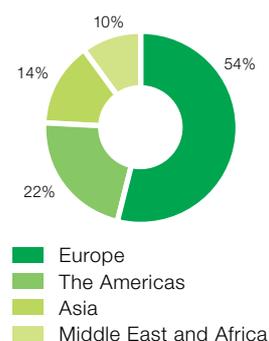


Annual Report 1998

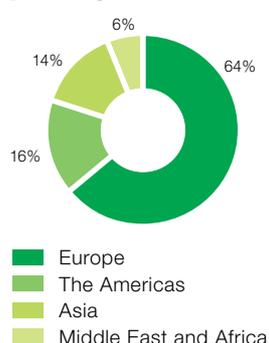


**ABB is a global \$ 30 billion engineering and technology Group serving customers in electrical power generation, transmission and distribution; automation; oil, gas and petrochemicals; industrial products and contracting; and financial services. The Group employs 200,000 people in over 100 countries.**

### Revenues per Region 1998



### Employees per Region 1998



Key figures				
(US\$ in millions, unless otherwise stated)	1998	1997	1996	1995
Orders received	31,462	34,803	33,884	35,163
Revenues	30,872	31,265	33,767	32,751
Operating earnings after depreciation	2,111	1,137	2,113	2,181
Income before taxes	1,865	853	1,901	2,003
Net income	1,305	572	1,233	1,315
Stockholders' equity	5,959	5,283	5,875	5,243
Total assets	32,383	29,784	30,896	32,076
Capital expenditure for tangible fixed assets	865	1,093	1,168	1,171
Capital expenditure for acquisitions	274	302	333	315
Expenditure for research and development	2,463	2,657	2,638	2,627
Operating earnings after depreciation/revenues (%)	6.8	3.6	6.3	6.7
Return on capital employed (%)	21.1	12.2	19.9	21.8
Return on equity (%)	23.2	10.3	22.2	28.4
Number of employees	199,232	213,057	214,894	209,637

Net income per share				
ABB AB A shares (in SEK)	5.52	2.32	4.42	4.99
ABB AB B shares (in SEK)	5.52	2.32	4.42	4.99
ABB AG bearer shares (in CHF)	103.30	46.80	85.40	90.20
ABB AG registered shares (in CHF)	20.66	9.36	17.08	18.04

Dividend per share <sup>1</sup>				
ABB AB A shares (in SEK) <sup>2</sup>	2.18	2.10	1.75	1.60
ABB AB B shares (in SEK) <sup>2</sup>	2.18	2.10	1.75	1.60
ABB AG bearer shares (in CHF)	41.00	40.00	38.00	30.00
ABB AG registered shares (in CHF)	8.20	8.00	7.60	6.00

<sup>1</sup> 1998 proposed.

<sup>2</sup> Per-share data 1995 to 1996 have been adjusted for the 10:1 stock split in ABB AB shares effective as of April 21, 1997.

Note: 1997 figures reflect ABB's 50-percent stake in Adtranz; ABB discontinued the proportionate consolidation of its 50-percent share in Adtranz in 1998 except for the operating results up to the third quarter.



ABB AB (Sweden) and ABB AG (Switzerland) are the two sole owners in equal parts of ABB Asea Brown Boveri Ltd, Zurich (Switzerland), which is the holding company of the ABB Group with approximately 1,000 companies around the world. The two parent companies each provide a transparent vehicle for investing in ABB as virtually all of their income and stockholders' equity comes from their respective 50-percent shares of the ABB Group income and equity.

The complete ABB Group and Parent Companies Annual Report 1998 consists of this Operational Review and a Financial Review. For a copy of the Financial Review, please contact ABB Investor Relations at the address printed on the back of this report.

The ABB Group publishes its annual report in English, German and Swedish. The English-language version is binding. It also issues quarterly financial results in April, July and October. All figures shown for the ABB Group are in U.S. dollars. In addition, separate annual reports are published by some ABB national and business entities. ABB also publishes annual environmental and technology reports.



**ABB Asea Brown Boveri Ltd**

Corporate Communications  
P.O. Box 8131  
CH-8050 Zurich  
Switzerland  
Phone +41 (0)1 317 7111  
Telefax +41 (0)1 311 7958

Internet address  
<http://www.abb.com>

**ABB Asea Brown Boveri Ltd**

Investor Relations  
P.O. Box 8131  
CH-8050 Zurich  
Switzerland  
Phone +41 (0)1 317 7111  
Telefax +41 (0)1 311 9817

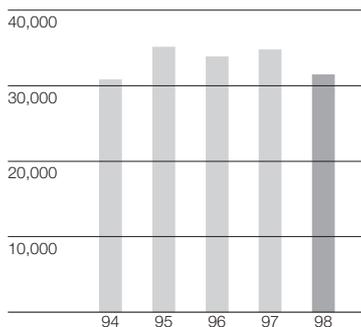
**ABB Asea Brown Boveri Ltd**

Environmental Affairs  
V. Esplanaden 9a 4 F1  
SE-35231 Växjö  
Sweden  
Phone +46 (0)470 22 005  
Telefax +46 (0)470 22 002

# Key Figures

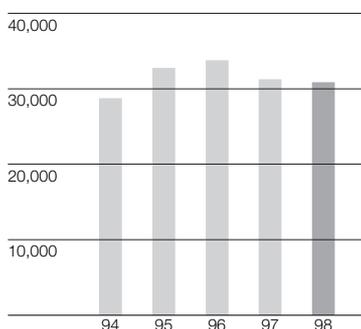
## Group Orders Received

(US\$ in millions)



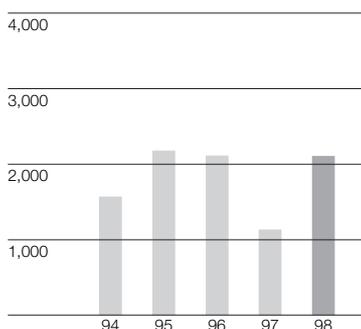
## Group Revenues

(US\$ in millions)



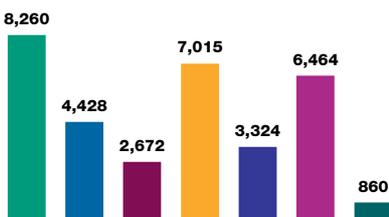
## Group Operating Earnings

(US\$ in millions)



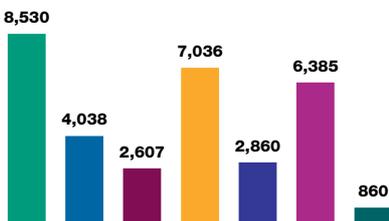
## Orders Received per Segment 1998

(US\$ in millions)



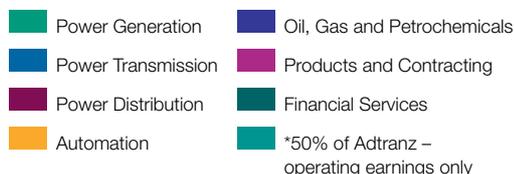
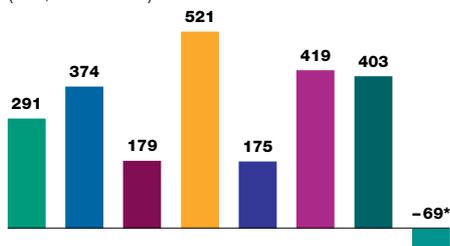
## Revenues per Segment 1998

(US\$ in millions)



## Operating Earnings after Depreciation per Segment 1998

(US\$ in millions)



As per September 1, 1998, ABB changed its Group management structure. Prior years' business data has been restated to reflect the reclassification of certain business areas. ABB Group data in total remains unaffected.

The statements in this review relating to matters that are not historical facts are forward-looking statements that are not guarantees of future performance and involve risks and uncertainties, including but not limited to: future global economic conditions; foreign exchange rates; regulatory approvals; market conditions; the actions of competitors and other factors beyond the control of the company.

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## Highlights of 1998

Orders received in 1998 fell 10 percent to \$ 31.5 billion. Adjusted for acquisitions and divestitures and expressed in local currencies, orders were 1 percent lower. Revenues were 1 percent lower at \$ 30.1 billion, and 8 percent higher on a comparable scope and in local currencies. Return on capital employed was 21.1 percent.

Earnings were substantially higher in Power Generation as the restructuring announced in 1997 improved costs and as revenues rose in the service and retrofit business. Power Transmission and Power Distribution also reported higher earnings, reflecting higher invoicing in several deregulated markets and productivity improvements.

Oil, Gas and Petrochemicals and Products and Contracting also saw higher earnings. Earnings were lower in Automation, due to cyclical shifts in demand in some key industries, project overruns and costs associated with addressing the Year 2000 issue. Financial Services recorded its best year ever.

ABB took a number of significant steps in 1998 for improved growth. ABB acquired Elsag Bailey to position itself as a leader in the global industrial automation market. It was the biggest acquisition in ABB's history. The company made a number of other strategic acquisitions, and in early 1999 completed the divestiture of its 50-percent share in Adtranz, its rail transportation joint venture with DaimlerChrysler.

Also, the industrial segments were realigned to better match changing market conditions and the re-

gional management layer was dissolved to adapt to the globalized business environment and increase efficiency. The restructuring announced in late 1997 was more than 90 percent completed in 1998.

The downturn in Asia delayed large projects, especially in the area of steam power plants. This was offset to some extent by projects in other emerging markets, such as the \$ 835-million oil-fired power plant in Saudi Arabia, and in the U.S., where ABB won a \$ 600-million contract to build a major petrochemical facility in Port Arthur, Texas.

ABB's Year 2000 Task Force continued to work with customers and ABB companies to prepare information technology systems for the Year 2000 transition.

The company continued to open new markets with technology innovations in all of its core businesses. ABB spent 8 percent of revenues, or \$ 2.5 billion, on research and development in 1998.



**Percy Barnevik**  
Chairman of the  
Board of Directors

## Letter from the Chairman

ABB's fundamental approach to business is to make its customers more successful by providing them with the strengths of a globalized company, delivered by local people who really understand what our customers need. Combined with a commitment to entrepreneurial values – speed, flexibility, front-line management responsibility – ABB also aims to move early, anticipating change instead of just reacting to it. These are the keys to ABB's long-term growth and profitability.

ABB took several bold steps in 1998 in pursuit of these goals. The company created new industrial segments that will allow it to better meet the challenges of fast-changing markets with good growth potential. In one of those markets, industrial automation, ABB made its biggest-ever acquisition, Elsag Bailey Process Automation NV. The addition of this global player reinforces ABB's position as a world leader in this high-growth and technology-intensive market. The divestiture of ABB's 50-percent share in the Adtranz rail joint venture with DaimlerChrysler announced at the beginning of 1999 reconfirms the company's strategy to lessen its dependence on heavy asset businesses with moderate growth rates.

ABB also dissolved the regional management level, which had successfully fulfilled its mandate to firmly establish ABB in all parts of the world, and reinforced its efforts to achieve global synergies. These changes make the company faster and more efficient, and they mean that ABB gets more out of its strong decentralized organization.

ABB continued to build its head start in emerging markets and in Central and Eastern Europe. In the short-term, our strong position in Latin America and in the Middle East and Africa has largely offset the impact of the short-term downturn in Asia. In the long-term, these markets will clearly be the world's primary drivers of economic growth, and ABB will be there to support that process with clean, efficient and cost-effective solutions. Just as important, ABB and all of its stakeholders derive an enormous benefit from the talent, creativity and enthusiasm of its people in these regions. Despite the economic turbulence of 1998, I am confident that this regional growth strategy will continue to bring rewards well into the next century.

While having a good strategy is important, success is about execution – getting it done. That, in turn, boils down to the people and here I would like to thank, on behalf of the Board and shareholders, ABB's people for their energy and initiative, for putting their customers first, for their dedication to the company, its values and goals.

A handwritten signature in blue ink that reads "Percy Barnevik". The signature is fluid and cursive, with a large initial "P".

**Percy Barnevik**  
Chairman of the Board of Directors

## President's Comments

Even against the background of rapid change seen in the 11 years since the creation of ABB, 1998 can safely be called a watershed year. But amid the challenges, 1998 offered opportunities for companies able to respond early to the shifting global business environment.

Our response to the challenges of 1998 and beyond is as simple as it is ground-breaking: ensuring increased value-orientation through a rekindled focus on our strengths – knowledge, technology and innovation.

The knowledge focus and our moves to ensure more market transparency underpinned the realignment of ABB's Group segment structure. That move sharpens our business focus by better matching the segments to their markets and underscores ABB's commitment to respond faster to the needs of customers, employees and other stakeholders.

The acquisition of Eltag Bailey Process Automation and the divestiture of our 50-percent share in the Adtranz rail joint venture with DaimlerChrysler also show that we intend to deliver on our promises to expand into knowledge- and service-intensive areas and to lessen our dependence on heavy asset-based businesses.

### **“Ingenuity at Work”**

On the cover of this report, in newspaper and television advertising, and on billboards at the world's major airports, you can read ABB's slogan: “Ingenuity

at Work.” The slogan stands for what we do, providing new and useful advances in technology and engineering for sustainable economic growth. But it also stands for how we do it, working in an atmosphere of innovation, action-orientation and entrepreneurship. An unbureaucratic and decentralized culture encourages ABB people everywhere to make the most of a strong local presence coupled with global resources in technology, production and financing.

ABB also stands for sustainability, for a sense of corporate responsibility that serves the long-term interest of the company and our owners, the shareholders. We achieve that by helping build the bedrock for economic development; by making the environment a priority; by transferring know-how and technology into the countries where we are active; and through dialogue with those who take an interest in what we do – governments, communities, non-governmental organizations and the media.

One of the major challenges facing global companies is the attraction, retention and management of talent. We rely on managers who understand the forces that shape our global and local business environment – and how to harness the enormous creative potential of the people in our diversified, multicultural Group. Putting that combined ingenuity to work is our future.

And in the watershed year of 1998, our people rose to the challenges before us. My colleagues on



**Göran Lindahl**  
President and Chief Executive Officer

the Group Executive Committee and I would like to thank them for their tireless efforts in making this difficult year a success.

### **Focus on research and technology**

Building value through knowledge and applying ingenuity also involves directly tapping the resources of our 20,000 engineers and scientists. To ensure that we can continue to add intelligence to products, solutions and services, ABB spent \$ 2.5 billion on Research and Development (R&D) in 1998.

We link ABB's R&D network closely to the global hubs of technological innovation, with leading universities, research institutions and other centers of excellence. At the same time, 80 percent of our R&D is carried out in ABB's local businesses close to our customers.

A large portion of our product portfolio has been developed in the last five years, which helps explain why ABB has become one of top three companies in each of our core industries. Our dedication to results-oriented R&D is, to my mind, truly "Ingenuity at Work". And new products are steadily introduced as a result, also in 1998. We saw the first commercial order for ABB's Powerformer, a breakthrough in generator technology that eliminates the need for transformer equipment and saves as much as 30 percent in total lifecycle cost of a power plant. A new ABB application for silicon carbide will allow electrical equipment to carry 10 times more power than before. Our products to

monitor and control underwater oil and gas pipeline systems can reduce offshore development costs by 30 percent. These and similar innovations form the basis for future growth.

### **ABB and the environment**

In ABB, we welcome the increasing concern for the environment and growing commitment to sustainable development. Industry has a vital role to play through technology improvements and higher efficiencies. By sharing our technological know-how around the world, ABB is making a special contribution to sustainability. Inside ABB, we are implementing an environmental management system according to the ISO 14001 standard.

Setting concrete goals is always the key. On the issue of greenhouse gas reductions, I proposed a major pilot project in an address to the World Energy Congress in Houston last year. I feel we should aim to cut carbon dioxide emissions by 1 gigaton, a quarter of the United Nations goal, across the energy chain. This project, as we envisage it, should be a cooperation between business, government, multilateral institutions, universities and other organizations.

To ensure constructive engagement, I work on behalf of ABB and industry as one of eleven commissioners in the World Commission on Dams, whose goal it is to find a balanced way to assess the impacts of large hydro dams.

## **Financial review**

Volatile financial markets reflecting considerable uncertainty in 1998 resulted in reduced customer spending in some of ABB's key markets. The downturn in Asia that began in 1997 continued and spread to Russia during 1998, as well as parts of Latin America at the beginning of 1999.

As a result of these trends, overall demand fell during the year and 1998 orders received were \$ 31,462 million. Adjusted for acquisitions and divestitures, in particular the sale of our stake in Adtranz, and expressed in local currencies, orders decreased by 1 percent.

In addition, our earnings were burdened by costs associated with the Year 2000 issue and by provisions to cover a potential \$ 84-million fine from the European Commission in connection with an anti-trust ruling in the European district heating business. However, our early efforts to adjust our cost base through restructuring and to expand into higher growth industries through acquisitions, divestitures began to yield significant benefits in 1998. As a result, operating earnings increased 5 percent to \$ 2.1 billion (excluding the 1997 restructuring charge). As a percent of revenues, personnel expenses decreased to 29.4 percent from last year's low level of 30.2 percent and material expenses declined to 44.3 percent from 45.3 percent.

Our ongoing efforts to reduce working capital have continued to benefit our net cash position which,

despite the significant cash outflows related to our restructuring program, remained at \$ 1.6 billion, the same level as at year-end 1997. Return on equity in 1998 was 23.2 percent (1997: 10.3 percent) and return on capital employed was 21.1 percent (1997: 12.2 percent). Excluding the 1997 restructuring charge from 1997 net income, 1998 return on equity and return on capital employed increased.

## **Outlook for 1999 and beyond**

The growth in Power Generation's gas-fired related activities will continue, particularly in North America. Orders and earnings in 1999 are expected to exceed the 1998 level. Orders and earnings are also expected to increase in Power Transmission and Power Distribution. Power Transmission expects steady, moderate growth in demand with an increasing focus on systems and comprehensive solutions. Power Distribution markets are expected to show high growth in an increasingly deregulated environment. In Products and Contracting, demand for standardized low-voltage products is expected to remain stable, but growth will be above-average in service and in some specialized contracting activities. Orders and earnings are expected to exceed the 1998 level.

Cyclical demand variations will continue for Automation during 1999. Overall, orders are expected to increase and, excluding the effect of the Elsag Bailey integration, earnings are expected to increase as well. The integration of Elsag Bailey will somewhat dilute earnings for the next two years. Demand for

Oil, Gas and Petrochemicals is expected to grow at a lower rate as a consequence of low oil prices. With the segment's focus on areas such as deepwater and subsea activities, as well as upgrades and expansion of refineries, orders are expected to exceed and earnings to reach about the same level as 1998. Financial Services will continue its expansion into areas requiring financial structuring solutions often combined with industrial projects, and operating earnings are not expected to reach the same level as in 1998.

In a difficult economic environment, orders and revenues for ABB Group are expected to grow. The 1999 net cash position will not reach the same level as at the end of 1998, primarily because of cash outlays for the Elsig Bailey acquisition.

Net income in 1999 is expected to exceed the level of 1998.

ABB's longer-term targets remain unchanged. The Group's strategic shift during the last two years will continue with a clear focus on expanding in knowledge- and service-based sectors as well as reducing our dependence on heavy asset businesses. This strategic shift will continue to result in a reduction of the capital needed. Further improved efficiency in our resource utilization will remain a priority. We also expect continued improvement of key financial ratios. Annual growth of at least 6 percent on average over the business cycle, considerable reduction of working capital in relation to revenues and an increase in net income margin from 4.2 percent in 1998 to the 6–7 percent level within 3 years remain major objectives for the Group.



**Göran Lindahl**

President and Chief Executive Officer



## ABB Group Organization



## Executive Committee

From left to right:  
Alexis Fries  
Sune Karlsson  
Renato Fassbind  
Göran Lindahl  
Gorm Gundersen  
Jörgen Centerman  
Armin Meyer  
Jan Roxendal





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## Power Generation

“Technology is key to delivering greater value to our customers and maintaining a competitive edge.”



Alexis Fries, Power Generation segment head

ABB continues to play an important role in the challenging, fast-changing power generation market. Higher demand in the U.S. and the Middle East helped offset the downturn in Asia, where project delays reduced our order intake. We continued to build market position for our advanced gas turbine technology around the world. The restructuring announced in late 1997 is ahead of schedule, while we continued to improve our project selection process to secure our margins. As a result, earnings improved substantially.

### Technology is key

Customer requirements continued to shift in response to ongoing privatization and deregulation. In a more competitive environment, our customers are looking for high fuel efficiency and reliability, low emissions, and full-scope suppliers who can deliver complete projects anywhere in the world. That includes financing, complete after-sales service, operation and maintenance, and cost-effective retrofit to get more out of existing assets.

Technology continued to play a key role in our ability to meet these changing demands. ABB won orders for several combined-cycle power plants equipped with our sequential combustion GT24/GT26 gas turbines. This

technology has proven especially attractive in deregulating markets where its very high efficiency and low emissions help customers reduce costs while producing cleaner power. Major orders in 1998 included plants in the U.K., the U.S., Taiwan and Mexico, bringing to 50 the total number of GT24/GT26 turbines ordered to date worldwide.

ABB also won the first order for its new GTX100 gas turbine from a municipal utility in Sweden. The GTX100 provides large turbine efficiency and emission performance in the low- to mid-output power range and is well suited to the growing small-scale power market. ABB also saw the first commercial order for its new generator technology, called the Powerformer, with an order for a district heating power plant. By eliminating the need for step-up transformer equipment, the Powerformer decreases the total lifecycle cost of a power plant.

Another market development is the growth in distributed power, where small power plants provide energy or heat to localized areas or even individual factories and buildings. When plants produce both electricity and heat (Combined Heat and Power), they achieve much higher efficiencies. These plants



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1. GTX100 gas turbine  
 2. Lumut power station, Malaysia  
 3. Midland heat and power plant, USA  
 4. Powerformer high-voltage generator

can be an economically and environmentally attractive option for our customers in deregulated markets, and the U.S. has recently announced a goal to double the use of such plants. ABB is meeting this demand with a modular turnkey design that includes remote control systems, full service, and financing.

**Emerging markets**

Steam turbines and boilers are the main components of coal- and oil-fired power plants and coal is the primary fuel for power generation in much of Asia. As a result, the project delays in Asia caused by financial uncertainty have had a corresponding impact on our steam power plant business. However, the outlook shows continued demand in India and China, where important domestic coal reserves will be used. In 1998, orders in other parts of the world have offset the Asian delays. Key among those was the turnkey 1,100-megawatt oil-fired Shoaiba steam power plant in Saudi Arabia.

Increasing service revenues is an important strategic goal for ABB. To help achieve that goal, we have as of 1999 created a global business area dedicated solely to the service needs of its customers. The six-year extension of a major service contract at the Midland Power Plant in the U.S. and a 10-year opera-

tion and maintenance contract at a large plant in Argentina are examples of the business opportunities that lie ahead in this important sector.

Looking forward, we expect growth in the demand for gas-fired power plants and for smaller distributed power plants. Large power plants will continue to be built in the emerging markets to sustain continued industrialization, although no major turnaround is expected in Asia in 1999. Deregulation will further drive growth in the service and revamp market, especially in Europe and North America. ABB has the technology, the people and the geographic scope to meet all of these demands well into the future.

<b>Business Areas in the Power Generation Segment</b>		
<b>Orders Received</b> (US\$ in millions)	1998	1997
Gas and Combi-Cycles	3,134	2,917
Steam Power Plants	2,575	3,076
Power Plant Systems	1,602	2,127
Nuclear Systems	404	742
Environmental Systems	525	760
Power Plant Service (new in 1999)	-	-
Other (not assigned to specific Business Area)	80	93
Intra-Segment transactions	-60	-250
<b>Total</b>	<b>8,260</b>	<b>9,465</b>

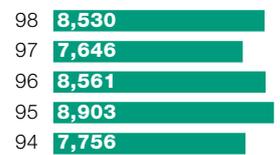
**Segment Activities:**

- Gas turbine and combined-cycle power plants
- Turnkey fossil-fuelled power plants and components
- Air pollution and control systems
- Clean coal systems
- Combined heat and power, district heating
- Hydro and diesel power plants
- Complete service, maintenance and retrofit
- Advanced light-water reactors and fuel

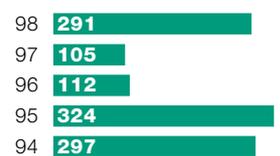
**Orders Received**  
(US\$ in millions)



**Revenues**  
(US\$ in millions)



**Operating Earnings**  
(US\$ in millions)





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## Power Transmission

**“We will meet these challenges . . . developing innovative ways to tap the many new business opportunities emerging around the world.”**



**Sune Karlsson, Power Transmission segment head**

ABB reinforced its position as the world’s leading power transmission company in 1998, keeping up orders received and increasing revenues and earnings in a very competitive market. Ongoing deregulation led to higher demand for turnkey system solutions, especially in the Americas, the Middle East and Europe. The economic downturn in Asia dampened growth but that was offset by order growth in other regions. Continued improvements in our cost structure also contributed to our better results for the year, and the new stand-alone segment is now focused on building its leading position.

Latin America continued to be one of the most progressive regions for privatization and deregulation. ABB will link Brazil’s northern and southern power grids and deliver a 1,000-megawatt power transmission system connecting the electricity networks of Brazil and Argentina. Sharing power makes better use of existing resources and significantly improves overall efficiency, a key cost factor in deregulated markets. ABB is working with power transmission customers in Latin America to find ways to transmit more power through existing lines.

In Europe, ABB is linking the electricity networks of Guernsey and Jersey Islands in the

English Channel to the European Grid via France. ABB will supply high-voltage systems and equipment for the planned High-Voltage Direct Current (HVDC) power link between Italy and Greece, the first electricity infrastructure project financed under the European Union’s Trans European Networks (TENs) plan.

Thanks to our strong local presence in the Middle East and Africa, we won several orders there in 1998, including a turnkey 255-kilometer transmission line joining northern and central Saudi Arabia and a 220-kilovolt gas-insulated substation, also in Saudi Arabia. ABB is completing a regional grid to link several countries in southern Africa, and is building a large air-insulated substation at a power plant in Kenya.

Some orders in Asia have been postponed because of financial uncertainty, but ABB still won large substation contracts in Malaysia and China. ABB continued to position itself for future growth in the region.

### **Technology leadership**

As always, technology played a key role in our performance in 1998. For example, we supplied several projects with our advanced high-voltage cable technology using cross-linked



4 5

- 1. Transformer manufacturing, China
- 2. GIS substation, Taiwan
- 3. HVDC Light, Sweden
- 4. High-voltage equipment service, Switzerland
- 5. 400 kV XLPE cables, Germany

polyethylene (XLPE) insulation. ABB cables are key to our new Powerformer technology, allowing this radically new generator to produce much higher voltages than conventional technology.

ABB continued to build its new HVDC Light technology, with projects in Australia and Denmark. HVDC Light allows interconnection of grids and also allows small-scale power generation, such as wind power, to be connected to large power networks, making both applications more economically feasible. ABB has also developed a new version of its static var compensation (SVC) system, called SVC Light, that increases power quality.

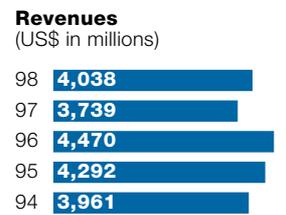
Service and retrofit is another growth area as cost-conscious customers invest more in maintaining and upgrading existing systems. ABB's innovative Plug and Switch System (PASS®) allows customers to easily retrofit or install new substations using modular components that simply plug into existing systems. The most important order for a PASS system in 1998 was for a substation in Brisbane, Australia. We also help customers become more competitive by upgrading products or providing new grid management concepts.

Cost management is another key to profitability. ABB has standardized designs, products and manufacturing processes at 27 power transformer production plants worldwide. The economies of scale achieved will reduce costs and boost quality even further.

Deregulation and privatization will continue and in many cases accelerate. Competitive pressures will grow for our customers and for us. Demand for turnkey solutions, service and retrofit and more technology-rich solutions will continue to rise. ABB will meet these challenges through cost and technology leadership, and by developing innovative ways to tap the many new business opportunities emerging around the world.

<b>Business Areas in the Power Transmission Segment</b>		
<b>Orders Received</b> (US\$ in millions)	1998	1997
Cables	525	752
High-Voltage Products and Substations	1,154	1,409
Power Lines	719	864
Power Systems	845	381
Power Transformers	1,057	1,079
T&D Service and Support	295	119
Other (not assigned to specific Business Area)	150	147
Intra-Segment transactions	-317	-397
<b>Total</b>	<b>4,428</b>	<b>4,354</b>

- Segment Activities:**
- Products and solutions for power cables
  - Air- and gas-insulated switchgear products, solutions and high-current systems
  - Products and solutions for overhead lines
  - High-voltage direct current systems, reactive power compensation and capacitors
  - Power transformers, reactors, components and insulating material.
  - Retrofit, maintenance, operations, consultancy and project development





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## Power Distribution

**“We work together with our customers to help them meet the challenges of fast-changing privatized and deregulated markets.”**



**Sune Karlsson,**  
**Power Distribution**  
**segment head**

The newly created Power Distribution Segment improved orders received and earnings in 1998. Demand was stable or higher in most regions, with the exception of Asia, where investment in infrastructure remains low. However, growth opportunities are being created worldwide by ongoing deregulation and privatization and ABB is well positioned to expand its share of this dynamic market. By creating a separate Power Distribution segment, ABB intends to take full advantage of these growth opportunities now and in the future.

Power Distribution focuses on the products, solutions and services to distribute electricity locally to end users. Our service offering also includes business management software to operate electricity trading systems. Our customers are the utilities that “manage the wires,” commercial institutions and industrial customers, such as chemical, automotive and pulp and paper companies. They are local communities, building contractors, big and small customers, global and local.

But despite their differences, they want the same things – innovative technology with more functionality and built-in intelligence, flexible turnkey solutions, global quality stan-

dards, and a competitive cost. ABB strives to meet these demands quickly in all of its markets. For example, ABB won a long-term contract to supply electricity to the London underground, a traffic system that carries more than 700 million passengers a year. In the Cayman Islands, ABB has entered into a seven-year strategic alliance with the local utility to expand the local electricity distribution system, including the design and installation of substations and related systems. In Mexico, ABB is delivering a distribution substation to the Mexican Petroleum Company (PEMEX) on a turnkey basis at its Dos Bocas sea terminal on the Gulf of Mexico.

Deregulation in the power sector means allowing consumers to choose from whom they want to buy electricity, and under what conditions. That opens opportunities for power companies to trade electricity like a commodity in an open market. ABB is at the forefront of this development, supplying the business management software that allows power generators to feed data on electricity availability and price into a central exchange system. Power consumers can then choose from whom they wish to purchase their electricity. ABB has delivered electricity trading systems to the U.S. state of California as well as to customers



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1. Single-phase distribution transformers, USA 2. New medium-voltage switchboard  
3. Power distribution, London Underground, UK 4. Rural electrification, Americas

in Singapore and Australia, and played a key role in the system recently launched in the U.K. It's a market with good growth potential.

As competition increases, power grid customers need precise information about how cost-effectively their networks are functioning. They need to find and correct problems quickly, reliably and at competitive costs. They need software that integrates operational information into a management system that covers all aspects of their business, from outage control to billing. At the same time, more customers are outsourcing operations such as engineering, construction, service and retrofit. As a result, when they place an order, they want suppliers who can put together a complete package, including financing and business consulting services. The creation of new business areas called T&D Service and Support (part of the Power Transmission segment but serving both the Transmission and Distribution segments) and Distribution Systems is aimed at tapping these new opportunities.

Looking ahead, ABB is determined to expand its position in the electrical distribution business. We offer the wide range of system solutions that competitive customers are looking

for, both in new equipment and upgrading and servicing existing installations. We have economies of scale in technology and product development that allow us to expand that product line and bring more innovative products to market quickly. Our global presence means we can deliver products, solutions and services to both global and local customers, no matter where they are.

Most importantly, we work together with our customers to help them meet the challenges of fast-changing privatized and deregulated markets. We can help them anticipate change and shape their new roles in the markets of the future.

**Business Areas in the Power Distribution Segment**

	1998	1997
<b>Orders Received</b> (US\$ in millions)		
Distribution Systems	753	716
Distribution Transformers	845	887
Medium-Voltage Equipment	1,154	1,141
Other (not assigned to specific Business Area)	-	-
Intra-Segment transactions	-80	-80
<b>Total</b>	<b>2,672</b>	<b>2,664</b>

**Segment Activities:**

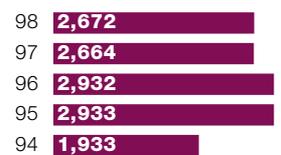
Solutions and systems for distributing energy to rural, urban and industrial customers as well as for airport installations

Distribution transformers

Products for distribution of electrical energy including medium-voltage switchboards, apparatus and pre-fabricated factory assemblies

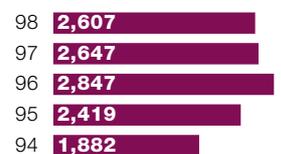
**Orders Received**

(US\$ in millions)



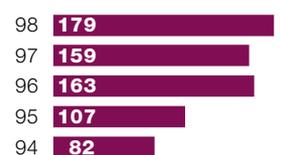
**Revenues**

(US\$ in millions)



**Operating Earnings**

(US\$ in millions)





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## Automation

“Economies of scale from our broad product range and global scope will mean greater value to our customers and shareholders.”



Jörgen Centerman,  
Automation segment  
head

With the creation of a new Automation Segment and the acquisition of Elsag Bailey, ABB is now signalling its ambition to further strengthen its leading global position in this growth business.

In Automation we serve customers in almost every industrial sector and country in the world. Our results in 1998 reflect this mix of business cycles and regional development. Demand was lower in many industries as commodity prices fell, but was stable or higher in oil, gas and petrochemicals and in the marine sector. Demand was mixed in Europe and lower in the Americas. Industrial investments in Asia stabilized at a low level. Overall, orders and earnings were lower.

### Managing in real time

The backbone of our process automation business is the Advant® OCS (Open Control System). Advant monitors and controls a wide range of industrial processes, such as the milling of pulp and paper, steel or textiles; oil, gas and chemical refining; food processing; manufacturing of products from pharmaceuticals to automobiles; and the production, transmission and distribution of electricity. Advant also allows customers to integrate their production systems with their enterprise,

resource and planning (ERP) systems, providing a link to ordering, billing and shipping. By linking the Advant OCS with ABB instrumentation and measurement systems and a full range of drives – devices that control the speed of industrial motors – customers can manage the entire manufacturing and business process in real time, thereby improving productivity and quality.

We demonstrated our full system capabilities in 1998 with an order to deliver automation platforms and drive systems to the world's largest paper mill, the US\$ 1 billion Asia Pulp and Paper facility near Shanghai, China. The delivery includes a total of more than 150 operator and process stations, electrification and drives for three paper machines, and an ABB Smart Advisor™ system that monitors the paper-making process – at 4,500 different points in one paper machine – and automatically advises machine operators of potential problems and how to correct them.

ABB is the world's largest supplier of AC (alternating current) drives, which control the speed of electrical motors. We continued to introduce new products in 1998 to help customers improve energy efficiency and reduce operating costs. There are significant growth



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- 1. Azipod marine propulsion system
- 2. Alpha Stars meter installation, USA
- 3. Panipat refinery, India
- 4. Interstand dimension control system, Sweden
- 5. FlexPicker pick and place robot

opportunities, especially in the microdrives used to control small motors, which are used almost universally in industry to run pumps and fans. Some 30 million small motors are sold each year without any form of speed control. ABB has targeted that market with a full line of microdrives that make small motor speed control economically more attractive.

ABB is also the world's largest supplier of flexible automation and industrial robotics systems. With an established presence in the global automotive market, ABB has now broadened its customer base into the food processing and pharmaceutical industries. New products in 1998 supported that expansion. One is the FlexPicker robot used in so-called "pick-and-place" processes, such as sorting and packaging foods, medical or hygiene products. Operating at high speed and programmable to handle a variety of different products, the FlexPicker provides customers with huge improvements in flexibility, operating costs and plant safety.

The acquisition of Elsag Bailey was the biggest in ABB's history and positions the company as the world leader in every major market. ABB also acquired U.K.-based August Systems, and

Alfa Laval Automation, headquartered in Sweden.

A major focus of our new Automation segment will be to gain the full economies of scale offered by our broad product range and our global scope. Synergies in product development, supply management, production and distribution will allow us to expand our technology lead, manage costs even better, deliver higher quality and, in the end, greater value to our customers and our shareholders.

**Business Areas in the Automation Segment**

Orders Received (US\$ in millions)	1998	1997
Automation Power Products	1,738	1,792
Instrumentation and Control Products	1,265	1,304
Flexible Automation	1,365	1,437
Marine and Turbochargers	663	582
Metals and Minerals	603	689
Petroleum, Chemical and Consumer Industries	314	392
Pulp and Paper	471	605
Utilities	1,150	1,154
Other (not assigned to specific Business Area)	112	80
Intra-Segment transactions	-666	-697
<b>Total</b>	<b>7,015</b>	<b>7,338</b>

**Segment Activities:**

Automation power products such as drives, motors and power electronics

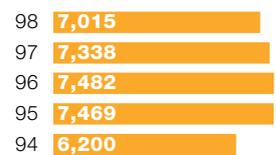
Instrumentation and control products such as field devices for sensing, controlling and actuating; analyzers; metering equipment; control and information systems

Flexible automation and robotics products and systems

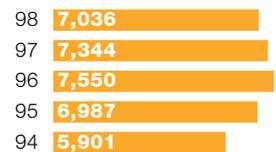
Diesel engine superchargers

Application expertise, project management, and integrated system deliveries to markets such as electrical and water utilities, the petrochemical, chemical and consumer industries, metals and mining, pulp and paper, marine and automotive

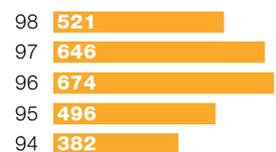
**Orders Received (US\$ in millions)**



**Revenues (US\$ in millions)**



**Operating Earnings (US\$ in millions)**





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## Oil, Gas and Petrochemicals

**“We intend to build our technology leadership and further strengthen our position in this dynamic and high-potential market.”**



**Gorm Gundersen,**  
**Oil, Gas and Petrochemicals segment head**

ABB's Oil, Gas and Petrochemicals business enjoyed another year of good growth in 1998. We saw double-digit growth in operating earnings, and a significant increase in the order backlog. We achieved this despite a slow-down in overall investment by many of our customers in the face of falling oil prices. Our technology leadership played a key role in this result.

For example, ABB has long focused on deep-water exploration and production technologies. These make it possible to develop oil and gas resources in even deeper water than previously possible. Because of the long-term nature of many of these developments, they are less vulnerable to short-term fluctuations in oil prices.

In the first half of 1999, ABB will complete the installation of the world's first commercial subsea separation and injection system, called SUBSIS. Located in the North Sea, about 60 kilometers (37 miles) west of Bergen, Norway, and at a depth of 340 meters (1,130 feet), the system will separate water from the oil stream, clean it, and re-inject it into the well to provide additional pressure used to pump more oil. By moving the separation plant from a platform to the seabed, ABB's solution reduces costs,

improves safety, and enhances oil recovery. ABB also launched enhancements to its MS-700™ well-head family to meet the extreme performance requirements of deep and ultra-deep waters down to 3,000 meters (9,750 feet). We are further supporting offshore well development with a new line of control buoys, fully equipped with communications systems to control subsea systems remotely and to relay operating information back to a central control base.

On the downstream side – where oil and gas are refined and processed into other products – ABB won a US\$ 600-million order from a joint venture between German chemicals company BASF and Belgian oil and petrochemical group Petrofina to build the world's largest “cracker,” a catalytic chemical reactor used, in this case, to produce ethylene and propylene – almost two billion pounds of each per year.

Other large petrochemicals orders included a 700,000-metric-ton per year ethylene plant in Saudi Arabia. ABB is also building its position as a supplier of process technology to producers of reformulated gasoline, used to reduce harmful exhaust emissions. Through a joint venture with Chemical Research & Licensing Company of the U.S., called Catalytic



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1. High integrity pipeline protection system 2. Horizontal Tree, UK  
 3. Ethylene plant, Indonesia 4. Subsea separation and injection system  
 5. Petrochemical refinery, China

Distillation Technologies, ABB is supplying technologies to a gasoline desulfurization unit in Louisiana and a number of gasoline refineries in Mexico operated by PEMEX, the state-owned oil company.

### Building partnerships

Strategic partnerships are an important way to ensure growth in this technology-intensive global business. ABB established other long-term partnerships to develop, license and market various petrochemical processes with U.S. oil and gas company Exxon, the Royal Dutch/Shell Group, and Criterion Catalyst Co. of the U.S. We also entered into a long-term partnership with Russian oil and gas group Gazprom. The agreement covers the manufacture of systems and equipment in natural gas exploration, recovery, oil and gas processing, transport and storage, including technology transfer. It also involves the joint development of oil and gas projects, both in Russia and in other countries, such as the US\$ 170-million order to build compressor stations in Poland for the Yamal gas pipeline running from Russia to Germany.

ABB aims to meet its growth targets in the oil, gas and petrochemicals business through a combination of organic growth and targeted

acquisitions. ABB has made a number of strategic acquisitions in this area in recent years and continued the trend in 1998 with the purchase of the deep water division of U.S.-based Han Padron Associates, a world leader in floating systems technology for deep water.

In 1999, ABB expects overall growth in the oil, gas and petrochemicals markets to slow from very high levels as customers continue to adjust to oil prices near 25-year lows. However, significant growth opportunities remain, especially where our technologies can help customers improve their profitability. We intend to build our technology leadership and further strengthen our position in this dynamic and high-potential market.

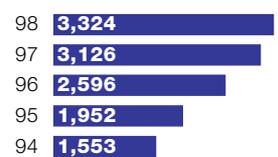
### Business Areas in the Oil, Gas and Petrochemicals Segment

Orders Received (US\$ in millions)	1998	1997
Oil, Gas and Petrochemicals	3,324	3,126
Other (not assigned to specific Business Area)	-	-
Intra-Segment transactions	-	-
<b>Total</b>	<b>3,324</b>	<b>3,126</b>

### Segment Activities:

- Refineries and petrochemical plants
- Subsea production systems
- Floating production systems
- Pressure-containing equipment
- Maintenance and modification of offshore and onshore facilities

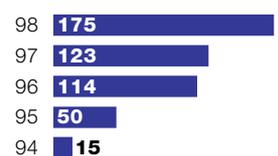
### Orders Received (US\$ in millions)



### Revenues (US\$ in millions)



### Operating Earnings (US\$ in millions)





## Products and Contracting

“We strive to offer superior value to our customers and a challenging and innovative environment for our people.”



Armin Meyer, Products and Contracting segment head

ABB's Products and Contracting Segment designs, manufactures and installs a wide range of electrical and mechanical products and systems used in industrial and commercial facilities, from light switches, push buttons, heating and air conditioning to self-regulating indoor environmental controls, security and energy management systems, even facility management. Our contracting activities focus on buildings, industrial plants and certain outdoor installations, such as telecommunications networks and airports. In addition, we provide full service, maintenance and repair programs to customers in most industrial sectors. We work very closely together with our customers – on any given day, an average of more than 20,000 of our people are on site with our customers.

We improved our results in 1998 in a mixed market. Although growth slowed somewhat in some of our products and contracting markets, overall demand was higher than the year before in Western Europe, the Middle East and Africa. In the Americas, demand was slightly lower. Orders were also down in Asia, in line with the economic situation in the region.

Contracting is often a very local business with many relatively small local or regional

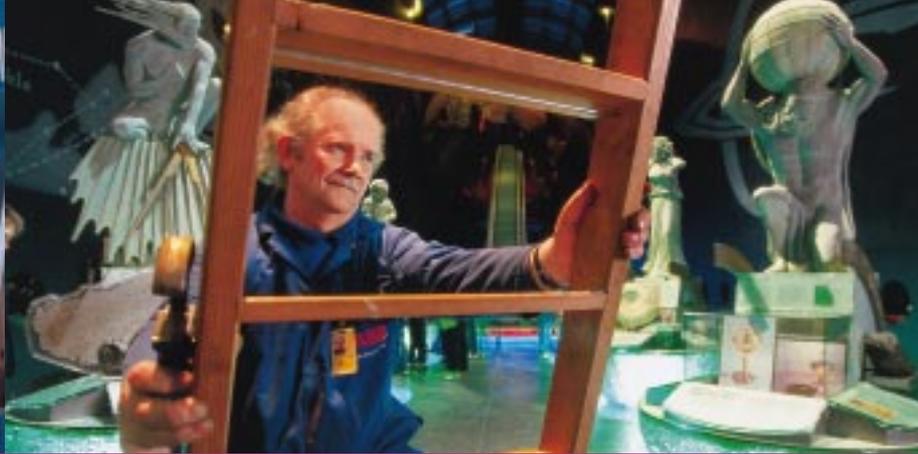
players. That opens an opportunity for ABB, with both a strong local presence and access to a very wide product scope and global economies of scale. For example, we completed work on the new Gardermoen airport in Oslo, Norway, in 1998, where we were responsible for supplying and installing the electrical and ventilation systems, lighting, the control system for baggage handling, security and a waste disposal system. ABB is also handling the airport's longer-term service and maintenance.

### Intelligent systems

In their highly competitive businesses, our customers expect suppliers to deliver products that can do more than ever, with built-in intelligence, self-regulating, extremely energy efficient. That makes the product side of this business technology intensive. ABB met this challenge in 1998 and consolidated its position as a market leader with the launch of a number of new products, such as INSUM, an intelligent motor protection, monitoring and communication system. INSUM uses advanced electronic sensing and feedback systems to control power distribution to industrial motors, ensuring they run at optimal efficiency and minimizing downtime. Customers for this and similar systems in 1998 included a pulp and



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1. Electric overload relay  
2. Oslo (Gardermoen) Airport, Norway  
3. Full service partnership with Hoechst, Germany  
4. Natural History Museum, UK

paper mill in France and a coal-fired power plant near Leipzig, Germany.

ABB has also developed a high-performance fan for mines and tunnels. The fan blades are made of a special high-strength material that can withstand the very high speeds required to maintain efficient air circulation in such demanding environments. The first significant orders were taken in the U.K. and Singapore.

ABB has pioneered the Full Service partnership concept, a long-term agreement in which ABB takes over design, execution and management of all of our customer's service and maintenance activities, often including supply of new equipment. In fact, the goal of these partnerships is to significantly improve the efficiency and productivity of our customers' processes. ABB now has 2,500 service experts working with more than 100 major full-service customers in different industries around the world. New customers include Krems Chemie in Austria and Hoechst in Germany. Krems Chemie is one of Austria's biggest chemical companies, specialized in the production of natural and artificial resins. Krems transferred its entire service team into a new 50-50 joint venture company with ABB, using ABB management and service expertise.

Investments were made to enhance our operations in key areas. We set up a fully automated line for fan manufacturing in Finland and started a production line for air handling units in Taiwan. The strategy to expand the global network of service workshops continues, with acquisitions during 1998 in Australia, Thailand and Zimbabwe.

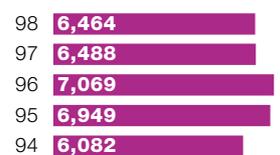
By taking advantage of our global sales and distribution network, strong local presence in key markets and our technological leadership, we strive to offer superior value to our customers and a challenging and innovative work environment for our people.

Business Areas in the Products and Contracting Segment		
Orders Received (US\$ in millions)	1998	1997
Contracting	3,023	3,059
Low-Voltage Products and Systems	2,131	2,142
Air Handling Equipment	514	545
Service	777	751
Other (not assigned to specific Business Area)	232	203
Intra-Segment transactions	-213	-212
<b>Total</b>	<b>6,464</b>	<b>6,488</b>

**Segment Activities:**

- Design, installation and maintenance of electrical and ventilation systems
- Complete infrastructure systems for industrial and commercial buildings
- Low-voltage products and systems to protect, switch and control. Electrical installation material
- Industrial fans and ventilation products and systems
- Service, repair of industrial equipment and maintenance management

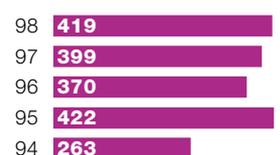
**Orders Received**  
(US\$ in millions)



**Revenues**  
(US\$ in millions)



**Operating Earnings**  
(US\$ in millions)





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## Financial Services

**“The need for private sector financing will continue to grow worldwide.”**



**Jan Roxendal,**  
**Financial Services**  
**segment head**

The volatility of world financial markets in 1998 provided both challenges and opportunities for ABB’s Financial Services segment, whose business focuses on supporting sales and providing financing and risk management tools for the Group’s industrial segments. On balance, the segment was able to improve its results and reported a record income before taxes.

The challenges resulted from the financial turmoil in Southeast Asia and Russia and concerns that it could spread to other emerging markets. That delayed investments in some large infrastructure projects as customers adapted to the financial uncertainty. It also made it harder to find partners willing to share financial risks.

### **New Opportunities**

At the same time, it opened opportunities for suppliers like ABB who can show their customers how to overcome the financial hurdles. Continued privatization and deregulation and the corresponding growth of independent power producers (IPPs) increased demand for innovative financing even further. ABB Financial Services met these challenges and helped secure a number of large projects in 1998, both in emerging and mature markets.

The biggest single order of the year for ABB was the 1,100-megawatt oil-fired power plant at Shoaiba, Saudi Arabia, valued at more than US\$ 800 million. ABB structured the 13-year financing package, which was the biggest financing of its type ever done in the Saudi electricity sector. The package included a deferred payment scheme for the customer.

ABB also arranged flexible financing for the 288-megawatt gas-fired Azito power plant in Ivory Coast, Africa. Our financing partners included the International Finance Corporation of the U.S., the U.K.-based Commonwealth Development Corporation, the World Bank’s International Development Agency, the African Development Bank, bi-lateral lenders in the Netherlands and Germany, and a commercial lender from France.

ABB arranged or contributed to the financing of a number of major projects in Latin America in 1998. In Mexico, ABB was one of the first companies to use a bond issued in the U.S. for a project in an emerging market to help finance a 484-megawatt gas-fired combined-cycle power plant at Monterrey. Also in Mexico, ABB provided debt financing to secure a project to build or expand 22 substa-



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1. Trading room, Sweden      2. Azito power plant, Ivory Coast  
3. Jorf Lasfar power plant, Morocco      4. Regional Treasury Center, Singapore

tions for the Mexican state electrical utility. Furthermore, ABB contributed to financing power projects in Chile, Brazil and Argentina.

### Growing new markets

Our financial expertise supports ABB's expansion into promising new markets. In power generation, ABB can lease small power plants to individual factories or commercial buildings, allowing the customer to avoid large upfront capital investment. In a deregulated environment, such solutions can be an economically attractive alternative to buying power from a utility. In the Automation segment, we will offer more comprehensive lease structures to our robotics customers. We expect to increase our financing activities in this segment and in Oil, Gas and Petrochemicals to reflect their good growth potential.

The volatility of financial markets in 1998 also provided trading opportunities and resulted in higher earnings for our treasury centers in Sweden, Switzerland, Norway and the U.S. The new regional Treasury Center Asia Pacific opened in Singapore and will serve our companies in Asia and provide ABB with complete coverage of financial markets in all time zones. The insurance business, meanwhile, expanded its presence in Switzerland

to focus on political risk insurance, often a key element of financing emerging market projects.

While we expect no substantial economic rebound in Southeast Asia in 1999, the need for private sector financing will continue to grow worldwide. India and China remain very important markets in this regard. After some years of stagnation, IPPs in the United States have emerged as a growth market. Latin America will also continue to offer good opportunities for private financing. With its global scope and broad expertise in so many different businesses, Financial Services will continue to make the most of the many growth opportunities in the years ahead.

### Segment Activities:

Management of Group liquid assets and borrowings, positions on foreign exchange and money markets within predefined risk limits

### Financial consulting services

Asset backed financing, large financial packages, financing for investments and financial advisory services

Traditional reinsurance, financial insurance/reinsurance and insurance brokerage

Project and export finance advisory services, and countertrade

Project underwriting and debt financing

Project development and equity financing of IPP projects

### Business Areas in the Financial Services Segment

Income before Taxes (US\$ in millions)	1998	1997
Treasury Centers	113	63
Leasing and Financing	56	56
Insurance	110	113
Structured Finance	20	19
Energy Ventures	54	46
Investment Management	-	1
Holding Activities & Eliminations*	50	-1
<b>Total</b>	<b>403</b>	<b>297</b>

\* 1998 figure reflects the sale of the Investment Management operations.

### Operating Earnings (US\$ in millions)

98	<b>403</b>
97	<b>297</b>
96	<b>323</b>
95	<b>257</b>
94	<b>214</b>



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## Research and Development

For more information about R&D at ABB, please see our 1998 Technology Report, available from ABB Corporate Communications (please see back cover for contact information).

Technology is a main driver of growth and profitability at ABB. Innovations allow us to deliver more value to our customers, open up new growth markets and, by improving the efficiency and environmental performance of our products, to contribute to sustainable development on a global level and help our customers become more competitive.

With some 20,000 scientists and engineers around the world, and R&D expenditures of US\$ 2.5 billion a year – about 8 percent of revenues – ABB is committed to building and maintaining its technology leadership.

A few highlights show the span of our innovation and some of our achievements in 1998:

- The first commercial application of our high-voltage generator, the POWERFORMER®, that generates electricity at any level needed without a step-up transformer. It was successfully taken into operation in Porjus, northern Sweden in 1998. We continue to spread this technology into many other areas of our business.
- By using the most advanced high-power semiconductor devices, electricity can be supplied with the right quality and lowest possible losses. In 1998, ABB inaugurated a state-of-the-art production line for these

1. Efficient cooling in gas turbines
2. Useful products from waste
3. Light waves detect voltage and current

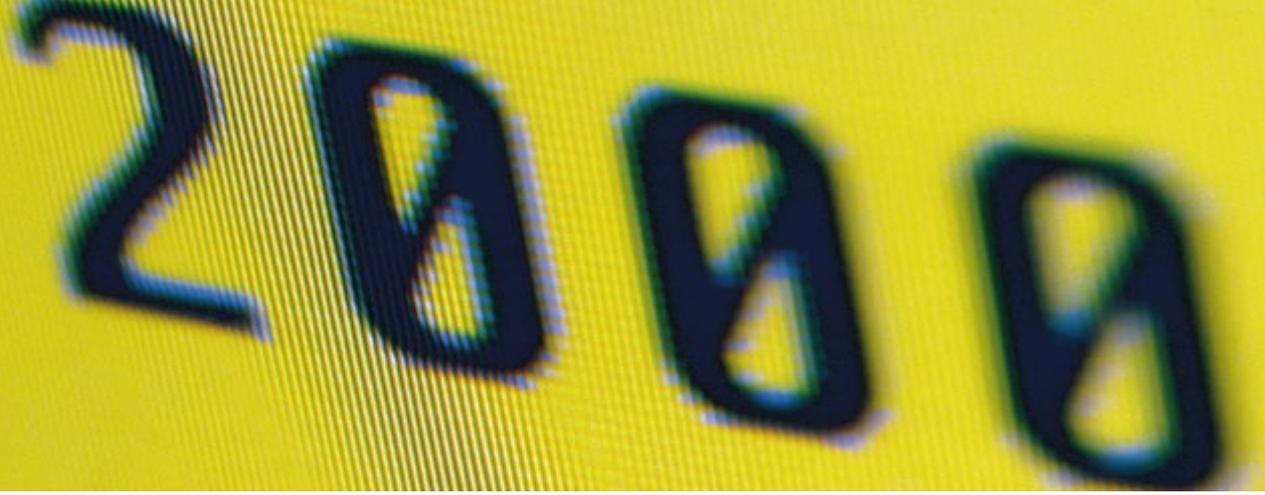
devices in Lenzburg, Switzerland. Intensive research will continue in the emerging area of silicon carbide technology.

- Our strong growth in the application of robots in flexible automation continued in 1998 with the introduction of our high-speed FlexPicker® robot, able to carry out 100 operations a minute, one of the fastest robots on the market today.

Part of our strength lies in our ability to bring together people from around the globe to focus on the technology needs of our customers. Our scientists and engineers work together in virtual teams linked through our global computer network, or in one of our nine corporate research labs in the U.S. and Europe, or together with our customers.

Partnerships with suppliers and with outside institutions, such as universities, also play a key role in our ability to take ideas from the drawing board to the market quickly.

We aim to be among the leading knowledge-based companies of the future, building on the depth and breadth of our expertise and the diversity of our people to deliver products, systems and complete solutions that make our customers more successful.



## Preparing for the Millennium

Because ABB serves a wide range of customers using software products to control many aspects of their operations, we take active steps to ensure that our products are either “Year 2000 compliant” or that their impact on our customers is minimized.

### **The “Four Pillars” Concept**

The ABB “Four Pillars” Concept is based on a close partnership with our customers and ABB has about 1,000 people working on the Year 2000 (Y2k) question at customer plants around the world. The concept consists of four important steps to support a smooth transition into the year 2000:

**Investigation:** We study the Y2k behavior of the products and systems where problems could occur in our customers’ plants and develop methods to improve their Y2k readiness.

**Inventory:** We carry out an inventory of our customers’ products, both from ABB and from other suppliers, to get a view of potential problems.

**Developing remediation methods:** We set up pilot projects based on different kinds of plants, such as paper mills or power plants, to test their Y2k compliance and to develop ways to correct problems that arise. By applying tested solutions to similar plants, we speed up the remediation process.

**Training:** We train large numbers of our customers’ personnel and our own in the remediation methods developed during the pilot projects. This know-how is quickly cascaded out into our customers’ businesses to support efforts to meet their Y2k deadlines.

With respect to products, systems and processes in operation within ABB we are applying the same systematic approach to make sure we can continue serving customers and maintaining reliable administrative, accounting and reporting systems over the Y2k transition period.

ABB’s assessment is that the Y2k issue and our related efforts will not adversely affect our production, sales or other activities nor our ability to provide the information needed by our various stakeholders.

The “Y2k Problem” or “Millennium Bug” refers to a characteristic of older software-based products that use calendar dates designated by only two digits, such as “98” rather than “1998.” As a result, at the turn of the century such software may read “00” not as “2000” but as “1900.” The Millennium Bug can affect not only high-tech applications but also basic infrastructure such as manufacturing, inventory maintenance, communications, and any other date-specific functions. It can be corrected by re-programming or replacing the relevant systems.

**What is the Millennium Bug?**



## Environment

For more information about ABB's environmental performance in 1998, please see our Environmental Management Report, available from ABB Corporate Communications (please see back cover for contact information).

### ISO 14001 Implementation

98 **449**  
97 **150**  
96 **50**  
95 **15**

ABB delivers power and industrial infrastructure all over the world. Our engineering is at the heart of almost every industrial activity. ABB systems control resource consumption in office towers, schools and factories. So if we can make things more efficient, and more efficiently, and apply those improvements around the world by sharing technology, we can make a real contribution to sustainable development.

Much of our research and development is related to improving the environmental impact of our products and systems:

- Gas treatment systems that capture carbon dioxide, a major greenhouse gas, and then recycle it for other uses.
- Microdrives that reduce the electricity consumption of small industrial motors by up to 60 percent.
- High-efficiency, low-emission gas turbines. Because of their widespread use, cutting emissions and improving efficiency by even a single percentage point can have a significant impact on the global environment.

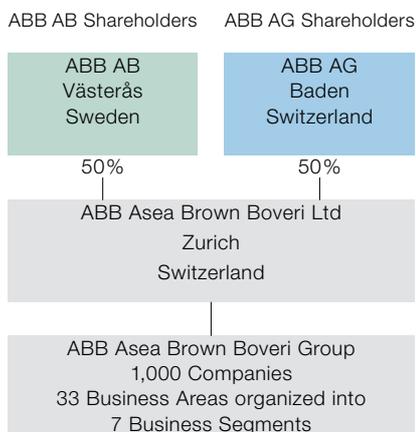
ABB has integrated environmental goals into the strategic planning of its global business areas. They will make an Environmental Declaration by the end of 1999, identifying goals to

improve for their environmental performance. ABB also has an ambitious program to improve its own environmental performance. We are implementing an environmental management system according to ISO 14001 in our more than 700 facilities worldwide. As of the end of 1998, 449 sites had implemented this standard. The remainder aim to reach that goal during 1999.

Sustainable development will never be achieved unless we all work together. ABB participates in a number of international partnerships, such as the World Commission on Dams, whose goal is to find a balanced way to assess the impacts of large hydro dams. ABB continued to support the Massachusetts Institute of Technology (MIT) joint program on science and policy of global change, the Alliance for Global Sustainability and its programs in China, and the one gigaton CO<sub>2</sub> reduction program of the World Energy Congress.

ABB fully recognizes its responsibility to work towards sustainable development and is committed to using its global presence, technological know-how and the creativity of its people to take on that challenge.

# Group Information and Financial Summary



The complete ABB Group and Parent Companies Annual Report 1998 consists of this Operational Review and a Financial Review. Copies of the Financial Review may be obtained from ABB Investor Relations at the address printed on the back cover of this report.

ABB companies throughout the world report their financial results in local currencies, which are then translated to U.S. dollars to establish the ABB Group's consolidated accounts.



# ABB Board of Directors

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**Percy N. Barnevik** (born 1941) Chairman

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Chairman: ABB AB, Investor, Sandvik

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Board Member: General Motors

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**Robert A. Jeker** (born 1935) Vice-Chairman

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Chairman: ABB AG, Batigroup, Feldschlösschen-Hürlimann Georg Fischer, Messe Basel, Stratec, Swiss Steel

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Board Member: Neue Zürcher Zeitung

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Former President: Credit Suisse

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**Gerhard Cromme** (born 1943)

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CEO: Fried. Krupp AG Hoesch-Krupp

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Board Member: ABB AG, Allianz, Suez Lyonnaise des Eaux, Veba, Volkswagen

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**Jürgen Dormann** (born 1940)

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CEO: Hoechst

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Board Member: ABB AG, Allianz, IBM Corporation

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**Yotaro Kobayashi** (born 1933)

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Chairman and Co-CEO: Fuji XEROX

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Board Member: Xerox Corporation

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Japanese Chairman: The Trilateral Commission

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Vice Chairman: International University of Japan, Keizai Doyokai (Japan Association of Corporate Executives)

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**Donald H. Rumsfeld** (born 1932)

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Chairman: Gilead Sciences

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Board Member: ABB AB, Gulfstream Aerospace, Kellogg, Tribune Company

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Former U.S. Ambassador to NATO, U.S. Secretary of Defense, CEO of G.D. Searle & Co., and CEO of General Instrument Corp.

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**Agostino Rocca** (born 1945)

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President and CEO: Techint Group

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Chairman: Siderar, Techint S.A., Techint Engineering Co., Tecpetrol

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Deputy Chairman: Siderca

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Advisory Member: New York Stock Exchange (NYSE), Praxair, Santander Group

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**Edwin Somm** (born 1933)

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President: The Association of Swiss Engineering Employers, The Swiss Association of Machinery Manufacturers

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Board Member: ABB AG, Georg Fischer, SIG, Swiss Steel

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**Peter D. Sutherland** (born 1946)

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Chairman and Managing Director: Goldman Sachs International

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Co-Chairman: BP Amoco

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Board Member: ABB AB, Ericsson, Investor

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Former Director-General GATT and WTO, Former EU Commissioner

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**Björn Svedberg** (born 1937)

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Board Member: ABB AB, Gambro, Investor, SAAB, SAGA Petroleum

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**Lodewijk C. van Wachem** (born 1931)

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Chairman: Royal Dutch Petroleum

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Board Member: Akzo Nobel, ATCO, Bayer, BMW, IBM, Philips, Zurich Financial Services

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Former President and CEO: Royal Dutch/Shell

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**Beat Hess**, Secretary to the Board

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## Auditors

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**KPMG Klynveld Peat Marwick Goerdeler SA**  
Zurich

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**Ernst & Young AG**  
Zurich

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## Proposed Changes in the ABB Board of Directors

Messrs. **Björn Svedberg** and **Lodewijk C. van Wachem** will resign from the ABB Group Board of Directors at the Annual General Meeting on March 18, 1999. The Board thanks them for their outstanding contributions to the company.

The Board intends to propose to the shareholders on March 18, 1999 to newly elect to the ABB Group Board Mr. **Martin Ebner**, Chairman of BZ Group Holding and President of BZ Bank, Switzerland and Mr. **Jacob Wallenberg**, Chairman of Skandinaviska Enskilda Banken and member of the management group of Investor AB, Sweden. In addition, the President and CEO of the ABB Group, Mr. **Göran Lindahl** is proposed to join the Board.

Further, the remaining members will be proposed for reelection to the ABB Group Board.

The ABB Group has also declared its intention to reelect Mr. **Percy N. Barnevik** as Chairman of the ABB Group Board and Mr. **Robert A. Jeker** as Vice-Chairman.

# Management

## Group Executive Committee

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<b>Göran Lindahl</b> (born 1945) Corporate Staffs and Functions:	President and Chief Executive Officer Audit, Corporate Communications, Environmental Affairs, Global Processes, International Consulting, Investor Relations, Legal Affairs, Management Resources
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<b>Jörgen Centerman</b> (born 1951) Business Segment:	Executive Vice President Automation
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<b>Renato Fassbind</b> (born 1955) Business Function: Corporate Staffs:	Executive Vice President Chief Financial Officer Accounting, Mergers and Acquisitions, Real Estate, Reporting and Control, Risk Management and Insurance, Taxes and Finance
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<b>Alexis Fries</b> (born 1955) Business Segment:	Executive Vice President Power Generation
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<b>Gorm Gundersen</b> (born 1944) Business Segment:	Executive Vice President Oil, Gas and Petrochemicals
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<b>Sune Karlsson</b> (born 1946) Business Segments:	Executive Vice President Power Transmission, Power Distribution
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<b>Armin Meyer</b> (born 1949) Business Segment:	Executive Vice President Products and Contracting
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<b>Jan Roxendal</b> (born 1953) Business Segment:	Executive Vice President Financial Services
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## Senior Corporate Officers

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<b>Markus Bayegan</b> (born 1944)	Research and Development, Technology Evaluation
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<b>Tomas Ericsson</b> (born 1935)	Corporate Projects/Finance and Administration
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### Corporate Staffs and Functions

Accounting, Reporting and Control	Jimmy Yap
Audit	Adelheid Schilliger
Corporate Communications	Björn Edlund
Government Affairs and Multilateral Banks	Richard O'Toole
Environmental Affairs	Jan Strömblad
Global Processes	Eric Elzvik
International Consulting	Bengt Skantze
Investor Relations	Manfred Ebling
Legal Affairs	Beat Hess
Management Resources	Arne Olsson
Mergers and Acquisitions	Eric Lint
Real Estate	Walter Stücklin
Risk Management and Insurance	Charles Salek
Taxes and Finance	Alfred Storck

### Corporate Research & Development

- in Finland	Juhani Pykkänen
- in Germany	Kurt-Volker Boos
- in Italy	Giandomenico Testi
- in Norway	Jan Bugge
- in Sweden	Harry Frank
- in Switzerland	Maurice Campagna
- Corporate Programs	Gernot Gessinger

### Business Area Managers

#### Power Generation

Gas and Combi-Cycles	John Gaskell
Steam Power Plants	Howard Pierce
Environmental Systems	Howard Pierce
Power Plant Systems	Leif Nilsson
Power Plant Service	Walter Gränicher
Nuclear Systems	Michael F. Barnoski
Power Segment Manufacturing	Franz Killer

#### Power Transmission

High-Voltage Products and Substations	Josef Dürr
Power Transformers	François Gabella
Cables	Petter Arvidson
Power Lines	Bo-Göran Persson
Power Systems	Bo Normark
T&D Service and Support	Joachim Schneider

#### Power Distribution

Distribution Systems	Kurt Håkansson
Distribution Transformers	Peter Smits
Medium-Voltage Equipment	Andrew Eriksson

#### Automation

Automation Power Products	Jouko Karvinen
Instrumentation and Control Products	Richard McAllister
Flexible Automation	Per Otto Dyb
Marine and Turbochargers	Andreas Fokkens
Metals and Minerals	Jonny Axelsson
Petroleum, Chemicals and Consumer Industries	Chester Mroz
Pulp and Paper	Dinesh Paliwal
Utilities	Michael Hirth

#### Oil, Gas and Petrochemicals

Oil, Gas and Petrochemicals	Gorm Gundersen
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#### Products and Contracting

Low-Voltage Products and Systems	Tom Sjökvist
Contracting	Rolf Karg
Service	Jan Coene
Air Handling Equipment	Ulf Bennet

#### Financial Services

Energy Ventures	Peter Giller
Insurance	Göran Thorstensson
Leasing & Financing	Johan Löwenhielm
Structured Finance	Lennart Blecher
Treasury Centers	
- in Northern Region	Peter Carlsson
- in Southern Region	Thomas Meyer

## Country Managers

### Europe

Austria	Rudolf Petsche
Benelux Countries	Jacques de Raad
Czech Republic	Frank Duggan
Denmark	S. A. Koch-Christensen
Estonia	Bo Henriksson
Finland	Matti Ilmari
France	Max Abitbol
Germany	Horst Dietz
Greece	Costas Cosmadakis
Hungary	Peter Hegedüs
Ireland	Diarmuid O'Sullivan
Italy	Umberto Di Capua
Latvia	Rolf A. Hellström
Lithuania	Vytautas Niedvaras
Norway	Øivind Lund
Poland	Mirosław Gryszka
Portugal	Carlos Dias
Romania	Peter Simon
Russia	Michel Tchesnakoff
Slovak Republic	Bernhard Koehler
Spain	Fernando Conte
Sweden	Anders Narvinger
Switzerland	Alois Sonnenmoser
Turkey	Alfred Barth
Ukraine	Åke Davidsson
United Kingdom	Eric Drewery

### Middle East and Africa

Dubai/UAE	Ulf G. Strömbäck
Egypt	Gian Francesco Imperiali
Israel	Jacob Shani
Ivory Coast	Koen Beckers
Morocco	Jean-Claude Lanzi
Nigeria	Wolfgang Pfeiffer
Saudi Arabia	Bengt Andersson
South Africa	Carlos Poñe
Tanzania	Bo Erik Lansryd
Zimbabwe	Vittorio Semilia

### Americas

Argentina	Ulises de la Orden
Bolivia	Nelson Izquierdo
Brazil	Cedric Lewis
Canada	Paul Kefalas
Chile	Victor Ballivian
Colombia	Napoleao Olmedo
Ecuador	Julio Barriga
Mexico	Benny Olsson
Peru	Eduardo Soldano
USA	Peter S. Janson
Venezuela	Oswald Weinreich

### Asia

Australia	Tommie Bergman
China/Hong Kong SAR	Rolf Schaumann
India	Kumar Kaura Kuldip
Japan	Lave Lindberg
Korea	Håkan Borin
Malaysia	Zubir Zainal Abidin
New Zealand	Tommie Bergman
Philippines	Thomas Ng
Singapore	Paul Ziegler
Taiwan	Felix Vest
Thailand	Terawat Thisabhiramya
Vietnam	Erik Nylund

# Consolidated Financial Statements

## Income Statement

Year ended December 31 (US\$ in millions)	1998	1997
<b>Revenues</b>	<b>30,872</b>	<b>31,265</b>
Material expenses	-13,606	-14,232
Personnel expenses	-9,044	-9,498
Other expenses	-5,085	-4,973
Changes in work in progress and finished goods	-132	180
Depreciation of fixed assets	-926	-997
Unusual items	32	-608
<b>Operating Earnings after Depreciation</b>	<b>2,111</b>	<b>1,137</b>
Earnings from equity accounted companies	0	2
Dividend income	25	10
Interest income	462	325
Interest expense	-734	-616
Exchange differences	1	-5
<b>Income before Taxes</b>	<b>1,865</b>	<b>853</b>
Income Taxes	-543	-258
<b>Net Income before Minority Interests</b>	<b>1,322</b>	<b>595</b>
Minority interests	-17	-23
<b>Net Income</b>	<b>1,305</b>	<b>572</b>

Note: 1997 figures reflect ABB's 50-percent stake in Adtranz; ABB discontinued the proportionate consolidation of its 50-percent share in Adtranz in 1998 except for the operating results up to the third quarter.

### Main exchange rates used in the translation of the Financial Statements

	ISO Codes	Average 1998/US\$	Year-end 1998/US\$	Average 1997/US\$	Year-end 1997/US\$
Australian Dollar	AUD	1.58	1.63	1.35	1.53
Canadian Dollar	CAD	1.48	1.55	1.39	1.43
Chinese Yuan Renminbi	CNY	8.28	8.28	8.29	8.28
Danish Krone	DKK	6.70	6.38	6.56	6.82
Finnish Markka	FIM	5.35	5.09	5.16	5.42
French Franc	FRF	5.90	5.62	5.79	5.99
German Mark	DEM	1.76	1.68	1.72	1.79
Indian Rupee	IDR	41.13	42.50	36.39	39.21
Italian Lira	ITL	1,736.11	1,658.37	1,694.92	1,760.56
Norwegian Krone	NOK	7.54	7.61	7.03	7.35
Polish Zloty	PLN	3.50	3.50	3.26	3.51
Pound Sterling	GBP	0.60	0.60	0.61	0.60
Spanish Peseta	ESP	149.43	142.67	145.58	151.68
Swedish Krona	SEK	7.95	8.13	7.61	7.90
Swiss Franc	CHF	1.45	1.38	1.44	1.45
European Currency Unit (ECU)	XEU	0.89	0.86	0.88	0.91

# Consolidated Financial Statements

## Balance Sheet

December 31 (US\$ in millions)	1998	1997
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	7,790	5,790
Trade receivables	6,173	5,656
Inventories	4,444	4,907
Other current assets	4,463	4,283
<b>Total Current Assets</b>	<b>22,870</b>	<b>20,636</b>
<b>Fixed Assets</b>		
Financing receivables	2,145	1,815
Shares and participations	750	385
Intangible assets	1,927	1,981
Construction in progress	173	242
Machinery and equipment	2,428	2,479
Land and buildings	2,090	2,246
<b>Total Fixed Assets</b>	<b>9,513</b>	<b>9,148</b>
<b>Total Assets</b>	<b>32,383</b>	<b>29,784</b>
<b>Liabilities and Equity</b>		
<b>Current Liabilities</b>		
Trade payables	5,225	4,566
Provisions	4,286	5,233
Other current liabilities	4,963	5,006
Short-term loans	3,409	1,715
<b>Total Current Liabilities</b>	<b>17,883</b>	<b>16,520</b>
<b>Non-Current Liabilities</b>		
Advances from customers	2,646	2,612
Medium- and long-term loans	2,808	2,511
Pension liabilities	1,771	1,748
Deferred taxes	1,001	790
<b>Total Non-Current Liabilities</b>	<b>8,226</b>	<b>7,661</b>
<b>Minority Interests</b>	<b>315</b>	<b>320</b>
<b>Stockholders' Equity</b>		
Share capital	2,087	2,087
Restricted reserves	1,103	965
Other reserves and retained earnings	1,464	1,659
Net income	1,305	572
<b>Total Stockholders' Equity</b>	<b>5,959</b>	<b>5,283</b>
<b>Total Liabilities and Equity</b>	<b>32,383</b>	<b>29,784</b>

Note: 1997 figures reflect ABB's 50-percent stake in Adtranz; ABB discontinued the proportionate consolidation of its 50-percent share in Adtranz in 1998 except for the operating results up to the third quarter.

# Consolidated Financial Statements

## Statement of Cash Flows

Year ended December 31 (US\$ in millions)	1998	1997
<b>Cash Flow from Operating Activities</b>		
Income before taxes <sup>1</sup>	1,865	853
Adjustments for depreciation of fixed assets	926	997
Adjustments for changes in provisions	- 551	546
Adjustments for changes in pension liabilities	35	11
Other adjustments	- 149	- 328
	<b>2,126</b>	<b>2,079</b>
Changes in operating assets and liabilities:		
Changes in trade receivables	- 631	- 264
Changes in other current assets	- 686	- 754
Changes in inventories	168	- 293
Changes in trade payables	744	650
Changes in other current liabilities (excl. income taxes due)	- 46	279
Changes in advances from customers	857	498
	<b>406</b>	<b>116</b>
<b>Income Taxes Paid</b>	<b>- 428</b>	<b>- 404</b>
<b>Net Cash Flow from Operating Activities</b>	<b>2,104</b>	<b>1,791</b>
<b>Cash Flow Related to Investing Activities</b>		
Changes in financing receivables	- 300	- 232
Acquisitions (net of cash acquired) <sup>2</sup>	- 274	- 288
Capital expenditure for tangible fixed assets	- 865	- 1,093
Proceeds from divestitures (net of cash disposed) <sup>2</sup>	60	738
Proceeds from disposal of tangible fixed assets	288	153
<b>Net Cash Flow Related to Investing Activities<sup>2</sup></b>	<b>- 1,091</b>	<b>- 722</b>
<b>Cash Flow Related to Financing Activities<sup>2</sup></b>		
Changes in short-term loans	1,672	- 640
Changes in medium- and long-term loans	286	734
Dividends paid	- 507	- 446
Other items <sup>2</sup>	- 509	- 69
<b>Net Cash Flow Related to Financing Activities<sup>2</sup></b>	<b>942</b>	<b>- 421</b>
<b>Effects of Translation Differences on Cash and Cash Equivalents</b>	<b>45</b>	<b>- 411</b>
<b>Net Change in Cash and Cash Equivalents</b>	<b>2,000</b>	<b>237</b>
Cash and cash equivalents – beginning of year	5,790	5,553
Cash and cash equivalents – end of year	7,790	5,790

<sup>1</sup> Actual interest received/paid does not differ materially from "Interest Income/Expenses" as included in income before taxes, and is thus not explicitly shown in the above presentation.

<sup>2</sup> 1997 restated to reflect the net amount of cash acquired or disposed.

Note: 1997 figures reflect ABB's 50-percent stake in Adtranz; ABB discontinued the proportionate consolidation of its 50-percent share in Adtranz in 1998 except for the operating results up to the third quarter.

# Country Statistics

Revenues <sup>1</sup> (US\$ in millions unless otherwise stated) and Employees	Revenues		Employees	
	1998	1997	1998	1997
<b>Europe</b>	<b>16,620</b>	<b>17,099</b>	<b>128,051</b>	<b>139,528</b>
Austria	318	302	1,132	1,316
Belgium	283	282	1,364	1,393
Czech Republic	525	319	4,970	5,759
Denmark	505	530	3,608	4,035
Finland	877	845	9,635	9,241
France	574	590	2,740	2,908
Germany	3,313	3,968	23,752	29,138
Italy	1,391	1,203	7,640	8,495
Netherlands	573	467	2,632	2,197
Norway	1,144	1,116	7,603	7,209
Poland	538	526	7,971	7,738
Portugal	148	256	1,110	1,487
Russia	201	207	1,371	1,462
Spain	567	509	3,447	3,810
Sweden	2,140	2,331	24,149	24,293
Switzerland	694	826	11,661	12,483
United Kingdom	1,698	1,784	7,145	9,174
Others	1,131	1,038	6,121	7,390
<b>The Americas</b>	<b>6,640</b>	<b>6,374</b>	<b>32,124</b>	<b>31,647</b>
Argentina	172	177	891	684
Brazil	758	602	4,305	3,718
Canada	363	396	2,266	2,172
Mexico	310	202	2,431	1,227
USA	4,263	4,142	19,725	21,433
Others	774	855	2,506	2,413
<b>Asia</b>	<b>4,474</b>	<b>5,427</b>	<b>27,313</b>	<b>30,912</b>
Australia	622	791	4,731	4,748
China	663	561	4,400	4,525
India	417	511	7,901	9,630
Indonesia	228	615	1,628	1,960
Japan	663	651	940	1,138
Malaysia	225	383	663	880
Philippines	142	243	754	1,470
Singapore	142	163	885	1,071
Thailand	188	351	3,117	3,739
Others	1,184	1,158	2,294	1,751
<b>Middle East and Africa</b>	<b>3,138</b>	<b>2,365</b>	<b>11,744</b>	<b>10,970</b>
Egypt	220	193	2,524	1,954
Saudi Arabia	811	521	1,462	1,189
South Africa	212	253	2,627	2,703
Others	1,895	1,398	5,131	5,124
<b>Group Total</b>	<b>30,872</b>	<b>31,265</b>	<b>199,232</b>	<b>213,057</b>

<sup>1</sup>Total revenues of the ABB Group from third-party customers in each region/country.

# ABB Group Statistical Data

(US\$ in millions, unless otherwise stated)	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989
<b>Consolidated Income Statement</b>										
Revenues	30,872	31,265	33,767	32,751	28,758	27,521	29,109	28,443	26,337	20,260
Depreciation of Fixed Assets	-926	-997	-1,044	-1,021	-893	-844	-901	-819	-750	-549
Operating Earnings after Depreciation	2,111	1,137	2,113	2,181	1,574	1,311	1,219	1,417	1,386	918
Income before Taxes	1,865	853	1,901	2,003	1,362	520	861	997	1,052	872
Net Income before Minority Interest	1,322	595	1,242	1,361	795	72	528	633	628	628
Net Income	1,305	572	1,233	1,315	760	68	505	609	590	589
<b>Consolidated Balance Sheet</b>										
Cash and Cash Equivalents	7,790	5,790	5,553	6,831	7,612	5,700	5,534	5,211	4,975	4,332
Other Current Assets	15,080	14,846	15,606	15,437	12,348	10,672	11,432	12,688	12,848	10,470
Fixed Assets	9,513	9,148	9,737	9,808	9,095	8,532	8,983	10,157	10,286	7,743
Total Assets	32,383	29,784	30,896	32,076	29,055	24,904	25,949	28,056	28,109	22,545
Current Liabilities	17,883	16,520	17,147	17,302	15,458	13,390	13,203	15,394	15,441	13,209
Advances from Customers	2,646	2,612	2,610	3,576	3,417	2,567	2,983	2,820	2,798	1,768
Medium- and Long-Term Loans	2,808	2,511	1,823	2,644	3,049	2,866	2,993	2,496	2,712	1,746
Other Long-Term Liabilities	2,772	2,538	3,094	2,971	2,732	2,244	2,384	2,547	2,442	1,447
Stockholders' Equity incl. Minority Interest	6,274	5,603	6,222	5,583	4,399	3,837	4,386	4,799	4,715	4,375
<b>Consolidated Statement of Cash Flows</b>										
Cash Flows from Operating Activities	2,104	1,791	834	951	2,135	1,515	1,942	2,128	1,044	1,437
Cash Flows related to Investing Activities	-1,091	-722	-1,118	-402	-501	-839	-373	-316	-1,024	-3,951
Cash Flows related to Financing Activities	942	-421	-855	-1,696	-122	-54	-477	-1,528	218	3,323
Effects of Translation Differences	45	-411	-139	366	400	-456	-769	-48	405	27
Net Changes in Cash and Cash Equivalents	2,000	237	-1,278	-781	1,912	166	323	236	643	836
<b>Other Data</b>										
Orders Received	31,462	34,803	33,884	35,163	30,827	28,644	31,153	29,209	28,938	21,348
Capital Expenditure for Tangible Fixed Assets	865	1,093	1,168	1,171	935	816	957	1,035	961	783
Capital Expenditure for Acquisitions	274	302	333	315	196	212	253	612	677	3,090
Expenditure for Research and Development	2,463	2,657	2,638	2,627	2,353	2,271	2,386	2,342	1,931	1,361
Dividends Declared Pertaining to Fiscal Year (Swiss francs in millions)	740	700	650	520	370	340	340	330	300	290
Net cash/net debt position	1,573	1,564	1,204	1,997	1,686	242	-7	-950	-2,110	-1,760
Average Capital Employed	12,319	12,085	12,537	12,478	11,816	11,579	12,531	13,403	12,724	9,585
Number of Employees	199,232	213,057	214,894	209,637	207,557	206,490	213,407	214,399	215,154	189,493
<b>Ratios</b>										
Operating Earnings after Depreciation/Revenues	6.8%	3.6%	6.3%	6.7%	5.5%	4.8%	4.2%	5.0%	5.3%	4.5%
Return on Equity	23.2%	10.3%	22.2%	28.4%	20.2%	1.8%	11.8%	13.9%	14.5%	16.8%
Return on Capital Employed	21.1%	12.2%	19.9%	21.8%	16.9%	15.4%	14.7%	14.7%	17.3%	15.1%