
Acquisition cost January 1	145	143
Additions	1	14
Disposals	(31)	(11)
Translation differences	(3)	(1)
	<b>112</b>	<b>145</b>
<b>Buildings and constructions</b>		
Acquisition cost January 1	918	739

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	2002	2001
	<u>          </u>	<u>          </u>
Additions	9	190
Disposals	(7)	(6)
Translation differences	(9)	(5)
Accumulated depreciation December 31	(171)	(147)
	<u>          </u>	<u>          </u>
Net carrying amount December 31	740	771
	<u>          </u>	<u>          </u>
<b>Machinery and equipment</b>		
Acquisition cost January 1	3,626	3,343
Additions	346	780
Disposals	(637)	(470)
Translation differences	(86)	(27)
Accumulated depreciation December 31	(2,303)	(2,194)
	<u>          </u>	<u>          </u>
Net carrying amount December 31	946	1,432
	<u>          </u>	<u>          </u>
<b>Other tangible assets</b>		
Acquisition cost January 1	79	74
Additions	7	45
Disposals	(58)	(37)
Translation differences	(6)	(3)
Accumulated depreciation December 31	(6)	(50)
	<u>          </u>	<u>          </u>
Net carrying amount December 31	16	29
	<u>          </u>	<u>          </u>
<b>Advance payments and fixed assets under construction</b>		
Acquisition cost January 1	137	314
Additions	35	152
Disposals	(68)	(73)
Transfers to:		
Other intangible assets	(7)	(3)
Land and water areas	0	(4)
Buildings and constructions	0	(84)
Machinery and equipment	(34)	(160)
Translation differences	(3)	(5)
	<u>          </u>	<u>          </u>
Net carrying amount December 31	60	137
	<u>          </u>	<u>          </u>
<b>Total property, plant and equipment</b>	<b>1,874</b>	<b>2,514</b>

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14. Investments in associated companies

	2002	2001
	<u>          </u>	<u>          </u>
	EURm	EURm
Net carrying amount January 1	49	61
Additions	24	7
Write-downs		(6)
Share of results	(19)	(12)
Translation differences	1	(1)
Other movements	(6)	
	<u>          </u>	<u>          </u>

	<u>2002</u>	<u>2001</u>
Net carrying amount December 31	49	49

In 2001, Nextrom Holding S.A. was accounted for under the equity method. Due to the increase of Nokia's ownership in 2002 Nextrom Holding S.A. has been fully consolidated for accounting purposes from the date of increased ownership which is reflected in other movements. Shareholdings in associated companies include no listed investments in 2002 (EUR 6 million in 2001 with fair value, based on quoted market prices, of EUR 19 million in 2001). See note 8.

#### 15. Available-for-sale investments

	<u>2002</u>	<u>2001</u>
	EURm	EURm
At January 1 as originally stated (cost)		3,111
On adoption of IAS 39 at January 1, 2001 remeasurement to fair value		58
Fair value at January 1	4,670	3,169
Additions, net	3,587	1,581
Decrease in fair value	(87)	
Impairment charges (Note 7)	(77)	(80)
Fair value at December 31	8,093	4,670
Non-current	238	399
Current	7,855	4,271

On the adoption of IAS 39 at January 1, 2001, all investment securities classified as available-for-sale were remeasured to fair value. The difference between their original carrying amount and their fair value at January 1, 2001 was credited to fair value and other reserves (See Consolidated Statement of Changes in Shareholders' Equity). Gains and losses arising from the change in the fair value of available-for-sale investments since that date are recognized directly in this reserve.

Available-for-sale investments, comprising marketable debt and equity securities and investments in unlisted equity shares, are fair valued, except in the case of certain unlisted equities, where the fair value cannot be measured reliably. Such unlisted equities are carried at cost, less impairment (EUR 48 million in 2002 and EUR 153 million in 2001). Fair value for equity investments traded in active markets and for unlisted equities, where the fair value can be measured reliably, is EUR 190 million in 2002 and EUR 169 million in 2001. Fair value for equity investments traded in active markets is determined by using exchange quoted bid prices. For other investments, fair

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value is estimated by using the current market value of similar instruments or by reference to the discounted cash flows of the underlying net assets.

Available-for-sale investments are classified as non-current, except for highly liquid, interest-bearing investments held as part of the Group's on going cash management activities and which are regarded as cash equivalents. See Note 34 for details of these investments.

#### 16. Long-term loans receivable

Long-term loans receivable consists of loans made to customers principally to support their financing of network infrastructure purchased from Nokia Networks, net of allowances and write-offs (see Note 7), are repayable as follows:

	<u>2002</u>	<u>2001</u>
	EURm	EURm

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	<u>2002</u>	<u>2001</u>
Under 1 year		
Between 1 and 2 years	494	643
Between 2 and 5 years		341
Over 5 years	562	144
	<u>1,056</u>	<u>1,128</u>

**17. Inventories**

	<u>2002</u>	<u>2001</u>
	EURm	EURm
Raw materials, supplies and other	534	741
Work in progress	432	582
Finished goods	311	465
	<u>1,277</u>	<u>1,788</u>

**18. Receivables**

Prepaid expenses and accrued income mainly consist of VAT and tax receivables, prepaid pension costs, accrued interest income and other accruals.

Accounts receivable include EUR 21 million (EUR 25 million in 2001) due more than 12 months after the balance sheet date.

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**19. Valuation and qualifying accounts**

Allowances on assets to which they apply:	Balance at beginning of year	Charged to cost and expenses	Charged to other accounts	Deductions <sup>(1)</sup>	Balance at end of year
	EURm	EURm	EURm	EURm	EURm
<b>2002</b>					
Doubtful accounts receivable	217	186		(103)	300
Long-term loans receivable	13			(13)	0
Inventory obsolescence	314	318		(342)	290
<b>2001</b>					
Doubtful accounts receivable	236	108		(127)	217
Long-term loans receivable	59			(46)	13
Inventory obsolescence	263	334		(283)	314
<b>2000</b>					
Doubtful accounts receivable	87	203		(54)	236
Long-term loans receivable		59			59
Inventory obsolescence	168	457		(362)	263

<sup>(1)</sup> Deductions include utilization and releases of the allowances.

**20. Fair value and other reserves**

	<b>Hedging reserve</b>	<b>Available-for-sale investments</b>	<b>Total</b>
	<b>EURm</b>	<b>EURm</b>	<b>EURm</b>
<b>Balance at January 1, 2001</b>			
Effect of adopting IAS 39;			
Fair valuation of current available-for-sale securities		43	43
Fair valuation of non-current available-for-sale securities		15	15
Transfer of gains and losses on qualifying cash flow hedging derivatives	(114)		(114)
<b>Balance at January 1, 2001, restated</b>	<b>(114)</b>	<b>58</b>	<b>(56)</b>
<b>Cash flow hedges:</b>			
Fair value gains/(losses) in period	76		76
<b>Available-for-sale investments:</b>			
Net fair value gains/(losses)		(67)	(67)
Transfer to profit and loss account on impairment		74	74
Transfer to profit and loss account on disposal		(7)	(7)
<b>Balance at December 31, 2001</b>	<b>(38)</b>	<b>58</b>	<b>20</b>
<b>Cash flow hedges:</b>			
Fair value gains/(losses) in period	60		60
<b>Available-for-sale Investments:</b>			
Net fair value gains/(losses)		(155)	(155)
Transfer to profit and loss account on impairment		67	67
Transfer to profit and loss account on disposal		1	1
<b>Balance at December 31, 2002<sup>(1)(2)</sup></b>	<b>22</b>	<b>(29)</b>	<b>(7)</b>

(1) The tax on the balance of the cash flow hedges was EUR (9) million.

(2) The tax on the balance of the available-for-sale investments was EUR (16) million.

The Group adopted IAS 39 at January 1, 2001; the impact on shareholders' equity and on various balance sheet captions at January 1, 2001 is shown above. In accordance with IAS 39, the comparative financial statements for the year ended December 31, 2000 are not restated.

In accordance with the transitional requirements of IAS 39, the Group transferred a net loss of EUR 114 million to the hedging reserve in respect of outstanding foreign exchange forward contracts that were properly designated and highly effective as cash flow hedges of highly probable forecast foreign currency cash flows. Previously such gains and losses were reported as deferred income or expenses in the balance sheet.



In order to ensure that amounts deferred in the cash flow hedging reserve represent only the effective portion of gains and losses on properly designated hedges of future transactions that remain highly probable at the balance sheet date, Nokia has adopted a process under which all derivative gains and losses are initially recognized in the profit and loss account. The appropriate reserve balance is calculated at the end of each period and posted to equity.

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Nokia continuously reviews the underlying cash flows and the hedges allocated thereto, to ensure that the amounts transferred to the Hedging Reserve during the year ended December 31, 2002 and 2001 do not include gains/losses on forward exchange contracts that have been designated to hedge forecasted sales or purchases that are no longer expected to occur. Because of the number of transactions undertaken during each period and the process used to calculate the reserve balance, separate disclosure of the transfers of gains and losses to and from the reserve would be impractical.

All of the net fair value gains or losses recorded in the Fair value and other reserve at December 31, 2002 on open forward foreign exchange contracts which hedge anticipated future foreign currency sales or purchases are transferred from the Hedging Reserve to the profit and loss account when the forecasted foreign currency cash flows occur, at various dates up to 1 year from the balance sheet date.

See note 15 for impact of adopting IAS 39 on available-for-sale investments at January 1, 2001.

## **21. The shares of the Parent Company**

### *Nokia shares and share capital*

Nokia has one class of shares. Each Nokia share entitles the holder to one (1) vote at General Meetings of Nokia. With effect from April 10, 2000, the par value of the share is EUR 0.06.

The minimum share capital stipulated in the Articles of Association is EUR 170 million and the maximum share capital is EUR 680 million. The share capital may be increased or reduced within these limits without amending the Articles of Association. On December 31, 2002 the share capital of Nokia Corporation was EUR 287,274,428 and the total number of shares and votes was 4,787,907,141.

On December 31, 2002 the total number of shares included 1,145,621 shares owned by the Group companies with an aggregate par value of EUR 68,737 representing approximately 0.02 percent of the total number of shares and votes.

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### *Authorizations*

#### **Authorizations to increase the share capital**

The Board of Directors had been authorized by Nokia shareholders at the Annual General Meeting held on March 21, 2001 to decide on an increase of the share capital by a maximum of EUR 54,000,000 offering a maximum of 900,000,000 new shares. In 2002, the Board of Directors has not increased the share capital on the basis of this authorization. The authorization expired on March 21, 2002.

At the Annual General Meeting held on March 21, 2002 Nokia shareholders authorized the Board of Directors to decide on an increase of the share capital by a maximum of EUR 55,800,000 in one or more issues offering a maximum of 930,000,000 new shares with a par value of EUR 0.06 within one year as of the resolution of the Annual General Meeting. The share capital may be increased in deviation from the shareholders' pre-emptive rights for share subscription provided that important financial grounds exist such as to finance possible business acquisitions or corresponding arrangements and to grant personnel incentives. In 2002, the Board of Directors has not increased the share capital on the basis of this authorization. The authorization is effective until March 21, 2003.

At the end of 2002, the Board of Directors had no other authorizations to issue shares, convertible bonds, warrants or stock options.

#### **Other authorizations**

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At the Annual General Meeting held on March 21, 2002 Nokia shareholders authorized the Board of Directors to repurchase a maximum of 220 million Nokia shares, representing 4.2 percent of total shares outstanding, and to resolve on the disposal of such shares. No shares were repurchased or disposed of in 2002 under the authorizations. These authorizations are effective until March 21, 2003. The authorisation to dispose of the shares may be carried out pursuant to terms determined by the Board provided that important financial grounds exist such as to finance acquisitions or to grant personnel incentives.

### *Convertible bonds and stock options*

The following table depicts the main features of our outstanding stock option plans, which may result in the increase of our share capital. The increase in share capital resulted by these stock options is the number of shares to be issued times the nominal value of each share. The plans have been approved by the Annual General Meetings in the year of the launch of the plan.

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### Outstanding stock option plans, December 31, 2002<sup>(2)</sup>

Plan (Year of launch)	Total plan size (Maximum no. of shares)	Number of participants (Approximately)	(Sub)category	Vesting schedule	Subscription periods		Exercise price/option	Exercise price/share	Split ratio
					Starting	Ending			
1997	152,000,000	2,000	A <sup>(1)</sup>	Vested	December 1, 1997	January 31, 2003	51.63 EUR	3.23 EUR	16:1
			B <sup>(1)</sup>	Vested	November 1, 1999	January 31, 2003	51.63 EUR	3.23 EUR	16:1
			C <sup>(1)</sup>	Vested	November 1, 2001	January 31, 2003	51.63 EUR	3.23 EUR	16:1
1999	144,000,000	16,000	A <sup>(1)</sup>	Vested	April 1, 2001	December 31, 2004	67.55 EUR	16.89 EUR	4:1
			B	Vested	April 1, 2002	December 31, 2004	225.12 EUR	56.28 EUR	4:1
			C	Vested	April 1, 2003	December 31, 2004	116.48 EUR	29.12 EUR	4:1
2001	145,000,000	25,000	2001A+B	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	July 1, 2002	December 31, 2006	36.75 EUR	36.75 EUR	1:1
			2001C3Q/01	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	October 1, 2002	December 31, 2006	20.61 EUR	20.61 EUR	1:1
			2001C4Q/01	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	January 1, 2003	December 31, 2006	26.67 EUR	26.67 EUR	1:1
			2001C1Q/02	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	April 1, 2003	December 31, 2007	26.06 EUR	26.06 EUR	1:1
			2001C3Q/02	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	October 1, 2003	December 31, 2007	12.99 EUR	12.99 EUR	1:1
			2001C4Q/02	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	January 1, 2004	December 31, 2007	16.86 EUR	16.86 EUR	1:1

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		Subscription periods				
2002A+B	25% vest 1 year after grant; 6.25% in 12 subsequent quarterly blocks	July 1, 2005	December 31, 2007	17.89 EUR	17.89 EUR	1:1

- (1) Listing on the Helsinki Exchanges (HEX)
- (2) Figures have been recalculated to reflect the par value of EUR 0.06 of the shares.

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Information relating to stock options during 2002, 2001 and 2000 are as follows:

	Number of shares	Weighted average exercise price <sup>(1)</sup>
<b>Shares under option at December 31, 1999</b>	204,620,102	6.91
Granted <sup>(2)</sup>	18,339,647	44.86
Exercised	33,490,088	2.22
Forfeited	4,937,904	33.24
<b>Shares under option at December 31, 2000</b>	184,531,757	19.71
Granted <sup>(2)</sup>	72,644,065	31.78
Exercised	24,790,689	3.54
Forfeited	4,385,380	31.09
<b>Shares under option at December 31, 2001</b>	227,999,753	25.71
Granted	51,127,314	17.96
Exercised	51,586,807	3.61
Forfeited	6,097,025	33.51
<b>Shares under option at December 31, 2002</b>	<b>221,443,235</b>	<b>28.81</b>
Options exercisable at December 31, 2000 (shares)	12,199,932	3.83
Options exercisable at December 31, 2001 (shares)	106,300,988	9.53
<b>Options exercisable at December 31, 2002 (shares)</b>	<b>107,721,842</b>	<b>27.92</b>

- (1) Weighted average exercise price, calculated for options where exercise price is known.

- (2) Includes options converted in acquisitions.

The options outstanding by range of exercise price at December 31, 2002 are as follows:

Options outstanding				Vested options outstanding	
Exercise prices	Number of shares	Weighted average remaining contractual life in years	Weighted average exercise price	Number of shares	Weighted average exercise price
EUR			EUR		EUR
0.36-3.04	503,670	6.22	1.06	464,165	1.06
3.23	7,185,264	0.08	3.23	7,178,704	3.23
3.44-16.68	2,523,261	7.41	11.51	1,521,241	10.88
16.89	46,424,432	1.06	16.89	45,893,040	16.89

## Options outstanding

17.89-22.97	30,366,202	3.20	17.95	562,020	20.20
26.06-34.59	34,266,321	2.25	27.72	712,425	31.32
36.75	40,920,212	2.63	36.75	12,983,930	36.75
38.91-55.82	380,573	5.33	48.38	268,909	43.49
56.28	38,673,300	1.31	56.28	38,137,408	56.28
	<b>221,443,235</b>			<b>107,721,842</b>	

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**General information about our stock option plans**

Shares subscribed for pursuant to the stock options described above will rank for dividend for the financial year in which the subscription occurs. Other shareholder rights will commence on the date on which the share subscription is entered in the Finnish Trade Register.

Pursuant to the stock options issued, an aggregate maximum number of 306,600,132 new shares may be subscribed for representing approximately 6.40 per cent of the total number of votes on December 31, 2002. During 2002 the exercise of 3,152,226 options resulted in the issuance of 50,377,020 new shares and the increase of the share capital of Nokia with EUR 3,022,621.

There were no other stock options and no convertible bonds outstanding as of December 31, 2002, the exercise of which would result in an increase of the share capital of the Parent Company.

**The Nokia Holding Inc. 1999 Stock Option Plan**

In 1999 Nokia introduced a complementary stock option plan available for Nokia employees in the U.S. and Canada (The Nokia Holding Inc. 1999 Stock Option Plan). Each stock option granted by December 31, 2000 entitles the holder to purchase one Nokia ADS during certain periods of time after April 1, 2001 until five years from the date of grant, for a price within the range of USD 20.50 - 54.50 per ADS. On December 31, 2002 a total of 802,284 stock options were outstanding and 491,171 were exercisable under the Nokia Holding Inc. 1999 Stock Option Plan. An exercise of the stock options under the Nokia Holding Inc. 1999 Stock Option Plan does not result in increase of the share capital of Nokia Corporation. The maximum number of ADSs with a par value of EUR 0.06 that may be issued under the Nokia Holding Inc. 1999 Stock Option Plan is 2,000,000. The shares are carried at purchase cost in the balance sheet until disposed.

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**22. Distributable earnings**

	<b>2002</b>
	<b>EURm</b>
Retained earnings	11,661
Translation differences (distributable earnings)	(178)
Treasury shares	(20)
Other non-distributable items	
Portion of untaxed reserves	2
	<b>11,465</b>

Retained earnings under IAS and Finnish Accounting Standards (FAS) are substantially the same.

Distributable earnings are calculated based on Finnish legislation.

**23. Long-term liabilities**

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	Outstanding December 31, 2002	Repayment date beyond 5 years	Outstanding December 31, 2001
	EURm	EURm	EURm
Long-term loans are repayable as follows:			
Bonds	62		90
Loans from financial institutions	98		76
Loans from pension insurance companies	15		25
Other long-term finance loans	12		16
Other long-term liabilities	67	67	76
	<b>254</b>	<b>67</b>	<b>283</b>
Deferred tax liabilities	207		177
<b>Total long-term liabilities</b>	<b>461</b>		<b>460</b>

The long-term liabilities excluding deferred tax liabilities as of December 31, 2002 mature as follows:

	EURm	Percent of total
2003		
2004	161	63.4%
2005	26	10.2%
2006		
2007		
Thereafter	67	26.4%
	<b>254</b>	<b>100.0%</b>

The currency mix of the Group long-term liabilities as at December 31, 2002 was as follows:

EUR	CNY	GBP	Others
30.39 %	26.22%	24.43%	18.96%

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The long-term loan portfolio includes a fixed-rate loan with a face amount of GBP 40 million that matures in 2004. The loan has been callable by the creditor on a three-month notice basis since 1994, although the Group does not anticipate that the creditor will request repayment prior to the final maturity. Accordingly the loan has not been classified as a current liability at December 31, 2002.

The Group has committed credit facilities totaling USD 2.6 billion. Committed credit facilities are intended to be used for U.S. and Euro Commercial Paper Programs back up purposes. Commitment fees on the facilities vary from 0.06% to 0.10% per annum.

At December 31, 2002 and 2001 the weighted average interest rate on loans from financial institutions was 8.44% and 6.0%, respectively.

Bonds:	Million of bonds	Currency	Interest	2002	2001
				EURm	EURm
1989 - 2004	40.0	GBP	11.375%	62	65

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Bonds:	Million of bonds	Currency	Interest	2002	2001
1993 - 2003	150.0	FIM	Floating		25
				<b>62</b>	<b>90</b>

24. Deferred taxes

	2002	2001
	EURm	EURm
<b>Deferred tax assets:</b>		
Intercompany profit in inventory	48	114
Tax losses carried forward	109	42
Warranty provision	118	214
Other provisions	183	327
Other temporary differences	168	135
Untaxed reserves	105	
Total deferred tax assets	<b>731</b>	<b>832</b>
<b>Deferred tax liabilities:</b>		
Untaxed reserves	(33)	(21)
Fair value gains/losses	(25)	(11)
Other	(149)	(145)
Total deferred tax liabilities	<b>(207)</b>	<b>(177)</b>
Net deferred tax asset	<b>524</b>	<b>655</b>
<b>The tax (charged)/credited to shareholders' equity is as follows:</b>		
Fair value and other reserves, fair value gains/losses	(25)	(11)

Deferred income tax liabilities have not been established for withholding tax and other taxes that would be payable on the unremitted earnings of certain subsidiaries, as such earnings are permanently reinvested. At December 31, 2002 the Group had loss carryforwards of EUR 91 million (EUR 8 million in 2001) for which no deferred tax asset was recognized due to uncertainty of utilization of these loss carry forwards. These loss carry forwards will expire in years 2006 through 2010.

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25. Short-term borrowings

Short-term borrowings consist primarily of borrowings from banks denominated in different foreign currencies. The weighted average interest rate at December 31, 2002 and 2001 is 6.01% and 4.9%, respectively.

26. Accrued expenses

	2002	2001
	EURm	EURm
Social security, VAT and other taxes	<b>385</b>	<b>1,339</b>

	<u>2002</u>	<u>2001</u>
Wages and salaries	212	217
Prepaid income	196	294
Other	1,818	1,627
	<u>2,611</u>	<u>3,477</u>

Other includes various amounts which are individually insignificant.

## 27. Provisions

	<u>Warranty</u>	<u>IPR infringements</u>	<u>Other</u>	<u>Total</u>
	EURm	EURm	EURm	EURm
At January 1, 2002	1,207	201	776	2,184
Exchange differences	(27)			(27)
Additional provisions	1,389	93	27	1,509
Change in fair value			(58)	(58)
Unused amounts reversed	(7)		(18)	(25)
	<u>1,382</u>	<u>93</u>	<u>(49)</u>	<u>1,426</u>
Charged to profit and loss account	1,382	93	(49)	1,426
	<u>1,382</u>	<u>93</u>	<u>(49)</u>	<u>1,426</u>
Utilized during year	(959)	(21)	(133)	(1,113)
	<u>(959)</u>	<u>(21)</u>	<u>(133)</u>	<u>(1,113)</u>
At December 31, 2002	1,603	273	594	2,470
	<u>1,603</u>	<u>273</u>	<u>594</u>	<u>2,470</u>

	<u>2002</u>	<u>2001</u>
	EURm	EURm
Analysis of total provisions at December 31:		
Non-current	460	465
Current	2,010	1,719

The IPR provision is based on estimated future settlements for asserted and unasserted past IPR infringements. Final resolution of IPR claims generally occurs over several periods. This results in varying usage of the provision year to year.

Other provisions mainly include provisions for non-cancellable purchase commitments, tax provisions and a provision for social security costs on stock options.

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## 28. Earnings per share

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Numerator/EURm			
Basic/Diluted:			
Net profit	3,381	2,200	3,938

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
Denominator/1000 shares			
Basic:			
Weighted average shares	4,751,110	4,702,852	4,673,162
Effect of dilutive securities: stock options	36,932	84,367	119,818
Diluted:			
Adjusted weighted average shares and assumed conversions	4,788,042	4,787,219	4,792,980

Under IAS 33, basic earnings per share is computed using the weighted average number of shares outstanding during the period. Diluted earnings per share is computed using the weighted average number of shares outstanding during the period plus the dilutive effect of stock options outstanding during the period.

**29. Commitments and contingencies**

	<u>2002</u>	<u>2001</u>
	EURm	EURm
<b>Collateral for our own commitments</b>		
Property under mortgages	18	18
Assets pledged	13	4
<b>Contingent liabilities on behalf of Group companies</b>		
Other guarantees	339	505
<b>Collateral given on behalf of other companies</b>		
Securities pledged <sup>(1)</sup>	34	33
<b>Contingent liabilities on behalf of other companies</b>		
Guarantees for loans <sup>(1)</sup>	57	95
<b>Financing commitments</b>		
Customer financing <sup>(1)</sup>	857	2,955

<sup>(1)</sup> See also Note 34(b).

The amounts above represent the maximum principal amount of commitments and contingencies.

Property under mortgages given as collateral for our own commitments include mortgages given to the Finnish National Board of Customs as a general indemnity of EUR 18 million in 2002 (EUR 18 million in 2001).

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Assets pledged for the Group's own commitments include inventories and available-for-sale investments of EUR 3 million and EUR 10 million, respectively, in 2002 (EUR 4 million of inventories in 2001).

Other guarantees include guarantees of Nokia's performance of EUR 332 million in 2002 (EUR 505 million in 2001). These guarantees are provided to certain Nokia Networks' customers in the form of bank guarantees, standby letters of credit and other similar instruments. These instruments entitle the customer to claim payment as compensation for non-performance by Nokia of its obligations under network infrastructure supply agreements. Depending on the nature of the instrument, compensation is payable either immediately upon request, or subject to



independent verification of nonperformance by Nokia.

Securities pledged and guarantees for loans on behalf of other companies of EUR 91 million in 2002 (EUR 127 million in 2001) represent guarantees relating to payment by certain Nokia Networks' customers under specified loan facilities between such customers and their creditors. Nokia's obligations under such guarantees are released upon the earlier of expiration of the guarantee or early payment by the customer. The majority of the financial guarantees is expected to expire by 2004.

Financing commitments of EUR 857 million in 2002 (EUR 2,955 million in 2001) are available under loan facilities negotiated with customers of Nokia Networks. Availability of the amounts is dependent upon the borrower's continuing compliance with stated financial and operational covenants and compliance with other administrative terms of the facility. The loans are primarily available to fund capital expenditure relating to purchases of network infrastructure equipment and services from Nokia Networks, though some portion of certain loans could be used to fund interest on the same facility, or working capital requirements. Certain loans are partially secured through either guarantees by the borrower's direct or indirect parent or other group companies, or shares and/or other assets of the borrower, its parent or other entities under common ownership.

There is no market for the guarantees listed above and they were issued without explicit cost; therefore, it is not practicable to establish the fair value of such instruments.

The Group is party to routine litigation incidental to the normal conduct of business. In the opinion of management, the outcome of and liabilities in excess of what has been provided for related to these proceedings, in the aggregate, are not likely to be material to the financial condition or results of operations.

As of December 31, 2002, the Group had purchase commitments of EUR 949 million relating to inventory purchase obligations, primarily for purchases in 2003.

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### 30. Leasing contracts

The Group leases office, manufacturing and warehouse space under various non-cancellable operating leases. Certain contracts contain renewal options for various periods of time.

The future costs for non-cancellable leasing contracts are as follows:

	<b>Operating lease</b>
Leasing payments, EURm	
2003	189
2004	125
2005	88
2006	75
2007	72
Thereafter	155
	<b>704</b>

Rental expense amounted to EUR 384 million in 2002 (EUR 393 million in 2001 and EUR 370 million in 2000).

### 31. Related party transactions

Nokia Pension Foundation is a separate legal entity that manages and holds in trust the assets for the Group's Finnish employee benefit plans; these assets include 0.2% of Nokia's shares. Nokia Pension Foundation is also the counterparty to equity swap agreements with the Group. The equity swaps are entered into to hedge part of the company's liability relating to future social security cost on stock options. During the year new transactions are entered into and old ones terminated based on the hedging need. The transactions and terminations are executed on standard

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commercial terms and conditions. The notional amount of the equity swaps outstanding at December 31, 2002 is EUR 12 million (EUR 182 million in 2001). The fair value of the equity swaps at December 31, 2002 is EUR 0 million (EUR 10 million in 2001).

At December 31, 2002 the Group has a contribution payment liability to Nokia Pension Foundation amounting to EUR 14 million (EUR 21 million in 2001) included in accrued expenses.

At December 31, 2002 the Group had borrowings amounting to EUR 66 million (EUR 66 million in 2001) from Nokia Unterstützungskasse mbH, the Group's German pension fund, which is a separate legal entity.

The Group recorded net rental expense of EUR 2 million in 2002 (EUR 4 million in 2001 and EUR 3 million in 2000) pertaining to a sale-leaseback transaction with the Nokia Pension Foundation involving certain buildings and a lease of the underlying land.

There were no loans granted to top management at December 31, 2002 or 2001. See Note 4, Personnel expenses, for officers and directors remunerations.

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### 32. Associated companies

	2002	2001	2000
	EURm	EURm	EURm
Share of results of associated companies	(19)	(12)	(16)
Dividend income	1		1
Share of shareholders' equity of associated companies	30	41	45
Receivables from associated companies			
Accounts receivable			4
Short-term loans receivable		2	1
Long-term loans receivable			31
Liabilities to associated companies	7		

### 33. Notes to cash flow statement

	2002	2001	2000
	EURm	EURm	EURm
Adjustments for:			
Depreciation and amortization (Note 9)	1,311	1,430	1,009
(Profit)/loss on sale of property, plant and equipment and available-for-sale investments	(92)	148	(42)
Income taxes (Note 11)	1,484	1,192	1,784
Share of results of associated companies (Note 32)	19	12	16
Minority interest	52	83	140
Financial income and expenses (Note 10)	(156)	(125)	(102)
Impairment charges	524	1,312	
Other	9	80	
Adjustments, total	3,151	4,132	2,805
Change in net working capital			

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	2002	2001	2000
	<u>        </u>	<u>        </u>	<u>        </u>
Decrease (increase) in short-term receivables	25	(286)	(2,304)
Decrease (increase) in inventories	243	434	(422)
Increase in interest-free short-term liabilities	687	830	1,349
	<u>        </u>	<u>        </u>	<u>        </u>
Change in net working capital	955	978	(1,377)
	<u>        </u>	<u>        </u>	<u>        </u>
Non-cash investing activities			
Acquisition of:			
Amber Networks		408	
Network Alchemy			336
DiscoveryCom			223
	<u>        </u>	<u>        </u>	<u>        </u>
Total		408	559
	<u>        </u>	<u>        </u>	<u>        </u>

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### 34. Risk management

#### General risk management principles

Nokia's overall risk management philosophy is based on having a corporate-wide view on key risks including strategic, operational, financial and hazard risks. Risk management in Nokia means a systematic and pro-active way to analyse, review and manage all opportunities, threats and risks related to the Group's activities.

The principles documented in the Group's risk policy and accepted by the Nokia Board require that risk management is integrated into each business process. Business or function owners always have risk ownership. Key risks are reported to the Group level to enable group-wide risk management. There are specific risk management policies covering, for example, treasury and customer finance risks.

#### Financial risks

The key financial targets for Nokia are growth, profitability, operational efficiency and a strong balance sheet. The objective for the Treasury function is twofold: to guarantee cost-efficient funding for the Group at all times, and to identify, evaluate and hedge financial risks in close co-operation with the business groups. There is a strong focus in Nokia on creating shareholder value. The Treasury function supports this aim by minimizing the adverse effects caused by fluctuations in the financial markets on the profitability of the underlying businesses and by managing the balance sheet structure of the Group.

Nokia has Treasury Centers in Geneva, Singapore/Beijing and Dallas/Sao Paolo, and a Corporate Treasury unit in Espoo. This international organization enables Nokia to provide the Group companies with financial services according to local needs and requirements.

The Treasury function is governed by policies approved by top management. Treasury Policy provides principles for overall financial risk management and determines the allocation of responsibilities for financial risk management in Nokia. Operating Policies cover specific areas such as foreign exchange risk, interest rate risk, use of derivative financial instruments, as well as liquidity and credit risk. The Treasury operating policy in Nokia is risk averse. Business Groups have detailed Standard Operating Procedures supplementing the Treasury policy in financial risk management related issues.

#### a) Market risk

##### Foreign exchange risk

Nokia operates globally and is thus exposed to foreign exchange risk arising from various currency combinations. Foreign currency denominated assets and liabilities together with expected cash flows from highly probable purchases and sales give rise to foreign exchange exposures. These transaction exposures are managed against various local currencies because of Nokia's substantial production and sales outside the Eurozone.

Due to the changes in the business environment, currency combinations may also change within the financial year. The most significant non-euro sales currencies during the year were U.S. dollar (USD), British pound Sterling (GBP) and Australian dollar (AUD). In general, the appreciation of the euro to other currencies has an adverse effect on Nokia's sales and operating profit in the medium

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to long term, while depreciation of the euro has a positive effect. The only significant non-euro purchasing currencies are Japanese yen (JPY) and U.S. dollar.

Break-down by currency of the underlying foreign exchange transaction exposure December 31, 2002

According to the foreign exchange policy guidelines of the Group, material transaction foreign exchange exposures are hedged. Exposures are mainly hedged with derivative financial instruments such as forward foreign exchange contracts and foreign exchange options. The majority of financial instruments hedging foreign exchange risk have a duration of less than a year. The Group does not hedge forecasted foreign currency cash flows beyond two years.

Nokia uses the Value-at-Risk ("VaR") methodology to assess the foreign exchange risk related to the Treasury management of the Group exposures. The VaR figure represents the potential losses for a portfolio resulting from adverse changes in market factors using a specified time period and confidence level based on historical data. To correctly take into account the non-linear price function of certain derivative instruments, Nokia uses Monte Carlo simulation. Volatilities and correlations are calculated from a one-year set of daily data.

Since Nokia has subsidiaries outside the Eurozone, the euro-denominated value of the shareholder's equity of Nokia is also exposed to fluctuations in exchange rates. Equity changes caused by movements in foreign exchange rates are shown as a translation difference in the Group consolidation. Nokia uses, from time to time, foreign exchange contracts and foreign currency denominated loans to hedge its equity exposure arising from foreign net investments.

#### **Interest rate risk**

The Group is exposed to interest rate risk either through market value fluctuations of balance sheet items (i.e. price risk) or changes in interest income or expenses (i.e. re-investment risk). Interest rate risk mainly arises through interest-bearing liabilities and assets. Estimated future changes in cash flows and balance sheet structure also expose the Group to interest rate risk.

Group companies are responsible for managing their short-term liquidity position, whereas the interest rate exposure of the Group is monitored and managed in the Treasury. Due to the current balance sheet structure of Nokia, emphasis is placed on managing the interest rate risk of investments.

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Nokia uses the VaR methodology to assess and measure the interest rate risk in investment portfolio, which is benchmarked against a one-year investment horizon. The VaR figure represents the potential losses for a portfolio resulting from adverse changes in market factors using a

specified time period and confidence level based on historical data. For interest rate risk VaR, Nokia uses variance-covariance methodology. Volatilities and correlations are calculated from a one-year set of daily data.

### Equity price risk

Nokia has certain strategic minority investments in publicly traded companies. These investments are classified as available-for-sale. The fair value of the equity investments at December 31, 2002 was EUR 137 million (EUR 169 million in 2001).

There are currently no outstanding derivative financial instruments designated as hedges of these equity investments.

In addition to the listed equity holdings, Nokia invests in private equity through Nokia Venture Funds. The fair value of these available-for-sale equity investments at December 31, 2002 was 54 million U.S. dollars (130 million U.S. dollars in 2001). Nokia is exposed to equity price risk on social security costs relating to stock option plans. Nokia hedges this risk by entering into cash settled equity swap and option contracts.

### b) Credit risk

#### Customer Finance Credit Risk

Network operators sometimes require their suppliers to arrange or provide term financing in relation to infrastructure projects. Nokia has maintained a financing policy aimed at close cooperation with banks, financial institutions and Export Credit Agencies to support selected customers in their financing of infrastructure investments. Nokia actively mitigates, market conditions permitting, this exposure by arrangements with these institutions and investors.

Credit risks related to customer financing are systematically analyzed, monitored and managed by Nokia's Customer Finance organization, reporting to the Chief Financial Officer. Credit risks are approved and monitored by Nokia's Credit Committee along principles defined in the Company's credit policy and according to the credit approval process. The Credit Committee consists of the CFO, Group Controller, Head of Group Treasury and Head of Nokia Customer Finance.

Nokia's infrastructure business is concentrated amongst mobile, wireless operators. The Customer Finance portfolio is substantially all in this group. In keeping with the Group's financing approach, the majority of the credit risk is to i) established mobile network operators ("incumbents") with an investment grade credit rating as determined by a major credit rating agency or equivalent as determined by Nokia ("investment grade") or ii) operators supported by other investment grade telecom operators through ownership stakes and various operational and technical support ("sponsor"). However, there is no certainty that the current sponsors will continue their involvement with the operators, and the sponsors generally do not provide guarantees of the loan balances. Nokia's credit risk to start-up operators ("greenfield operators") is substantially all to operators with investment grade sponsors.

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At the end of December 31, 2002 our long-term loans to customers, net of allowances and write-offs, totaled EUR 1,056 million (EUR 1,128 million in 2001), while financial guarantees given on behalf of third parties totaled EUR 91 million (EUR 127 million in 2001). In addition, we had financing commitments totaling EUR 857 million (EUR 2,955 million in 2001). Total customer financing (outstanding and committed) stood at EUR 2,004 million (EUR 4,210 million in 2001).

The term customer financing portfolio at December 31, 2002 was:

	Outstandings	Financing Commitments	Totals	%
	EURm	EURm	EURm	
<b>Total Portfolio</b>	<b>1,147</b>	<b>857</b>	<b>2,004</b>	<b>100%</b>
Incumbent, Investment Grade/I.G. Sponsor	199	211	410	20%
Incumbent, non-I.G. Sponsor	168	229	397	20%

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	<u>Outstandings</u>	<u>Financing Commitments</u>	<u>Totals</u>	<u>%</u>
Total Incumbent	367	441	807	40%
Greenfield, I.G. Sponsor	746	417	1,163	58%
Greenfield, non-I.G. Sponsor	34	0	34	2%
<b>Total Greenfield</b>	<b>780</b>	<b>417</b>	<b>1,197</b>	<b>60%</b>

**Financial credit risk**

Financial instruments contain an element of risk of the counterparties being unable to meet their obligations. This risk is measured and monitored by the Treasury function. The Group minimizes financial credit risk by limiting its counterparties to a sufficient number of major banks and financial institutions.

Direct credit risk represents the risk of loss resulting from counterparty default in relation to on-balance sheet products. The fixed income and money market investment decisions are based on strict creditworthiness criteria. The outstanding investments are also constantly monitored by the Treasury. Nokia does not expect the counterparties to default given their high credit quality.

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Current Available-for-sale investments<sup>(1)(2)(3)</sup>

	<u>2002</u>	<u>2001</u>
	EURm	EURm
Government, long-term (bonds)	1,244	789
Government, short-term (bills)	124	
Corporate, long-term (bonds)	3,708	1,475
Corporate, short-term (CP)	2,779	2,007
<b>Total</b>	<b>7,855</b>	<b>4,271</b>
	<u>2002</u>	<u>2001</u>
	EURm	EURm
Fixed rate investments	7,433	4,143
Floating rate investments	422	128
<b>Total</b>	<b>7,855</b>	<b>4,271</b>

(1) Available-for-sale investments are carried at fair value in 2002 and 2001.

(2)

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Weighted average interest rate for Current available-for-sale investments was 3.54% in 2002 and 3.97% in 2001.

(3)

Included within current Available-for-sale investments is EUR 44 million and EUR 43 million of restricted cash at December 31, 2002 and 2001, respectively.

### c) Liquidity risk

Nokia guarantees a sufficient liquidity at all times by efficient cash management and by investing in liquid interest bearing securities. Due to the dynamic nature of the underlying business Treasury also aims at maintaining flexibility in funding by keeping committed and uncommitted credit lines available. During the year Nokia renewed the maturing USD 750 million Revolving Credit Facility. The committed facilities at year end totalled USD 2.6 billion.

The most significant existing funding programs include:

Revolving Credit Facility of USD 750 million, matures in 2003

Revolving Credit Facility of USD 500 million, matures in 2003

Revolving Credit Facility of USD 350 million, matures in 2004

Revolving Credit Facility of USD 1,000 million, matures in 2006

Local commercial paper program in Finland, totalling EUR 750 million

Euro Commercial Paper (ECP) program, totalling USD 500 million

US Commercial Paper (USCP) program, totalling USD 500 million

None of the above programs have been used to a significant degree in 2002.

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Nokia's international creditworthiness facilitates the efficient use of international capital and loan markets. The ratings of Nokia from credit rating agencies as at December 31, 2002 were:

Short-term	Standard & Poor's	A-1
	Moody's	P-1
Long-term	Standard & Poor's	A
	Moody's	A1

### Hazard risk

Nokia strives to ensure that all financial, reputation and other losses to the Group and our customers are minimized through preventive risk management measures or purchase of insurance. Insurance is purchased for risks which cannot be internally managed. Nokia's Insurance & Risk Finance function's objective is to ensure that Group's hazard risks, whether related to physical assets (e.g. buildings) or intellectual assets (e.g. Nokia brand) or potential liabilities (e.g. product liability) are optimally insured.

Nokia purchases both annual insurance policies for specific risks and multi-line multi-year insurance policies, where available. Nokia has concluded a Multi-Line Multi-Year Insurance covering a variety of the above mentioned risks in order to decrease the likelihood of non-anticipated sudden losses.

### Notional amounts of derivative financial instruments<sup>(1)</sup>

	2002	2001
	EURm	EURm

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	<u>2002</u>	<u>2001</u>
Foreign exchange forward contracts <sup>(2)(3)</sup>	11,118	20,978
Currency options bought <sup>(3)</sup>	1,408	1,328
Currency options sold <sup>(3)</sup>	1,206	1,209
Cash settled equity options <sup>(4)</sup>	209	
Cash settled equity swaps <sup>(4)</sup>	12	182

(1) The notional amounts of derivatives summarized here do not represent amounts exchanged by the parties and thus are not a measure of the exposure of Nokia caused by its use of derivatives.

(2) Notional amounts outstanding include positions which have been closed off.

(3) As at December 31, 2002 notional amounts include contracts amounting to EUR 2 billion used to hedge the shareholders' equity of foreign subsidiaries (December 31, 2001 EUR 1.1 billion).

(4) Cash settled equity swaps and options can be used to hedge risk relating to incentive programs and investment activities.

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**Fair values of derivatives**

The net fair values of derivative financial instruments at the balance sheet date were:

	<u>2002</u>	<u>2001</u>
	EURm	EURm
Derivatives with positive fair value <sup>(1)</sup> :		
Forward foreign exchange contracts <sup>(2)</sup>	235	186
Currency options bought	21	11
Cash settled equity options	28	
Cash settled equity swaps		10
Embedded derivatives <sup>(3)</sup>	14	6
Derivatives with negative fair value <sup>(1)</sup> :		
Forward foreign exchange contracts <sup>(2)</sup>	(98)	(214)
Currency options written	(7)	(7)

(1) Out of the forward foreign exchange contracts and currency options, fair value EUR 36 million was designated for hedges of net investment in foreign subsidiaries as at December 31, 2002 (EUR 3million at December 31, 2001) and reported in translation difference.

(2) Out of the foreign exchange forward contracts, fair value EUR 31 million was designated for cash flow hedges as at December 31, 2002 (EUR (38) million at December 31, 2001) and reported in fair value and other reserves.

(3) Embedded derivatives are components of contracts having the characteristics of derivatives, and thus requiring fair valuing of such components. The change in the fair value is reported in other financial income and expenses.



**35. Principal Nokia Group companies at December 31, 2002**

		<b>Parent holding %</b>	<b>Group majority %</b>
		<u>          </u>	<u>          </u>
US	Nokia Inc.		100.0
DE	Nokia GmbH	100.0	100.0
GB	Nokia UK Limited		100.0
KR	Nokia TMC Limited	100.0	100.0
CN	Beijing Capitel Nokia Mobile Telecommunications Ltd		50.0
NL	Nokia Finance International B.V.	100.0	100.0
HU	Nokia Komárom Kft	100.0	100.0
BR	Nokia do Brazil Tecnologia Ltda	100.0	100.0
IT	Nokia Italia Spa		100.0
FR	Nokia France S.A.	100.0	100.0
CN	Dongguan Nokia Mobile Phones Company Ltd		70.0
CN	Beijing Nokia Hang Xing Telecommunications Systems Co. Ltd.		69.0

**Shares in listed companies**

Group holding more than 5%

	<b>Group holding %</b>	<b>Group voting %</b>
	<u>          </u>	<u>          </u>
Nextrom Holding S.A.	79.33	86.21
Nokian Renkaat Oyj/Nokian Tyres plc	18.9	18.9

As of December 31, 2001, Group holding percentage and Group voting percentage of Nextrom Holding S.A. were 59.97% and 39.97% (Nokia had agreed to abstain from exercising the voting rights relating to certain shares), respectively. In 2002, due to an increase of Nokia's ownership in Nextrom Holding S.A. the Group's holding percentage and Group's voting percentage became 79.33% and 86.21% respectively. Accordingly, Nextrom Holding S.A. has been fully consolidated for accounting purposes from the date of increased ownership. (See note 8)

A complete list of subsidiaries and associated companies is included in Nokia's Statutory Accounts.

**36. Differences between International Accounting Standards and U.S. Generally Accepted Accounting Principles**

The Group's consolidated financial statements are prepared in accordance with International Accounting Standards, which differ in certain respects from accounting principles generally accepted in the United States (U.S. GAAP). The principal differences between IAS and U.S. GAAP are presented below together with explanations of certain adjustments that affect consolidated net income and total shareholders' equity as of and for the years ended December 31:

	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<u>          </u>	<u>          </u>	<u>          </u>
	EURm	EURm	EURm
<b>Reconciliation of net income</b>			
Net income reported under IAS	<b>3,381</b>	2,200	3,938
U.S. GAAP adjustments:			
Pension expense	(5)	(22)	(13)
Development costs	(66)	(104)	(65)
Marketable securities			(10)

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
Provision for social security cost on stock options	(90)	(132)	34
Stock compensation expense	(35)	(85)	(46)
Cash flow hedges	6	(22)	
Net investment in foreign companies	48		
Amortization of identifiable intangible assets acquired	(22)	(7)	
Amortization of goodwill	206	28	
Impairment of goodwill	104		
Deferred tax effect of U.S. GAAP adjustments	76	47	9
	<u>          </u>	<u>          </u>	<u>          </u>
Net income under U.S. GAAP	<b>3,603</b>	1,903	3,847
	<u>          </u>	<u>          </u>	<u>          </u>

**Presentation of comprehensive income under U.S. GAAP:**

Other comprehensive income:			
Foreign currency translation adjustment	(465)	(21)	104
Additional minimum liability, net of tax	(3)		
Net gains (losses) on cash flow hedges, net of tax	56	96	
Net unrealized (losses) gains on securities, net of tax			
Net unrealized holding (losses) gains during the year	(78)	(67)	(30)
Transfer to profit and loss account on impairment	67	74	
Less: Reclassification adjustment for gains included in income	1	(7)	(44)
	<u>          </u>	<u>          </u>	<u>          </u>
Other comprehensive income	(422)	75	30
	<u>          </u>	<u>          </u>	<u>          </u>
Comprehensive income	<b>3,181</b>	1,978	3,877
	<u>          </u>	<u>          </u>	<u>          </u>

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	<u>2002</u>	<u>2001</u>
	EURm	EURm
<b>Reconciliation of shareholders' equity</b>		
Total shareholders' equity reported under IAS	14,281	12,205
U.S. GAAP adjustments:		
Pension expense	(37)	(32)
Additional minimum liability	(5)	
Development costs	(421)	(355)
Marketable securities and unlisted investments	77	
Provision for social security cost on stock options	35	125
Deferred compensation	(13)	(47)
Share issue premium	179	178
Stock compensation	(166)	(131)
Acquisition purchase price	4	4
Amortization of identifiable intangible assets acquired	(29)	(7)
Amortization of goodwill	234	28
Impairment of goodwill	104	
Translation of goodwill	(240)	
Deferred tax effect of U.S. GAAP adjustments	147	53
	<u>          </u>	<u>          </u>

	<u>2002</u>	<u>2001</u>
Total shareholders' equity under U.S. GAAP	<u>14,150</u>	<u>12,021</u>

**Earnings per share under U.S. GAAP**

Earnings per share amounts after giving retroactive effect to the 4-for-1 stock split in 2000 are presented below:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EUR	EUR	EUR
Earnings per share (net income):			
Basic	0.76	0.40	0.82
<b>Diluted</b>	<b>0.75</b>	0.40	0.80

**Pension expense and additional minimum liability**

Under IAS, pension assets, defined benefit pension liabilities and expense are actuarially determined in a similar manner to U.S. GAAP. However, under IAS the prior service cost, transition adjustments and expense resulting from plan amendments are generally recognized immediately. Under U.S. GAAP, these expenses are generally recognized over a longer period. Also, under U.S. GAAP the employer should recognize an additional minimum pension liability charged to other comprehensive income when the accumulated benefit obligation (ABO) exceeds the fair value of the plan assets and this amount is not covered by the liability recognized in the balance sheet. The calculation of the ABO is based on approach two as described in EITF 88-1, Determination of Vested Benefit Obligation for a Defined Benefit Pension Plan, under which the actuarial present value is based on the date of separation from service.

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The U.S. GAAP pension adjustment reflects the difference between the prepaid pension asset and related pension expense as determined by applying IAS 19, Employee Benefits, and the pension asset and pension expense determined by applying FAS 87, Employers' Accounting for Pensions.

**Development costs**

Development costs have been capitalized under IAS after the product involved has reached a certain degree of technical feasibility. Capitalization ceases and depreciation begins when the product becomes available to customers. The depreciation period of these capitalized assets is between two and five years.

Under U.S. GAAP, software development costs would similarly be capitalized after the product has reached a certain degree of technical feasibility. However, certain non-software related development costs capitalized under IAS would not be capitalizable under U.S. GAAP and therefore have been expensed under U.S. GAAP.

**Marketable securities and unlisted investments**

Under IAS, prior to the adoption of IAS 39 on January 1, 2001, investments in marketable securities were carried at cost. Upon adoption of IAS 39, all available-for-sale investments, which includes all publicly listed and non-listed marketable securities, are measured at fair value and gains and losses are recognized within shareholders' equity until realized in the profit and loss account upon sale or disposal.

Under U.S. GAAP, the Group's listed marketable securities would be classified as available-for-sale and carried at aggregate fair value with gross unrealized holding gains and losses reported as a separate component of shareholders' equity. Investments in equity securities that are not traded on a public market are carried at historical cost, giving rise to an adjustment between IAS and U.S. GAAP. Total proceeds from the sale of available-for-sale securities were EUR 94 million in 2000.

**Provision for social security cost on stock options**

Under IAS, the Group provides for social security costs on stock options on the date of grant, based on the fair value of the option. The provision is adjusted for movements in the fair value of the options.

Under U.S. GAAP, no expense is recorded until the options are exercised.

### **Stock compensation**

Under IAS, no compensation expense is recorded on stock options granted. Under U.S. GAAP, the Group follows the methodology in APB Opinion 25, Accounting for Stock Issued to Employees (APB 25), to measure employee stock compensation.

Certain employees have been granted stock options with an exercise price less than the quoted market value of the underlying stock on the date of grant. This intrinsic value is recorded as deferred compensation within shareholders' equity and recognized in the profit and loss account over the vesting period of the stock options. The stock options issued are recorded as share issue premium.

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### **Cash flow hedges**

As a result of a specific difference in the rules under IAS 39 and FAS 133, Accounting for Derivative Instruments and Hedging Activities, relating to hedge accounting, certain foreign exchange gains and losses classified within equity under IAS would be included in the income statement under U.S. GAAP.

### **Net investment in foreign companies**

Under IAS, on the disposal of a foreign entity, the cumulative amount of the exchange differences which have been deferred and which relate to that foreign entity should be recognized as income or as expenses in the same period in which the gain or loss on disposal is recognized. An enterprise may dispose of its interest in a foreign entity through sale, liquidation, repayment of share capital and permanent loans, or abandonment of all, or part of, that entity.

Under U.S. GAAP, the cumulative translation differences are reported in the profit and loss account only upon the sale or upon complete or substantially complete liquidation of the investment in a foreign entity.

### **Acquisition purchase price**

Under IAS, when the consideration paid in a business combination includes shares of the acquirer, the purchase price of the acquired business is determined at the date on which the shares are exchanged.

Under U.S. GAAP, the measurement date for shares of the acquirer is the first day on which both the number of acquirer shares and the amount of other considerations become fixed. The average share price for a few days before and a few days after the measurement date is then used to value the shares.

### **Amortization of identifiable intangible assets acquired**

Under IAS, acquired unpatented technology is not separately recognized on acquisition but is included within goodwill.

Under U.S. GAAP, any unpatented technology acquired in a business combination is recorded as an identifiable intangible asset with a related deferred tax liability. The intangible asset is amortized over its estimated useful life. The adjustment to U.S. GAAP net income and shareholders' equity relates to the amortization and accumulated amortization, respectively, of Amber Networks' intangible.

The gross carrying amount of intangible assets, under U.S. GAAP, is EUR 109 million as of December 31, 2002 (EUR 109 million as of December 31, 2001), which is being amortized over an estimated useful life of five years. Accumulated amortization as of December 31, 2002 was EUR 29 million (EUR 7 million at December 31, 2001). The amortization expense for the year ended December 31, 2002 is EUR 22 million (EUR 7 million in 2001). Amortization expense on intangible assets is expected to be EUR 22 million in 2003, 2004 and 2005 and EUR 14 million in 2006.

**Amortization of goodwill**

Under IAS, goodwill is amortized over its estimated useful life. Under U.S. GAAP, prior to July 1, 2001, goodwill was amortized over its estimated useful life consistent with IAS. The Group adopted the transition provisions of FAS 141, Business Combinations (FAS 141), with effect from July 1, 2001. The Group also adopted the provisions of FAS 142, Goodwill and Other Intangible Assets (FAS 142), on January 1, 2002. As a result, goodwill is no longer subject to amortization subsequent to the date of adoption. As the non-amortization of goodwill provisions of FAS 142 were effective immediately for all acquisitions after June 30, 2001, goodwill arising from the Amber Networks acquisition was also not amortized during 2001.

The U.S. GAAP adjustment reverses the amortization expense recorded under IAS and also reverses the movement in accumulated amortization under IAS during the period subsequent to the adoption of FAS 141 and FAS 142.

The following table shows the results of operations as if FAS 142 were applied to prior periods:

	<b>2001</b>	<b>2000</b>
	<b>EURm</b>	<b>EURm</b>
	<b>(except per share amounts)</b>	
Net income as reported under U.S. GAAP	1,903	3,847
Add back: Goodwill amortization	274	140
<b>Adjusted net income</b>	<b>2,177</b>	<b>3,987</b>
<b>Income per share Basic</b>		
Net income as reported under U.S. GAAP	0.40	0.82
Goodwill amortization	0.06	0.03
<b>Adjusted net income</b>	<b>0.46</b>	<b>0.85</b>
<b>Income per share Diluted</b>		
Net income as reported under U.S. GAAP	0.40	0.80
Goodwill amortization	0.06	0.03
<b>Adjusted net income</b>	<b>0.45</b>	<b>0.83</b>

**Impairment of goodwill**

The Company has evaluated its existing goodwill relating to prior business combinations and has determined that an adjustment or reclassification to intangible assets as of January 1, 2002 was not required in order to conform to the new criteria in FAS 141. The Company has also reassessed the useful lives and carrying values of other intangible assets, and will continue to amortize these assets over their remaining useful lives.

As of January 1, 2002, the Company performed the transitional impairment test under FAS 142 and compared the carrying value for each reporting unit to its fair value, which was determined based on discounted cash flows. Upon completion of the transitional impairment test, the Company determined that there was no impairment as of January 1, 2002, as the carrying value of each reporting unit did not exceed its fair value. The Company also completed the annual impairment test required by FAS 142 during the fourth quarter of 2002, which was also performed by

comparing the carrying value of each reporting unit to its fair value based on discounted cash flows.

Under IAS, goodwill is allocated to "cash generating units", which are the smallest group of identifiable assets which includes the goodwill under review for impairment, and that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets. Under IAS, the Company recorded an impairment of goodwill of EUR 104 million related to Amber Networks as the carrying amount of the cash generating unit exceeded the recoverable amount of the unit. Upon completion of the annual impairment test, the Company determined that the impairment recorded for Amber Networks should be reversed for U.S. GAAP purposes because, at the IP Mobility Network reporting unit level where Amber Networks resides, the fair value of the reporting unit exceeded the book value of the reporting unit.

Below is a roll forward of U.S. GAAP goodwill during 2002:

	<b>Nokia Mobile Phones</b>	<b>Nokia Networks</b>	<b>Nokia Venture Organization</b>	<b>Common Group Functions</b>	<b>Group</b>
	<b>EURm</b>	<b>EURm</b>	<b>EURm</b>	<b>EURm</b>	<b>EURm</b>
Balance as of January 1, 2002	351	382	80		813
Goodwill acquired				9	9
Impairment losses		(17)	(61)		(78)
Translation adjustment	(202)	(42)	4		(240)
<b>Balance as of December 31, 2002</b>	<b>149</b>	<b>323</b>	<b>23</b>	<b>9</b>	<b>504</b>

Of the amount of goodwill under U.S. GAAP, EUR 352 million relates to the acquisition of Amber Networks in 2001. Goodwill is not deductible for tax purposes.

#### **Translation of goodwill**

Under IAS, the company translates goodwill arising on the acquisition of foreign subsidiaries at historical rates.

Under U.S. GAAP, goodwill is translated at the closing rate on the balance sheet date with gains and losses recorded as a component of shareholders' equity.

#### **Disclosures required by U.S. GAAP**

##### *Dependence on limited sources of supply*

Our manufacturing also depends on obtaining adequate supplies of fully functional components on a timely basis. Our principal requirements are for electronic components, such as semiconductors, microprocessors, micro controllers, memory devices and displays, which have a wide range of applications in our communications products. In addition, a particular component may be available only from a limited number of suppliers. We also outsource a portion of our manufacturing to third parties. If a component supplier fails to meet our supplier requirements, such as, most notably, our product quality standards, and consequently some of our products are unacceptable to us, this could adversely affect our sales and operating profit. Suppliers may from time to time extend lead times, limit supplies or increase prices due to capacity constraints or

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other factors, which could adversely affect our ability to deliver our products on a timely basis. Moreover, if one of the third parties to which we outsource manufacturing fails to perform, or experiences delays or disruption to its manufacturing, or financial difficulties, this could adversely affect our sales and operating profit.

##### *Segment information*

The accounting policies of the segments are the same as those described in Note 1, Accounting principles. Nokia accounts for intersegment revenues and transfers as if the revenues or transfers were to third parties, and therefore at current market prices. Nokia evaluates the performance of its segments and allocates resources to them based on operating profit.

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
<b>Long lived assets by location of assets<sup>(1)</sup>:</b>			
Finland	932	1,161	1,105
USA	180	299	427
Great Britain	189	227	230
China	168	266	269
Germany	137	182	250
Other	268	379	451
	<u>1,874</u>	<u>2,514</u>	<u>2,732</u>
	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
<b>Capital additions to long lived assets<sup>(1)</sup>:</b>			
Nokia Mobile Phones	212	362	855
Nokia Networks	82	264	277
Nokia Ventures Organization	4	9	33
Common Group Functions	67	296	269
	<u>365</u>	<u>931</u>	<u>1,434</u>

(1) Long-lived assets include property, plant and equipment.

**Compensation expense**

As allowed by FAS 123, Accounting for Stock-Based Compensation (FAS 123), under U.S. GAAP the Group has elected to continue to apply APB 25 and related interpretations in accounting for its stock-based compensation plans. No stock-based employee compensation cost is reflected in net income for options granted with an exercise price equal to the market value of the underlying stock at the date of grant. Generally, options vest on the date they become exercisable. Compensation expense recorded under APB 25 was EUR 28 million in 2002, net of tax (EUR 85 million in 2001 and EUR 46 million in 2000).

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**36. Differences between International Accounting Standards and U.S. Generally Accepted Accounting Principles (Continued)**

Had compensation cost for stock-based management incentive plans been determined based on the fair value at the grant dates for options under that plan consistent with the method prescribed in FAS 123, the Group's net income and earnings per share would have been reduced to the pro forma amounts indicated below:

		<u>2002</u>	<u>2001</u>	<u>2000</u>
Net income under U.S. GAAP (EURm)	As reported	3,603	1,903	3,847
Add: Stock-based employee compensation expense included in reported net income under U.S. GAAP, net of tax		20	81	46
Deduct: Total stock-based employee compensation expense determined under fair value method for all awards, net of tax		(467)	(663)	(446)
Net income under U.S. GAAP (EURm)	Pro forma	<u>3,156</u>	<u>1,321</u>	<u>3,447</u>

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		2002	2001	2000
		————	————	————
		————	————	————
Basic earnings per share (EUR)	As reported	0.76	0.40	0.82
	Pro forma	0.67	0.28	0.74
Diluted earnings per share (EUR)	As reported	0.75	0.40	0.80
	Pro forma	0.66	0.28	0.72

Under FAS 123, pro forma disclosures are only required in relation to awards granted after January 1, 1995. Prior to January 1, 2001, Nokia calculated the fair value of the options using the binomial option-pricing model. From January 1, 2001, the fair value of options has been calculated using the Black Scholes model. The use of the Black Scholes model rather than the binomial pricing model did not have a material effect on the compensation expense or on the pro forma net income or per share amounts disclosed. The fair value of the options is estimated on the date of grant with the following assumptions:

Weighted average assumptions	2002	2001	2000
	————	————	————
Dividend yield	1.13%	0.93%	0.37%
Expected volatility	50%	50%	45%
Risk-free interest rate	4.73%	4.05%	4.69%
Expected life (years)	3.8	2.8	2.3

The weighted-average fair value of options granted was EUR 7.12 in 2002, EUR 10.70 in 2001 and EUR 16.89 in 2000.

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#### Deferred taxes

Under IAS, the presentation of deferred taxes differs from the methodology set forth in U.S. GAAP. For purposes of U.S. GAAP, deferred tax assets and liabilities must either be classified as current or non-current based on the classification of the related non-tax asset or liability for financial reporting. This table presents the IAS deferred tax assets and liabilities according to the presentation prescribed by FAS 109, Accounting for Income Taxes under U.S. GAAP.

	2002	2001
	————	————
	EURm	EURm
<b>Current assets:</b>		
Intercompany profit in inventory	48	114
Warranty provision	58	61
Other provisions	62	340
Tax losses carried forward	13	
Other	128	
	————	————
	309	515
	————	————
<b>Non-current assets:</b>		
Tax losses carried forward	125	50
Warranty provision	60	47
Other provisions	121	116
Untaxed reserves	105	
Other temporary differences	40	112
	————	————
	451	325
	————	————
Deferred tax assets	760	840
Less: valuation allowance	(29)	(8)



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	<u>2002</u>	<u>2001</u>
Total deferred tax assets	<u>731</u>	<u>832</u>
<b>Current deferred tax liabilities</b>	<b>(20)</b>	<b>(44)</b>
<b>Non-current deferred tax liabilities:</b>		
Untaxed reserves	<b>(33)</b>	<b>(21)</b>
Fair value gains/losses	<b>(25)</b>	<b>(11)</b>
Other	<b>(129)</b>	<b>(101)</b>
	<u><b>(187)</b></u>	<u><b>(133)</b></u>
Total deferred tax liabilities	<u><b>(207)</b></u>	<u><b>(177)</b></u>
Net deferred tax asset	<u><b>524</b></u>	<u><b>655</b></u>

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*Pension expense*

Under IAS, the determination of pension expense for defined benefit plans differs from the methodology set forth in U.S. GAAP. For purposes of U.S. GAAP, the Group has estimated the effect on net income and shareholders' equity assuming the application of SFAS No. 87 in calculating pension expense as of January 1, 1992.

For its single-employer defined benefit pension schemes, net periodic pension cost included in the Group's U.S. GAAP net income for the years ended December 31, 2002, 2001 and 2000, includes the following components:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
	EURm	EURm	EURm
Service cost benefits earned during the year <sup>(1)</sup>	<b>58</b>	49	40
Interest on projected benefit obligation	<b>47</b>	40	35
Expected return on assets	<b>(60)</b>	(74)	(78)
Amortization of prior service cost	<b>12</b>	2	7
Recognized net actuarial loss		(21)	(32)
Amortization of transition asset	<b>1</b>	2	2
Curtailement	<b>4</b>	(1)	
Net periodic pension income	<u><b>62</b></u>	<u><b>(3)</b></u>	<u><b>(26)</b></u>

(1) Excludes premiums associated with pooled benefits.

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The following table sets forth the changes in the benefit obligation and fair value of plan assets during the year and the funded status of the significant defined benefit pension plans showing the amounts that would be recognized in the Group's consolidated balance sheet in accordance

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with U.S. GAAP at December 31:

	2002		2001	
	Domestic plans	Foreign plans	Domestic plans	Foreign plans
	EURm		EURm	
Projected benefit obligation				
at beginning of year	(531)	(236)	(453)	(194)
Foreign exchange		2		1
Service cost	(47)	(11)	(38)	(11)
Interest on projected benefit obligation	(33)	(14)	(29)	(12)
Plan participants' contributions		(3)		(3)
Amendments		(11)		
Actuarial gain (loss)	65	4	(18)	(27)
Curtailement				2
Benefits paid	7	8	7	8
Projected benefit obligation at end of year	(539)	(261)	(531)	(236)
Plan assets at fair value				
at beginning of year	664	123	921	117
Foreign exchange		(2)		(1)
Actual return on plan assets	(53)	(12)	(251)	(3)
Employer contribution	32	22	1	15
Plan participants' contributions		3		3
Benefits paid	(7)	(8)	(7)	(8)
Plan assets at fair value at end of year	636	126	664	123
Excess (deficit) of plan assets over projected benefit obligation	97	(135)	133	(113)
Unrecognized transition obligation	2	3	3	7
Unrecognized net (gain)/loss from experience differences	11	21	(30)	5
Unamortized prior service cost	34		36	
Net amount recognized	144	(111)	142	(101)
Amounts recognized in the statements of financial position consist of:				
Prepaid benefit cost	144		142	
Accrued benefit liability		(116)		(101)
Intangible asset				
Accumulated other comprehensive income		5		
Net amount recognized	144	(111)	142	(101)

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In both 2002 and 2001 the foreign plans were underfunded. The total Accumulated Benefit Obligation and Fair value of plan assets in respect of these plans were EUR 229 million (EUR 236 million in 2001) and EUR 126 million (EUR 123 million in 2001), respectively.

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The accrued pension cost at December 31, 2002 of EUR 111 million in respect of foreign plans is made up of a prepaid pension cost of EUR 4 million and an accrued pension cost of EUR 115 million. The accrued pension cost at December 31, 2001 was made up of a prepaid pension cost of EUR 5 million and an accrued pension cost of EUR 106 million.

Weighted average assumptions used in calculation of pension obligations are as follows:

	2002		2001	
	Domestic	Foreign	Domestic	Foreign
	%	%	%	%
Discount rate for determining present values	5.50	5.58	5.80	5.85
Expected long term rate of return on plan assets	7.25	6.56	7.50	6.49
Annual rate of increase in future compensation levels	3.50	3.09	4.00	3.05
Pension increases	2.30	2.29	2.80	2.87

The Group also contributes to multiemployer plans, insured plans and defined contribution plans. Such contributions were approximately EUR 167 million, EUR 195 million and EUR 116 million in 2002, 2001 and 2000, respectively, including premiums associated with pooled benefits.

At December 31, 2002 approximately 20% of domestic plan assets consist of Nokia securities.

The remaining plan assets consist primarily of real estate, cash and other short-term investments.

### Foreign currency translation

Net foreign exchange gains/(losses) of EUR (63) million, EUR (256) million and EUR (81) million were included in the determination of net income of which EUR (476) million, EUR (309) million and EUR (82) million were included in cost of sales for the year ended December 31, 2002, 2001, and 2000, respectively. EUR 442 million and EUR 78 million of the net foreign exchange gains/(losses) were included in the determination of net sales in 2002 and 2001, respectively.

### Cash and cash equivalents

Under U.S. GAAP bank overdrafts of EUR 78 million and EUR 86 million in 2002 and 2001, respectively, for which there is a legal right of offset would be included within cash and cash equivalents and would be excluded from short-term borrowings.

### Consolidation

Nokia has an investment in a subsidiary in which it owns 50% of the voting shares, which under IAS has been consolidated as Nokia has control of its operating and financial policies. Under U.S. GAAP this entity would be accounted for as a joint venture using the equity method. The impact of deconsolidation would increase net sales by approximately 4% and has an immaterial effect on operating profit after adjusting for the impact of sales from Nokia to the subsidiary and the subsidiary's sales to Nokia. In addition, there would be no impact on net profit as a result of the deconsolidation.

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Under U.S. GAAP, related party transactions with the subsidiary include sales by Nokia to the subsidiary of EUR 1,462 million (EUR 2,090 million in 2001 and EUR 1,558 million in 2000) and purchases by Nokia from the subsidiary of EUR 2,090 million (EUR 1,536 million in 2001 and EUR 916 million in 2000).

### New US Accounting Standards

In June 2002, the FASB issued SFAS No. 146, Accounting for Costs Associated with Exit or Disposal Activities (FAS 146). This Statement addresses financial accounting and reporting for costs associated with exit or disposal activities and nullifies Emerging Issues Task Force Issue No. 94-3, Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring). This Statement requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred and can be measured at fair value. The provisions of this Statement are effective prospectively for exit or disposal activities



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Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4.

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

- a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
- b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
- c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5.

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

- a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
- b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6.

The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: February 7, 2003

*/s/ JORMA OLLILA*

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Chairman and Chief Executive Officer

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I, Olli-Pekka Kallasvuo, certify that:

1.

I have reviewed this annual report on Form 20-F of Nokia Corporation;

2.

Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with

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respect to the period covered by this annual report;

3.

Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4.

The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a)

designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

b)

evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

c)

presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5.

The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

a)

all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b)

any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6.

The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: February 7, 2003

/s/ OLLI-PEKKA KALLASVUO

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Executive Vice President,  
Chief Financial Officer

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SECURITIES AND EXCHANGE COMMISSION  
Washington D.C. 20549  
NOKIA CORPORATION

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## Exhibits To Form 20-F

- \*1. Articles of Association of Nokia Corporation.
  - 6. See note 28 to our consolidated financial statements included in Item 18 of this Form 20-F for information on how earnings per share information was calculated.
  - 8. List of significant subsidiaries.
  - 10(a).1 Consent of Independent Accountants.
  - 10(a).2 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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\*  
Incorporated by reference to our annual report on Form 20-F for the fiscal year ended December 31, 2000.

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