ABB LTD Form 20-F March 10, 2009

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As filed with the Securities and Exchange Commission on March 10, 2009

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## FORM 20-F

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

OR

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

For the fiscal year ended December 31, 2008

OR

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

OR

 SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 Commission file number: 001-16429

## ABB Ltd

(Exact name of registrant as specified in its charter)

Switzerland

(Jurisdiction of incorporation or organization)

Affolternstrasse 44 CH-8050 Zurich Switzerland

(Address of principal executive offices)

Richard A. Brown Affolternstrasse 44 CH-8050 Zurich Switzerland Telephone: +41-43-317-7111 Facsimile: +41-43-317-7992

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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

**Title of each class** American Depositary Shares, each representing one Registered Share Registered Shares, par value CHF 2.02 Name of each exchange on which registered New York Stock Exchange

New York Stock Exchange\*

Securities registered or to be registered pursuant to Section 12(g) of the Act: None.

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

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 2,322,792,835 Registered Shares (including treasury shares)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý No o

If this is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  $\circ$  No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer.

Large accelerated filer ý Accelerated filer o Non-accelerated filer o Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing: U.S. GAAP ý International Financial Reporting Standards as issued by the International Accounting Standards Board o Other o

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. item 17 o item 18 o

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No ý

\*

Listed on the New York Stock Exchange not for trading or quotation purposes, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the Securities and Exchange Commission.

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#### INTRODUCTION

ABB Ltd is a corporation organized under the laws of Switzerland. In this report, "the ABB Group," "ABB," the "Company," "we," "our" and "us" refer to ABB Ltd and its consolidated subsidiaries (unless the context otherwise requires). We also use these terms to refer to ABB Asea Brown Boveri Ltd and its subsidiaries prior to the establishment of ABB Ltd as the holding company for the entire ABB Group in 1999, as described in this report under "Item 4. Information on the Company Introduction History of the ABB Group." Our American Depositary Shares (each representing one registered share of ABB Ltd) are referred to as "ADSs." The registered shares of ABB Ltd are referred to as "shares."

Our principal corporate offices are located at Affolternstrasse 44, CH-8050 Zurich, Switzerland, telephone number +41-43-317-7111.

#### FINANCIAL AND OTHER INFORMATION

ABB Ltd has prepared its statutory unconsolidated financial statements in accordance with the Swiss Code of Obligations. The Consolidated Financial Statements of ABB Ltd, including the notes thereto, as of December 31, 2008 and 2007 and for each of the years in the three-year period ended December 31, 2008 (our Consolidated Financial Statements) have been prepared in accordance with United States generally accepted accounting principles (U.S. GAAP).

In this report: (i)"\$," "U.S. dollars" and "USD" refer to the lawful currency of the United States of America; (ii) "CHF" and "Swiss francs" refer to the lawful currency of Switzerland; (iii) "€" and "euro" refer to the lawful currency of the participating member states of the European Economic and Monetary Union (Eurozone); (iv) "SEK" and "Swedish krona" refer to the lawful currency of Sweden; (v) "£," "sterling," "pounds sterling" and "GBP" refer to the lawful currency of the United Kingdom; (vi) "Indian rupee" refers to the lawful currency of India; and (vii) "Chinese renminbi" refers to the lawful currency of the People's Republic of China.

Except as otherwise stated, all monetary amounts in this report are presented in U.S. dollars. Where specifically indicated, amounts in Swiss francs have been translated into U.S. dollars. These translations are provided for convenience only, and they are not representations that the Swiss franc could be converted into U.S. dollars at the rate indicated. These translations have been made using the twelve o'clock buying rate in the City of New York for cable transfers as certified for customs purposes by the Federal Reserve Bank of New York as of December 31, 2008, unless otherwise indicated. The twelve o'clock buying rate for Swiss francs on December 31, 2008 was 1.00 = CHF 1.0673. The twelve o'clock buying rate for Swiss francs on March 6, 2009 was 1.00 = CHF 1.1525.

#### FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "intends," "may," "will," or "should" or, in each case, their negative, or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this report and include statements regarding our intentions, beliefs or current expectations concerning, among other things, our results of operations, financial condition, liquidity, prospects, growth, dispositions, strategies and the countries and industries in which we operate.

These forward-looking statements include, but are not limited to the following:

Statements in "Item 3. Key Information Dividends and Dividend Policy" regarding our policy on future dividend payments;

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Statements in "Item 3. Key Information Risk Factors," "Item 4. Information on the Company" and "Item 5. Operating and Financial Review and Prospects" regarding our management objectives and the timing of intended capital expenditures;

Statements in "Item 5. Operating and Financial Review and Prospects" regarding our management objectives, including our mid term outlook, as well as trends in results, prices, volumes, operations, margins and overall market trends; and

Statements in "Item 8. Financial Information Legal Proceedings" regarding the outcome of certain compliance matters under investigation.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the countries and industries in which we operate, may differ materially from those described in or suggested by the forward-looking statements contained in this report. In addition, even if our results of operations, financial condition and liquidity, and the development of the countries and industries in which we operate, are consistent with the forward-looking statements contained in this report, those results or developments may not be indicative of results or developments in subsequent periods. Important factors that could cause actual results to differ materially from our expectations are contained in cautionary statements in this report and include, without limitation, the following:

Our business is exposed to risks associated with the ongoing financial crisis, the weakening of the global economy and political conditions

Illegal behavior by any of our employees or agents could have a material adverse impact on our consolidated operating results, cash flows, and financial position as well as on our reputation and our ability to do business.

Our operations in emerging markets expose us to risks associated with conditions in those markets.

Undertaking long-term fixed price or turnkey projects exposes our businesses to risk of loss should our actual costs exceed our estimated or budgeted costs.

Our international operations expose us to the risk of fluctuations in currency exchange rates.

Our hedging activities may not protect us against the consequences of significant fluctuations in exchange rates, interest rates or commodity prices on our earnings and cash flows.

Increases in the costs of our raw materials may adversely affect our financial performance.

The weakening or unavailability of our intellectual property rights could adversely affect our business.

We operate in very competitive markets and could be adversely affected if we fail to keep pace with technological changes.

Industry consolidation could result in more powerful competitors and fewer customers.

We are subject to environmental laws and regulations in the countries in which we operate. We incur costs to comply with such regulations, and our ongoing operations may expose us to environmental liabilities.

We may be the subject of product liability claims.

We may encounter difficulty in managing our business due to the global nature of our operations.

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We have retained liability for environmental remediation costs relating to businesses that we sold in 2000, and we could be required to make payments in respect of these retained liabilities in excess of established provisions.

If we fail to make the payments required under the Modified Plan of Reorganization for Combustion Engineering (the CE Plan) we could trigger an injunction default which would lead to the termination of the channeling injunction under the CE Plan.

If we are unable to obtain performance and other guarantees from financial institutions, we may be prevented from bidding on, or obtaining, some contracts, or our costs with respect to such contracts could be higher.

If we cannot successfully implement the planned integration of our different Enterprise Resource Planning (ERP) systems, then we may be unable to produce reliable accounts, and our business and reputation may be adversely affected.

If we are unable to successfully adapt our internal controls over financial reporting to changes in circumstance, our ability to report our financial results on a timely and accurate basis may be adversely affected. As a result, investors could lose confidence in our financial reporting, which may harm our business and the trading price of our stock.

If we are unable to attract and retain qualified management and personnel then our business may be adversely affected.

We urge you to read the sections of this report entitled "Item 3. Key Information Risk Factors," "Item 4. Information on the Company" and "Item 5. Operating and Financial Review and Prospects" for a more complete discussion of the factors that could affect our future performance and the countries and industries in which we operate. In light of these risks, uncertainties and assumptions, the forward-looking circumstances described in this report and the assumptions underlying them may not occur.

Except as required by law or applicable stock exchange rules or regulations, we undertake no obligation to update or revise publicly any forward-looking statement, whether as a result of new information, future events or otherwise. All subsequent written and oral forward-looking statements attributable to us or to persons acting on our behalf are expressly qualified in their entirety by the cautionary statements referred to above and contained elsewhere in this report.

#### PART I

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

Not applicable

#### Item 2. Offer Statistics and Expected Timetable

Not applicable

#### Item 3. Key Information

#### SELECTED FINANCIAL DATA

The following table presents our selected financial and operating information at the dates and for each of the periods indicated. You should read the following information together with the information contained in "Item 5. Operating and Financial Review and Prospects," as well as our Consolidated Financial Statements and the notes thereto, included elsewhere in this report.

Our selected financial data are presented in the following tables in accordance with U.S. GAAP and have been derived from our published Consolidated Financial Statements. Our Consolidated Financial Statements as of and for each of the years ended December 31, 2008, 2007, 2006, 2005 and 2004 were audited by Ernst & Young AG, except for the 2004 financial statements of Jorf Lasfar Energy Company S.C.A. (Jorf Lasfar), a corporation in which, prior to its sale in May 2007, we had a 50 percent interest, which were audited by other independent auditors.

The Consolidated Financial Statements as of December 31, 2004 have not been audited after the reclassifications of certain businesses between continuing operations and discontinued operations.

#### **INCOME STATEMENT DATA**<sup>(1)</sup>:

	Year ended December 31,					
	2008	2007	2006	2005	2004	
	(\$ in millions, except per share data)					
Total revenues	34,912	29,183	23,281	20,964	18,987	
Total cost of sales	(23,972)	(20,215)	(16,537)	(15,510)	(14,219)	
Gross profit	10,940	8,968	6,744	5,454	4,768	
Selling, general and administrative expenses	(5,822)	(4,975)	(4,326)	(3,780)	(3,672)	
Other income (expense), net	(566)	30	139	37	(41)	
Earnings before interest and taxes	4,552	4,023	2,557	1,711	1,055	
Interest and dividend income	315	273	147	153	146	
Interest and other finance expense	(349)	(286)	(307)	(407)	(355)	
Income from continuing operations before						
taxes, minority interest and cumulative effect of						
accounting change	4,518	4,010	2,397	1,457	846	
Provision for taxes	(1,119)	(595)	(686)	(464)	(258)	
Minority interest	(260)	(244)	(179)	(126)	(100)	
Income from continuing operations before						
cumulative effective of accounting change	3,139	3,171	1,532	867	488	
Income (loss) from discontinued operations, net of						
$\tan^{(2)}$	(21)	586	(142)	(127)	(523)	
Income (loss) before cumulative effect of						
accounting change	3,118	3,757	1,390	740	(35)	
Cumulative effect of accounting change, net of						
$\tan^{(3)}$				(5)		
Net income (loss)	3,118	3,757	1,390	735	(35)	
Basic earnings (loss) per share:						
Income from continuing operations before						
cumulative effect of accounting change	1.37	1.40	0.72	0.43	0.24	
Income (loss) from discontinued operations, net						
of tax	(0.01)	0.26	(0.07)	(0.07)	(0.26)	
Cumulative effect of accounting change, net of						
tax						
Net income (loss)	1.36	1.66	0.65	0.36	(0.02)	
Diluted earnings (loss) per share:						
Income from continuing operations before						
cumulative effect of accounting change	1.37	1.38	0.69	0.42	0.24	
Income (loss) from discontinued operations, net						
of tax	(0.01)	0.25	(0.06)	(0.06)	(0.26)	
Cumulative effect of accounting change, net of						
tax						
Net income (loss)	1.36	1.63	0.63	0.36	(0.02)	
		4				

### **BALANCE SHEET DATA**<sup>(1)</sup>:

	At December 31,						
	2008	2007	2006	2005	2004		
	(\$ in millions)						
Cash and equivalents	6,399	4,650	4,198	3,136	3,558		
Marketable securities and short-term investments	1,407	3,460	528	368	524		
Total assets	33,181	31,001	25,142	22,276	24,677		
Long-term debt	2,009	2,138	3,160	3,932	4,717		
Total debt <sup>(4)</sup>	2,363	2,674	3,282	4,096	5,334		
Capital stock and additional paid-in capital	4,695	5,634	4,514	3,121	3,083		
Total stockholders' equity	11,158	10,957	6,038	3,483	2,824		

#### CASH FLOW DATA:

	Year ended December 31,						
	2008	2007	2006	2005	2004		
	(\$ in millions)						
Net cash provided by (used in) operating activities	3,958	3,054	1,939	1,012	902		
Net cash provided by (used in) investing activities	114	(2,291)	(694)	(316)	354		
Net cash provided by (used in) financing activities	(2,119)	(625)	(392)	(896)	(2,745)		

(1)

During 2006, Statement of Financial Accounting Standards No. 123 (revised 2004), *Share-Based Payment* (SFAS 123R) and Statement of Financial Accounting Standards No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans an amendment of FASB Statements No.* 87, 88, 106 and 123(R) (SFAS 158) were adopted. For the impact of these standards, see "Note 17 Employee benefits" and "Note 18 Share-based payment arrangements" to our Consolidated Financial Statements. As of January 1, 2007, we adopted Financial Accounting Standards Board (FASB) Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* ("FIN 48"). For the impact of FIN 48, see "Note 2 Significant accounting policies" and "Note 16 Taxes" to our Consolidated Financial Statements.

(2)

Income (loss) from discontinued operations, net of tax includes costs related to the Company's asbestos obligation of its U.S. subsidiary Combustion Engineering Inc., of approximately \$31 million, \$0 million, \$70 million, \$133 million and \$262 million in 2008, 2007, 2006, 2005 and 2004 respectively. Income from discontinued operations in 2007 primarily relates to the gain of \$530 million realized on the sale of the Company's downstream oil and gas business. For additional information, see "Item 5. Operating and Financial Review and Prospects" and "Note 3 Acquisitions, divestments and discontinued operations" and "Note 15 Commitments and contingencies" to the Consolidated Financial Statements.

(3)

We accounted for the adoption of Interpretation 47 of Financial Accounting Standards No. 143, *Accounting for Asset Retirement Obligations* (FIN 47) as a change in accounting principle in 2005. Based on our outstanding obligations, we recognized the cumulative effect of the accounting change of \$5 million loss in 2005 in the Consolidated Income Statement.

(4)

Total debt is equal to the sum of short-term debt (including current maturities of long-term debt) and long-term debt.

The weighted-average number of shares outstanding was as follows:

	Year ended December 31,					
	2008	2007	2006	2005	2004	
Weighted-average number of shares (in millions)	2,287	2,258	2,128	2,029	2,028	

#### DIVIDENDS AND DIVIDEND POLICY

Payment of dividends is subject to general business conditions, the ABB Group's current and expected financial condition and performance and other relevant factors including growth opportunities.

Dividends may be paid only if ABB Ltd has sufficient distributable profits from previous fiscal years or sufficient free reserves to allow the distribution of a dividend. In addition, at least 5 percent of ABB Ltd's annual net profits must be retained and booked as legal reserves, unless these reserves already amount to 20 percent of ABB Ltd's share capital. As a holding company, ABB Ltd's main sources of income are dividend and interest from its subsidiaries. At December 31, 2008, of the CHF 12,567 million of stockholders' equity recorded in the unconsolidated statutory financial statements of ABB Ltd prepared in accordance with Swiss law, CHF 4,692 million was attributable to the share capital, CHF 1,633 million was attributable to legal reserves, CHF 1,032 million was attributable to reserves for treasury shares, CHF 2,655 million was attributable to other reserves and CHF 2,555 million represents net income and retained earnings available for distribution.

ABB Ltd may only pay out a dividend if it has been proposed by a shareholder or the board of directors of ABB Ltd and approved at a general meeting of shareholders, and the auditors confirm that the dividend conforms to statutory law and the Articles of Incorporation of ABB Ltd. In practice, the shareholders' meeting usually approves dividends as proposed by the board of directors, if the board of directors' proposal is confirmed by the statutory auditors.

Dividends are usually due and payable no earlier than three trading days after the shareholders' resolution. Dividends not collected within five years after the due date accrue to ABB Ltd and are allocated to its other reserves. For information about the deduction of withholding taxes from dividend payments, see "Item 10. Additional Information Taxation."

We have established a dividend access facility for shareholders who are resident in Sweden under which these shareholders may register with VPC AB (Sweden) (VPC), as a holder of up to 600,004,716 shares, and receive dividends in the Swedish kronor equivalent to the dividend paid in Swiss francs without deduction of Swiss withholding tax. For further information, see "Item 10. Additional Information Taxation."

Because ABB Ltd pays cash dividends, if any, in Swiss francs (subject to the exception for certain shareholders in Sweden described above), exchange rate fluctuations will affect the U.S. dollar amounts received by holders of ADSs upon conversion of those cash dividends by Citibank, N.A., the depositary, in accordance with the Amended and Restated Deposit Agreement dated May 7, 2001.

ABB Ltd did not pay any dividends with respect to the year ended December 31, 2004. With respect to the years ended December 31, 2005 and December 31, 2006, ABB Ltd paid a dividend in May 2006 of CHF 0.12 (USD 0.10) per share and in May 2007 of CHF 0.24 (USD 0.20) per share. With respect to the year ended December 31, 2007, ABB Ltd paid a dividend in 2008 of CHF 0.48 (USD 0.46) per share by way of a nominal value reduction (reduction in the par value of each share). The USD amounts for each of the foregoing dividend payments made in CHF have been translated using the average rates of the month in which the dividends were paid.

With respect to the year ended December 31, 2008, ABB Ltd's board of directors has proposed to pay a dividend of CHF 0.48 per share by way of a nominal value reduction, subject to approval by its shareholders at the May 2009 Annual General Meeting and certain subsequent actions required under Swiss law.

#### **RISK FACTORS**

You should carefully consider all of the information set forth in this report and the following description of risks and uncertainties that we currently believe may exist. Our business, financial condition or results of operations could be adversely affected by any of these risks. Additional risks of which we are unaware or that we currently deem immaterial may also impair our business operations. This annual report also contains forward-looking statements that involve risks and uncertainties. Our results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those described below and elsewhere in this annual report. See "Forward-Looking Statements."

#### Our business is exposed to risks associated with the ongoing financial crisis, the weakening of the global economy and political conditions.

Adverse changes in economic or political conditions, both inside and outside the U.S., could have a material adverse effect on our business, financial condition, results of operations and liquidity. During 2008, the volatility in the global financial markets reached unprecedented levels. Volatile oil prices, falling equity market values, declining business, weakened consumer confidence, risks of increased inflation and deflation and increased unemployment rates have created fears of a severe recession. These disruptions are likely to have an ongoing adverse effect on the world economy. We are unable to predict how long the economic downturn will last. A continuing economic downturn and financial market disruptions may adversely impact the demand for our products and services. For example, the current lack of confidence and the shortage of credit in the financial markets may prevent our customers and suppliers from obtaining the financing required to pursue their business activities as planned, and thereby force them to modify, delay or cancel plans to purchase or supply our products or services or to execute transactions. Payment terms, especially the level of advance payments in large orders, may become less favorable. In addition, if our customers do not generate sufficient revenue, or fail to obtain access to the capital markets, they may not be able to pay, or may delay payment of, the amounts they owe us. Customers with liquidity issues may lead to additional bad debt expense for us, which may adversely affect our results of operations and cash flows. In addition, we are subject to the risk that the counterparties to our credit agreements and hedging transactions may go bankrupt if they suffer catastrophic demand on their liquidity that will prevent them from fulfilling their contractual obligations to us.

The U.S. Government recently enacted legislation and created several programs to help stabilize credit markets and financial institutions and restore liquidity, including the Emergency Economic Stabilization Act of 2008, the Federal Reserve's Commercial Paper Funding Facility (CPFF) and Money Market Investor Funding Facility, the Federal Deposit Insurance Corporation's (FDIC) Temporary Liquidity Guarantee Program. Additionally, the governments of many nations have announced similar measures for institutions in their respective countries. There is no assurance that these programs individually or collectively will have beneficial effects in the credit markets, will address credit or liquidity issues of companies that participate in the programs or will reduce volatility or uncertainty in the financial markets. The failure of these programs to have their intended effects could have a material adverse effect on the financial markets, which in turn could materially and adversely affect our business, financial condition and results of operations.

Apart from the effects of the credit crisis and the economic slowdown that it entailed, our business environment is influenced by numerous other economic or political uncertainties which will affect the global economy and the international capital market. In periods of slow economic growth or decline, our customers are more likely to decrease expenditures on the types of products and systems we supply and we are more likely to experience decreased revenues as a result. Our Power Products and Power Systems divisions are affected by the level of investments by utilities, and our Process Automation, Automation Products, and Robotics divisions are affected by conditions in a broad range of industries, including the automotive, pharmaceutical, pulp and paper, metals and minerals and manufacturing and



consumer industries. At various times during the last several years, we also have experienced, and may experience in the future, gross margin declines in certain businesses, reflecting the effect of items such as competitive pricing pressures, inventory write-downs, charges associated with the cancellation of planned expansion, increases in pension and postretirement benefit expenses, and increases in component and manufacturing costs resulting from higher labor and material costs borne by our manufacturers and suppliers that, as a result of competitive pricing pressures or other factors, we are unable to pass on to our customers. Economic downturns also may lead to restructuring actions and associated expenses. Uncertainty about future economic conditions makes it difficult for us to forecast operating results and to make decisions about future investments.

In addition, we are subject to the risks that our business operations in or with certain countries, including those identified as state sponsors of terrorism, may be adversely effected by trade or economic sanctions or other restrictions imposed on these countries and that actual or potential investors that object to these business operations may adversely effect the price of our shares by disposing of or deciding not to purchase our shares.

## Illegal behavior by any of our employees or agents could have a material adverse impact on our consolidated operating results, cash flows, and financial position as well as on our reputation and our ability to do business.

Certain of our employees or agents have taken, and may in the future take, actions that violate or are alleged to violate the U.S. Foreign Corrupt Practices Act of 1977 (FCPA), legislation promulgated pursuant to the 1997 Organization for Economic Co-operation and Development (OECD) Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, applicable antitrust laws and other applicable laws or regulations. For more information regarding investigations of past actions taken by certain of our employees, see "Item 8. Financial Information Legal Proceedings." Such actions have resulted, and in the future could result, in governmental investigations, enforcement actions and civil and criminal penalties, including monetary penalties or other sanctions. It is possible that any governmental investigation or enforcement action arising from these matters could conclude that a violation of applicable law has occurred and the consequences of any such investigation or enforcement action may have a material adverse impact on our consolidated operating results, cash flows and financial position. In addition, such actions, whether actual or alleged, could damage our reputation and ability to do business.

Further, detecting, investigating and resolving such actions could be expensive and could consume significant time and attention of our senior management. While we are committed to conducting business in a legal and ethical manner, our internal control systems have not been, and in the future may not be, completely effective to prevent and detect such improper activities by our employees and agents.

#### Our operations in emerging markets expose us to risks associated with conditions in those markets.

A significant amount of our operations are conducted in the emerging markets of Latin America, Asia, the Middle East and Africa. In 2008, approximately one-third of our consolidated revenues were generated from these emerging markets. Operations in emerging markets can present risks that are not encountered in countries with well-established economic and political systems, including:

Economic instability, which could make it difficult for us to anticipate future business conditions in these markets, cause delays in the placement of orders for projects that we have been awarded and subject us to volatile geographic markets;

Political or social instability, which makes our customers less willing to make cross-border investments in such regions and complicates our dealings with governments regarding permits or other regulatory matters, local businesses and workforces;

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Boycotts and embargoes that may be imposed by the international community on countries in which we operate, which could adversely affect the ability of our operations in those countries to obtain the materials necessary to fulfill contracts and our ability to pursue business or establish operations in those countries;

Foreign state takeovers of our facilities in these countries;

Significant fluctuations in interest rates and currency exchange rates;

The imposition of unexpected taxes or other payments on our revenues in these markets;

The ability to obtain financing and/or insurance coverage from export credit agencies; and

The introduction of exchange controls and other restrictions by foreign governments.

In addition, the legal and regulatory systems of many emerging market countries are less developed and less well-enforced than in industrialized countries. Therefore, our ability to protect our contractual and other legal rights in these countries could be limited. Consequently, our exposure to the conditions in or affecting emerging markets may adversely affect our business, financial condition, results of operations and liquidity.

## Undertaking long-term fixed price or turnkey projects exposes our businesses to risk of loss should our actual costs exceed our estimated or budgeted costs.

We derive a portion of our revenues from long-term, fixed price or turnkey projects that are awarded on a competitive basis and can take many months, or even years, to complete. Such contracts involve substantial risks, including the possibility that we may underbid and the fact that we typically assume substantially all of the risks associated with completing the project and the post-completion warranty obligations. These risks include the project's technical risk, meaning that we must tailor our products and systems to satisfy the technical requirements of a project even though, at the time we are awarded the project, we may not have previously produced such a product or system. The revenue, cost and gross profit realized on such contracts can vary, sometimes substantially, from our original projections because of changes in conditions, including but not limited to:

Unanticipated technical problems with the equipment being supplied or developed by us which may require us to incur incremental expenses to remedy the problem;

Changes in the cost of components, materials or labor;

Difficulties in obtaining required governmental permits or approvals;

Project modifications which create unanticipated costs;

Delays caused by local weather and geological conditions, including natural disasters;

Customer delays;

Shortages of construction equipment;

Supply bottlenecks, especially of key components; and

Suppliers', subcontractors' or consortium partners' failure to perform.

These risks are exacerbated if the duration of the project is extended because there is an increased risk that the circumstances upon which we originally bid and developed a price will change in a manner that increases our costs. In addition, we sometimes bear the risk of delays caused by unexpected conditions or events. Our project contracts often make us subject to penalties if we cannot complete portions of the project in accordance with agreed-upon time limits and guaranteed performance levels.

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#### Our international operations expose us to the risk of fluctuations in currency exchange rates.

Exchange rate fluctuations have had, and could continue to have, a material impact on our operating results, the comparability of our results between periods, the value of assets or liabilities as recorded on our Consolidated Balance Sheet and the price of our securities. The global financial crisis has led to increased volatility in exchange rates, which makes it harder to predict exchange rates and thus do accurate financial planning. Changes in exchange rates can unpredictably and adversely affect our consolidated operating results, and could result in exchange losses.

**Currency Translation Risk.** The results of operations and financial position of most of our non-U.S. companies are initially recorded in the currency, which we call "local currency," of the country in which the respective company resides. That financial information is then translated into U.S. dollars at the applicable exchange rates for inclusion in our Consolidated Financial Statements. The exchange rates between local currencies and the U.S. dollar can fluctuate substantially, which could have a significant translation effect on our reported consolidated results of operations and financial position.

Increases and decreases in the value of the U.S. dollar versus local currencies will affect the reported value of our local currency assets, liabilities, revenues and costs in our Consolidated Financial Statements, even if the value of these items has not changed in local currency terms. These translations could significantly and adversely affect our results of operations and financial position from period to period.

**Currency Transaction Risk.** Currency risk exposure also affects our operations when our sales are denominated in currencies that are different from those in which our manufacturing or sourcing costs are incurred. In this case, if after the parties agree on a price, the value of the currency in which the price is to be paid were to weaken relative to the currency in which we incur manufacturing or sourcing costs, there would be a negative impact on the profit margin for any such transaction. This transaction risk may exist regardless of whether or not there is also a translation risk as described above.

Currency exchange rate fluctuations in those currencies in which we incur our principal manufacturing expenses or sourcing costs may adversely affect our ability to compete with companies whose costs are incurred in other currencies. If our principal expense currencies appreciate in value against such other currencies, our competitiveness may be weakened.

## Our hedging activities may not protect us against the consequences of significant fluctuations in exchange rates, interest rates or commodity prices on our earnings and cash flows.

Our policy is to hedge material currency exposures by entering into offsetting transactions with third party financial institutions. Given the effective horizons of our risk management activities and the anticipatory nature of the exposures intended to be hedged, there can be no assurance that our currency hedging activities will fully offset the adverse financial impact resulting from unfavorable movements in foreign exchange rates. In addition, the timing of the accounting for recognition of gains and losses related to a hedging instrument may not coincide with the timing of gains and losses related to the underlying economic exposures.

As a resource-intensive operation, we are exposed to a variety of market and asset risks, including the effects of changes in commodity prices and interest rates. We monitor and manage these exposures as an integral part of our overall risk management program, which recognizes the unpredictability of markets and seeks to reduce the potentially adverse effects on our business. Nevertheless, changes in commodity prices and interest rates cannot always be predicted or hedged.

If we are unable to successfully manage the risk of changes in exchange rates, interest rates or commodity prices or if our hedging counterparties are unable to perform their obligations under our

hedging agreements with them, then substantial changes in these rates and prices could have an adverse effect on our financial condition and results of operations.

#### Increases in the costs of our raw materials may adversely affect our financial performance.

We purchase large amounts of commodity-based raw materials, including steel, copper, aluminum, and oil. Prevailing prices for such commodities are subject to fluctuations due to changes in supply and demand and a variety of additional factors beyond our control, such as global political and economic conditions. Historically, prices for some of these raw materials have been volatile and unpredictable, and such volatility is expected to continue. Therefore, commodity price changes may result in unexpected increases in raw material costs, and we may be unable to increase our prices to offset these increased costs without suffering reduced volumes, revenues or operating income. We do not fully hedge against changes in commodity prices and our hedging procedures may not work as planned.

We depend on third parties to supply raw materials and other components and may not be able to obtain sufficient quantities of these materials and components, which could limit our ability to manufacture products on a timely basis and could harm our profitability. For some raw materials and components, we rely on a single supplier or a small number of suppliers. If one of these suppliers were unable to provide us with a raw material or component we need, our ability to manufacture some of our products could be adversely affected until we are able to establish a new supply arrangement. We may be unable to find a sufficient alternative supply channel in a reasonable time period or on commercially reasonable terms, if at all. If our suppliers are unable to deliver sufficient quantities of materials on a timely basis, the manufacture and sale of our products may be disrupted, we might have obligations under our performance guarantees and our sales and profitability could be materially adversely affected.

#### The weakening or unavailability of our intellectual property rights could adversely affect our business.

Our intellectual property rights are fundamental to all of our businesses. We generate, maintain, utilize and enforce a substantial portfolio of trademarks, trade dress, patents and other intellectual property rights. We use our intellectual property rights to protect the goodwill of our products, promote our product recognition, protect our proprietary technology and development activities, enhance our competitiveness and otherwise support our business goals and objectives. However, there can be no assurance that the steps we take to obtain, maintain and protect our intellectual property rights will be adequate. Our intellectual property rights may fail to provide us with significant competitive advantages, particularly in foreign jurisdictions that do not have, or do not enforce, strong intellectual property rights. The weakening or unavailability of our trademarks, trade dress, patents and other intellectual property rights could adversely affect our business.

#### We operate in very competitive markets and could be adversely affected if we fail to keep pace with technological changes.

We operate in very competitive environments in several specific respects, including product performance, developing integrated systems and applications that address the business challenges faced by our customers, pricing, new product introduction time and customer service. The relative importance of these factors differs across the geographic markets and product areas that we serve. The markets for our products and services are characterized by evolving industry standards (particularly for our automation technology products and systems), rapidly changing technology and increased competition as a result of privatization (particularly for our power products and systems). For example, for a number of years, power transmission and distribution providers throughout the world have been undergoing substantial privatization. This has increased their need for timely product and service innovations that increase efficiency and allow them to compete in a deregulated environment. Additionally, the continual development of advanced technologies for new products and product

enhancements is an important way in which we maintain acceptable pricing levels. If we fail to keep pace with technological changes in the industrial sectors that we serve, we may experience price erosion and lower margins.

The principal competitors for our automation technology products, systems and services include Emerson Electric Co., Honeywell International, Inc., Invensys plc, Schneider Electric SA and Siemens AG. We primarily compete with Areva., Schneider Electric SA and Siemens AG in sales of our power technology products and systems to our utilities customers. The principal competitors with our Robotics business include Fanuc Robotics, Inc., Kuka Robot Group and Yaskawa Electric Corporation. All of our primary competitors are sophisticated companies with significant resources that may develop products and services that are superior to our products and services or may adapt more quickly than we do to new technologies, industry changes or evolving customer requirements. Our failure to anticipate or respond quickly to technological developments or customer requirements could adversely affect our business, results of operations, financial condition and liquidity.

#### Industry consolidation could result in more powerful competitors and fewer customers.

Competitors in the industries in which our business divisions operate are consolidating. In particular, the automation industry is undergoing consolidation that is reducing the number but increasing the size of companies that compete with us. As our competitors consolidate, they likely will increase their market share, gain economies of scale that enhance their ability to compete with us and/or acquire additional products and technologies that could displace our product offerings.

Our customer base also is undergoing consolidation. Consolidation within our customers' industries (such as the marine and cruise industry, the automotive, aluminum, steel, pulp and paper, pharmaceutical industries and the oil and gas industry) could affect our customers and their relationships with us. If one of our competitors' customers acquires any of our customers, we may lose its business. Additionally, as our customers become larger and more concentrated, they could exert pricing pressure on all suppliers, including ABB. For example, in an industry such as power transmission, which historically has consisted of large and concentrated customers such as utilities, price competition can be a factor in determining which products and services will be selected by a customer.

## We are subject to environmental laws and regulations in the countries in which we operate. We incur costs to comply with such regulations, and our ongoing operations may expose us to environmental liabilities.

Our operations are subject to U.S., European and other laws and regulations governing the discharge of materials into the environment or otherwise relating to environmental protection. Our manufacturing facilities use and produce paint residues, solvents, metals, oils and related residues. We use petroleum-based insulation in transformers, polyvinylchloride (PVC) resin to manufacture PVC cable and chloroparafine as a flame retardant. We use inorganic lead as a counterweight in robots that we produce. We have manufactured and sold, and we are using in some ABB factories, certain types of transformers and capacitors containing polychlorinated biphenyls (PCBs). These are considered to be hazardous substances in many jurisdictions in which we operate. We may be subject to substantial liabilities for environmental contamination arising from the use of such substances. All of our manufacturing operations are subject to ongoing compliance costs in respect of environmental matters and the associated capital expenditure requirements.

In addition, we may be subject to significant fines and penalties if we do not comply with environmental laws and regulations including those referred to above. Some environmental laws provide for joint and several strict liability for remediation of releases of hazardous substances, which could result in us incurring a liability for environmental damage without regard to our negligence or fault. Such laws and regulations could expose us to liability arising out of the conduct of operations or conditions caused by others, or for our acts which were in compliance with all applicable laws at the



time the acts were performed. Additionally, we may be subject to claims alleging personal injury or property damage as a result of alleged exposure to hazardous substances. Changes in the environmental laws and regulations, or claims for damages to persons, property, natural resources or the environment, could result in substantial costs and liabilities to us.

#### We may be the subject of product liability claims.

We may be required to pay for losses or injuries purportedly caused by the design, manufacture or operation of our products and systems. Additionally, we may be subject to product liability claims for the improper installation of products and systems designed and manufactured by others.

Product liability claims brought against us may be based in tort or in contract, and typically involve claims seeking compensation for personal injury or property damage. If the claimant runs a commercial business, claims are often made also for financial losses arising from interruption of operations. Based on the nature and application of many of the products we manufacture, a defect or alleged defect in one of these products could have serious consequences. For example:

If the products produced by our Power Products and Power Systems divisions are defective, there is a risk of fires, explosions and power surges and significant damage to electricity generating, transmission and distribution facilities as well as electrical shock causing injury or death.

If the products produced by our Automation Products and Process Automation divisions are defective, our customers could suffer significant damage to facilities that rely on these products and systems to properly monitor and control their manufacturing processes. Additionally, people could be exposed to electrical shock and/or other harm causing injury or death.

If the products produced by our Robotics division malfunction, then they could injure persons or damage other equipment or facilities.

If any of the products produced by us contain hazardous substances then there is a risk that such products or substances could injure or kill people.

If we were to incur a very large product liability claim, our insurance protection might not be adequate or sufficient to cover such a claim in terms of paying any awards or settlements, and/or paying for our defense costs. Further, some claims may be outside the scope of our insurance coverage. If a litigant were successful against us, a lack or insufficiency of insurance coverage could result in an adverse effect on our business, financial condition, results of operations and liquidity. Additionally, a well-publicized actual or perceived problem could adversely affect our market reputation which could result in a decline in demand for our products.

#### We may encounter difficulty in managing our business due to the global nature of our operations.

We operate in approximately 100 countries around the world and, as of December 31, 2008, employed approximately 120,000 people. As of December 31, 2008, approximately 54 percent of our employees were located in Europe, approximately 17 percent in the Americas, approximately 24 percent in Asia and approximately 5 percent in the Middle East and Africa. In order to manage our day-to-day operations, we must overcome cultural and language barriers and assimilate different business practices. In addition, we are required to create compensation programs, employment policies and other administrative programs that comply with the laws of multiple countries. We also must communicate and monitor group-wide standards and directives across our global network. Our failure to successfully manage our geographically diverse operations could impair our ability to react quickly to changing business and market conditions and to enforce compliance with group-wide standards and procedures.

## We have retained liability for environmental remediation costs relating to businesses that we sold in 2000, and we could be required to make payments in respect of these retained liabilities in excess of established provisions.

We have retained liability for environmental remediation costs at two sites in the United States that were operated by our nuclear technology business, which we sold in April 2000 to British Nuclear Fuels plc (BNFL). We have retained all environmental liabilities associated with our Combustion Engineering subsidiary's Windsor, Connecticut facility and a portion of the liabilities associated with our former ABB C-E Nuclear Power, Inc. subsidiary's Hematite, Missouri facility. The primary environmental liabilities associated with these sites relate to the costs of remediating radiological and chemical contamination upon decommissioning the facilities. Based on information that BNFL has made available, we believe remediation may take until 2015 at the Hematite site. We estimate that the remediation will take until 2012 at the Windsor site. At the Windsor site, we believe that a significant portion of such remediation costs will be the responsibility of the U.S. government pursuant to U.S. federal law, although the exact amount of such responsibility cannot reasonably be estimated. In connection with the sale of the nuclear business in April 2000, we established a provision of \$300 million in respect of estimated remediation costs related to these facilities. Expenditures charged to the remediation provision were \$4 million and \$3 million during 2008 and 2007, respectively. The provision balance was \$241 million and \$245 million at December 31, 2008 and 2007, respectively. Due to the nature of remediation activities, it is possible that we could be required to make expenditures in excess of the provision. Potential excess expenditures cannot reasonably be estimated at this time. See "Item 5. Operating and Financial Review and Prospects Environmental Liabilities."

## If we fail to make the payments required under the Modified Plan of Reorganization for Combustion Engineering (the CE Plan) we could trigger an injunction default which would lead to the termination of the channeling injunction under the CE Plan.

Our Combustion Engineering, Inc. subsidiary (CE) had been a co-defendant in a large number of lawsuits claiming damage for personal injury resulting from exposure to asbestos. Since early 2003, we and our subsidiaries have been seeking to resolve our asbestos-related personal injury liabilities related to CE. A plan of reorganization for CE was filed under Chapter 11 of the U.S. Bankruptcy Code and during 2006, the CE Plan became effective.

On the effective date of the CE Plan, the U.S. Bankruptcy Court issued an injunction, referred to as a channeling injunction, pursuant to which all asbestos-related personal injury claims against ABB Ltd and certain entities in the ABB group (including CE) arising out of CE's business operations will be settled or otherwise satisfied from the proceeds of the trust established for such purposes.

Under the CE Plan, ABB Ltd and certain of its subsidiaries have contingent payment obligations of \$50 million for which we have established a provision as of December 31, 2008. Failure to satisfy those payment obligations could lead to an injunction default which would lead to the termination of the channeling injunction under the plan. In such case, all claims which were previously subject to the injunction would need to be resolved through the tort system. This could also cause our credit ratings to be downgraded, restrict our access to the capital markets or otherwise have a material adverse effect on our financial condition, results of operations, cash flows and liquidity.

## If we are unable to obtain performance and other guarantees from financial institutions, we may be prevented from bidding on, or obtaining, some contracts, or our costs with respect to such contracts could be higher.

In the normal course of our business and in accordance with industry practice, we provide a number of guarantees including bid-bonds, advance payment guarantees and performance guarantees, which guarantee our own performance. These guarantees may include guarantees that a project will be completed or that a project or particular equipment will achieve defined performance criteria. If we fail

to attain the defined criteria, we must make payments in cash or in kind. Performance guarantees frequently are requested in relation to large projects in our core power and automation businesses.

Some customers require that performance guarantees be issued by a financial institution. In considering whether to issue a guarantee on our behalf, financial institutions consider our credit ratings. In addition, the global financial crisis has made it more difficult and expensive to obtain these guarantees. If, in the future, we cannot obtain such a guarantee from a financial institution on reasonable terms, we could be prevented from bidding on, or obtaining, some contracts, or our costs with respect to such contracts could be higher, which would reduce the profitability of the contracts. If we cannot obtain guarantees on commercially reasonable terms from financial institutions in the future, there could be a material impact on our business, financial condition, results of operations or liquidity.

## If we cannot successfully implement the planned integration of our different ERP systems, then we may be unable to produce reliable accounts, and our business and reputation may be adversely affected.

In a number of specific countries, we are integrating our various ERP systems into country-wide ERPs in an effort to standardize and consolidate our accounting and reporting processes. A significant portion of these remaining system integrations are planned to occur during 2009 and 2010. If we cannot successfully implement the planned integration activities, we may be unable to produce reliable accounts and our business and reputation may be adversely affected.

# If we are unable to successfully adapt our internal controls over financial reporting to changes in circumstance, our ability to report our financial results on a timely and accurate basis may be adversely affected. As a result, investors could lose confidence in our financial reporting, which may harm our business and the trading price of our stock.

We are required to include in this Annual Report on Form 20-F a report by our management regarding the effectiveness of our internal control over financial reporting. The report includes, among other things, an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management.

If we are unable to conclude that our internal control over financial reporting is effective in any future period (or if our auditors are unable to express an opinion on the effectiveness of our internal controls), we could lose investor confidence in the accuracy and completeness of our financial reports, which may have an adverse effect on our stock price.

#### If we are unable to attract and retain qualified management and personnel then our business may be adversely affected.

Our success depends in part on the abilities of our personnel, particularly our senior management team and key employees. If we are unable to attract and retain members of our senior management team and key employees this could have an adverse effect on our business.

#### Item 4. Information on the Company

#### INTRODUCTION

We are a global leader in power and automation technologies that are designed to improve performance and lower the environmental impact of our utility and industrial customers. We provide a broad range of products, systems, solutions and services that are designed to improve power grid reliability, increase industrial productivity and enhance energy efficiency. Our focus on power transmission, distribution and power-plant automation serves electric, gas and water utilities, as well as

industrial and commercial customers. We also deliver automation systems that measure, control, protect and optimize plant applications across a full range of industries. We apply our expertise to develop creative ways of integrating our products and systems with our customers' business processes to enhance their productivity and efficiency.

#### History of the ABB Group

The ABB Group was formed in 1988 through a merger between Asea AB and BBC Brown Boveri AG. Initially founded in 1883, Asea AB was a major participant in the introduction of electricity into Swedish homes and businesses and in the development of Sweden's railway network. In the 1940s and 1950s, Asea AB expanded into the power, mining and steel industries. Brown Boveri and Cie. (later renamed BBC Brown Boveri AG) was formed in Switzerland in 1891 and initially specialized in power generation and turbines. In the early to mid 1900s, it expanded its operations throughout Europe and broadened its business operations to include a wide range of electrical engineering activities.

In January 1988, Asea AB and BBC Brown Boveri AG each contributed almost all of their businesses to the newly formed ABB Asea Brown Boveri Ltd, of which they each owned 50 percent. In 1996, Asea AB was renamed ABB AB and BBC Brown Boveri AG was renamed ABB AG. In February 1999, the ABB Group announced a group reconfiguration designed to establish a single parent holding company and a single class of shares. ABB Ltd was incorporated on March 5, 1999, under the laws of Switzerland. In June 1999, ABB Ltd became the holding company for the entire ABB Group. This was accomplished by having ABB Ltd issue shares to the shareholders of ABB AG and ABB AB, the two publicly traded companies that formerly owned the ABB Group. The ABB Ltd shares were exchanged for the shares of those two companies, which, as a result of the share exchange and certain related transactions, became wholly owned subsidiaries of ABB Ltd and are no longer publicly traded. ABB Ltd shares are currently listed on the SIX Swiss Exchange (traded on SWX Europe), the NASDAQ OMX Stockholm Exchange and the New York Stock Exchange (in the form of American Depositary Shares).

#### **Organizational Structure**

Our business is international in scope and we generate revenues in numerous currencies. We operate in approximately 100 countries and have structured our global organization into four regions: Europe, the Americas, Asia and the Middle East and Africa (MEA). We are headquartered in Zurich, Switzerland.

We manage our business based on a divisional structure. Our business comprises five divisions: Power Products; Power Systems; Automation Products; Process Automation and Robotics.

Following the sale of the majority of our non-core activities, Non-core and Other is no longer presented separately but included in Corporate and Other.

	Rever D	Revenues Year ended December 31,			Percentage of Core division Revenues Year ended December 31,		
	2008	2007	2006	2008	2007	2006	
	(\$	in millions)			(%)		
Power Products	11,890	9,777	7,275	31	31	29	
Power Systems	6,912	5,832	4,544	18	18	18	
Automation Products	10,250	8,644	6,837	27	27	27	
Process Automation	7,815	6,420	5,448	20	20	21	
Robotics	1,642	1,407	1,288	4	4	5	
Core divisions	38,509	32,080	25,392	100	100	100	
Corporate, Non-core and Other Activities and							
Eliminations	(3,597)	(2,897)	(2,111)				
Total	34,912	29,183	23,281				

For a breakdown of our consolidated revenues derived from each geographic region in which we operate, see "Item 5. Operating and Financial Review and Prospects Analysis of Results of Operations Revenues."

Our principal corporate offices are located at Affolternstrasse 44, CH-8050 Zurich, Switzerland, telephone number +41-43-317-7111. Our agent for U.S. federal securities law purposes is ABB Holdings Inc., located at 501 Merritt 7, Norwalk, Connecticut 06851.

#### **BUSINESS DIVISIONS**

#### **Industry Background**

Our five divisions operate across two key markets, the power market and the automation market. Our Power Products and Power Systems divisions operate in the power market. Our Automation Products, Process Automation and Robotics divisions operate in the automation market.

#### Power Market

The power market uses products, systems and services designed primarily to deliver electricity. Electricity is generated in power stations and is then fed into an electricity grid, from where it is transmitted and distributed to consumers. The portions of an electricity grid that operate at the highest voltages are "transmission" systems, while those that operate at lower voltages are "distribution" systems. Transmission systems link power generation sources to distribution systems and then branch out over shorter distances to carry electricity from the transmission system to end users. These electricity networks incorporate sophisticated devices to control and monitor operations and to prevent damage from failures or stresses.

Electricity is transformed at different stages in the delivery process between the source and the ultimate end user. For example, electrical power is often generated in large power plants at 10 to 20 kilovolts. Because this voltage is too low to be transmitted efficiently, transformers are used to increase the voltage (up to 1,000 kilovolts) for long-distance commercial transmission. This reduces losses and increases the amount of power that can be carried per line.

Transformers are also used to decrease the voltage at the local end for distribution to end users, such as residential, commercial or industrial consumers. An electric utility distribution system comprises distribution substations and networks, both overhead and underground. Some large industrial and commercial facilities receive electricity at higher voltage levels from the transmission or distribution

network, while most industrial, commercial and residential users receive electricity from distribution network feeders at lower voltages.

Drivers in the power market vary by region. In North America the focus is on replacing aged infrastructure and improving grid reliability. In Europe the focus is on replacement of aged infrastructure and the integration of renewable energy sources, such as wind farms in the North Sea. Another driver in Europe is the increased demand for interconnections between countries to facilitate the market for energy trading. Both in North America and in Europe, improving energy efficiency also stimulates power investment. In the Middle East, a high level of investments is driven by large infrastructure projects and the related need for electricity. In emerging markets, including most parts of Asia, there is a need for electricity grid increases to cope with rising energy needs.

There is a global trend toward deregulation and privatization of the power market, which is creating a more competitive environment for our customers. This trend is evident in the United States, parts of Latin America, and Europe, and is developing in other regions. The creation of a free market for electricity requires our customers to become more cost-efficient and reliable to compete as a lowest-cost provider among power suppliers. Grid operators must be able to deliver power to customers that are hundreds or thousands of miles away within a few minutes. As more disturbance-sensitive loads (such as computers and telecommunications systems) have been added to networks, demand for reliable, high-quality electricity and "smarter" grid has increased. Power suppliers can achieve this efficiency and reliability in a number of ways, including the following:

Replacing and modernizing assets and investing in information technology-based control and monitoring equipment and communications networks to control and supervise power networks based on instantaneous access to information.

Upgrading current technologies and introducing new technologies to improve network reliability, increase network power rating and enhance the control of power flow through existing transmission and distribution assets.

Developing new power transmission systems to link power generation sources with distant load centers, as is the case for example in China, or to link neighboring power grids in order to optimize existing power generation capacity across borders, as for example in Europe between Central Europe and Scandinavia.

Developing energy trading systems.

Another major trend is the discussion on climate change, which has created a strong interest in energy-efficient and environmentally-friendly solutions. Both drivers have a direct impact on our business as ABB delivers technologically-driven solutions to increase the energy efficiency on existing electrical infrastructure and to integrate renewable energy such as wind and solar power into the electricity grid while meeting the grid code requirements.

#### Automation Market

The automation market uses products, systems and services designed primarily to improve product quality, energy efficiency, productivity and consistency in industrial and manufacturing applications. The automation market can be divided into three sectors:

Process automation refers to control systems, plant electrification and other process applications applied in processes where the main objective is continuous production, such as in the oil and gas, power, chemicals, minerals, metals and pulp and paper industries. Product lines for this market include plant electrification, instrumentation, analytical measurement and control products and systems, as well as motors and drives.

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Factory automation refers to discrete operations that manufacture individual items for automotive and general industry areas such as foundry, metal fabrication, plastics, consumer electronics and food & beverage. Product lines for this market include robots and application equipment, product and system services and modular manufacturing solutions, as well as motors, drives, and low voltage products for control and power applications.

Building automation comprises product lines and applications particularly targeted at the building industry. Product lines for this market include a wide range of low-voltage products for control of climate, lighting and security for optimal management of the energy cost of buildings.

#### **Power Products Division**

#### Overview

Our Power Products division serves electric, gas and water utilities, as well as industrial and commercial customers, with a broad range of products and services for power transmission and distribution. Direct sales account for a majority of the division's total product sales, and sales through external channel partners, such as wholesalers, distributors and original equipment manufacturers (OEMs), account for the remainder. Key technologies include high- and medium-voltage switchgear and apparatus, circuit breakers for various current and voltage levels, power and distribution transformers, as well as sensors and products to automate and control electrical and other utility networks. The division had approximately 33,600 employees and 110 manufacturing plants as of December 31, 2008 and generated \$11.9 billion of revenues in 2008.

#### The Power Products Division

Our Power Products division manufactures three categories of products: High-voltage Products, Medium-voltage Products and Transformers. The division sells primarily to utilities, distributors, wholesalers, installers and OEMs in the utilities and power generation industries. Some of the division's products are integrated into the offering of the Power Systems and Process Automation divisions or are sold through external channel partners such as engineering, procurement and construction (EPC) firms.

The division manufactures distribution transformers (up to 72.5 kilovolts) for use in industrial facilities, commercial buildings and utility distribution networks to step down electrical voltage to the levels needed by end users. Industrial transformers are mainly delivered to the steel and aluminum industry, which need their own high-voltage transformers and substations on-site to service their heavy electricity requirements. We manufacture and sell a full range of distribution transformers including oil-type, dry-type and special application distribution transformers. Although oil-type transformers are more commonly used, demand for dry-type transformers is growing because they minimize fire hazards and have applications in high-density office buildings, windmills, offshore drilling platforms, marine vessels and high-volume industrial plants.

We also design and manufacture power transformers (72.5 to 1,000 kilovolts) for utility, transportation and industrial customers, as well as transformer components such as bushings and tap changers. Generator transformers are used in power generation when it is necessary to increase power voltage from a power plant for long-distance transmission. We produce traction transformers used in electric locomotives and we provide a wide range of transformer service and retrofit solutions for utilities and industry customers. The division also produces insulation material.

In the medium-voltage area, the division develops products and systems that reduce outage times and improve power quality and control, which are key to improving operational efficiency of both utility and industrial customers. It supplies switching equipment both directly to end users and through distributors and OEMs. Its products provide connections between higher voltage substations and lower voltage uses. It produces a comprehensive line of medium-voltage equipment (1 to 50 kilovolts),

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including products such as indoor and outdoor switch disconnectors, breakers, reclosers, fuses, contactors, instrument transformers and sensors as well as air- and gas-insulated switchgear, motor control centers, and ring main units for primary and secondary distribution. It also produces indoor and outdoor modular systems, compact substations and power distribution centers. In addition, a significant portion of its products are sold through external channel partners such as OEMs.

The Power Products division also provides high-voltage transmission equipment to power utilities that enables them to operate more efficiently and with lower environmental impact, both of which are significant business concerns in the market in which our customers operate. We manufacture the principal components of power transmission systems (50 to 800 kilovolts), including air- and gas-insulated switchgear, capacitors, high-voltage circuit breakers, grounding switches and instrument transformers. The division also delivers the entire ABB portfolio of low-, medium- and high-voltage capacitors and surge arresters. Its products and components also include circuit breaker drives and cable accessories.

#### Customers

The Power Products division's principal customers are electric, gas and water utilities, owners and operators of power transmission systems, utilities that own or operate networks and owners and operators of power generating plants. Other customers include gas transmission companies, local distribution companies and multi-utilities, which are involved in the transmission or distribution of more than one commodity. The division also serves industrial and commercial customers, such as operators of large commercial buildings and heavy industrial plants.

#### Sales and Marketing

The Power Products division sells its products individually and as parts of larger systems through our Power Systems division. Direct sales account for a majority of the division's total product sales, and sales through external channel partners, such as wholesalers, distributors and OEMs, account for the remainder. Because the Power Products and Power Systems divisions share many of the same customers and technologies, and are influenced by the same market drivers, the two divisions share a common sales force in most regions and countries.

#### Competition

On a global basis, the Power Products division's principal competitors are Siemens AG and Areva, and, in the medium-voltage market, Schneider Electric SA. We also compete regionally with companies such as Cooper Industries, Eaton Electric Corporation, Crompton Greaves and Bharat Heavy Electricals Ltd.

#### Capital Expenditures

The Power Products division's capital expenditures for property, plant and equipmentwere \$305 million in 2008, compared to \$209 million and \$145 million in 2007 and 2006, respectively. Principal investments in 2008 included investments to replace existing equipment, particularly in Sweden, China, Germany and the United States. Geographically, in 2008, Europe accounted for 48 percent of our capital expenditures, followed by 34 percent in Asia, 16 percent in the Americas and 2 percent in Middle East and Africa.



#### **Power Systems Division**

#### Overview

Our Power Systems division serves electric, gas and water utilities, as well as industrial and commercial customers, with a broad range of systems and services for power generation, transmission and distribution. Key technologies include substations, high-voltage power converters, advanced cables for underground and sub-sea power transmission, and systems to automate and control power plants, electrical and other utility networks. The division had approximately 15,800 employees in more than 70 countries as of December 31, 2008 and generated \$6.9 billion of revenues in 2008.

#### The Power Systems Division

Our Power Systems division delivers systems in four areas: grid systems, network management, power generation, and substations. The division sells primarily to utilities, EPC companies and power generation industries. Some of the Power Product division's products are integrated into the offering of the Power Systems division.

For grid systems, we provide power systems that are essential to grid reliability, including flexible alternating current transmission systems (FACTS) and we also sell high-voltage direct current (HVDC) systems. Critical components in these systems are power semiconductors and cables which are also manufactured by the Power Systems division.

We are a leading manufacturer of HVDC technology, which is an advanced technology for transporting electricity over long distances, feeding power from mainland sites to off-shore platforms or integrating large off-shore windpower into the power grid. It reduces power losses, increases system stability and provides a more controllable flow than high-voltage alternating current. An HVDC transmission system typically includes converters, which change alternating current to direct current and then back to alternating current when it reaches the terminal point, and transmission line cables, either above or below ground. Advances in converter and cable technology have enabled us to introduce a system called HVDC Light . Converter stations for HVDC Light are approximately one-fifth the size of conventional HVDC technology for the same rated power. HVDC Light extends the range of applications for underground or submarine high-voltage direct current. Typical applications include interconnection of separate networks that operate on different frequencies or provide variational power quality, such as wind parks. The system can also be used as a substitute for local power generation in remote areas, islands or oil platforms.

We also provide FACTS devices to enhance power grid stability, improve power quality and thus increase transmission capability. FACTS devices include series compensators, static volt-amperes reactive compensators (SVCs) and SVC Light (based on the same unique technology as HVDC Light).

HVDC, HVDC Light , FACTS, and SVC Light systems rely on advanced power semiconductor components. Our power semiconductor business develops and manufactures tailor-made components to maximize the performance of these systems. The Power Systems division supplies power semiconductor devices to other ABB businesses and to external customers in the power transmission and distribution, drives, and transportation markets.

Our cable business is specialized in sub-sea cable solutions and land-cables for bulk energy transfer over long distances.

Our network systems offering includes high-end supervisory control and data acquisition (SCADA) systems for power and gas customers. SCADA systems are used to monitor and control energy transmission, distribution and power generation. They are also used in market systems for power networks providing real time information about the status of the grid. SCADA systems allow utilities to

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optimize their business by improving the performance of their installed network equipment to meet changing customer requirements and new market conditions.

The division also provides wireless and fixed communication systems for power, water and gas utilities, including both operational and corporate communication networks. It offers fiber optics, microwave radio and power line applications for data networking and broadband network management, as well as teleprotection and substation communication networks and voice switching management systems.

In the area of power generation, the division offers complete system integration of instrumentation, control and electrical equipment for the power generation market. The services offered include combustion management, plant performance optimization, condition monitoring and asset management. We also offer turnkey water pumping stations including control systems.

Substations interconnect electricity grids operating on different voltage levels, sectionalize portions of the grid and protect the electrical system against damage from outside sources such as lightning and overload. By sectionalizing the grid, power can be rerouted from portions of the transmission system that are experiencing problems to sections that are functioning properly, thereby enhancing the overall reliability of the power supply.

We deliver complete air- and gas-insulated substations for power transmission. Substations are also necessary in a power distribution network to sectionalize and reduce the voltage of the main power lines and cables to the lower voltages required for efficient distribution and consumption. For power distribution, we sell traditional custom-engineered substations.

This division offers services and support for management of existing power transmission and distribution assets, including both ABB products and those manufactured by third parties.

In addition, the Power Systems division offers a range of services aimed at reducing the in-house operational and maintenance requirements of utility customers. Our services range from contracts for spare parts management, support agreements and retrofits, to service, consulting and training. The Power Systems division also undertakes analyses of the design of new transmission and distribution systems as well as optimization that take into account technical, economic and environmental considerations.

#### Customers

The Power System division's principal customers are electric, gas and water utilities, owners and operators of power transmission systems, utilities that own or operate networks and owners and operators of power generating plants. Other customers include transmission companies, local distribution companies and multi-utilities, which are involved in the transmission or distribution of more than one commodity. The division also serves industrial and commercial customers, such as operators of large commercial buildings and heavy industrial plants.

#### Sales and Marketing

The Power Systems division sells its systems primarily through a direct sales force of specialized sales engineering teams. Some sales are also handled through third-party channels, such as OEMs and system integrators or EPC firms. Because the Power Systems and Power Products divisions share many of the same customers and technologies, and are influenced by the same market drivers, the two divisions share a common sales force in most regions and countries.

#### Competition

On a global basis, the Power Systems division's principal competitors are Siemens AG and Areva. In the power generation area, the division's principal competitors are Areva, Emerson Electric Co., General Electric Company, Invensys plc and Siemens AG.

#### Capital Expenditures

The Power System division's capital expenditures for property, plant and equipment were \$89 million in 2008, compared to \$50 million and \$26 million in 2007 and 2006, respectively. Principal investments in 2007 included investments to replace existing equipment, particularly in Sweden, Germany, and Switzerland. Geographically, in 2008, Europe accounted for 83 percent of our capital expenditures, followed by 7 percent in Asia, 5 percent in the Americas and 5 percent in Middle East and Africa.

#### **Automation Products Division**

#### Overview

The Automation Products division provides products, with related services, that are used as components in machinery, switchboards, distribution panels, and building and automation systems. The Automation Products offering covers a wide range of products and services including low-voltage switchgear, breakers, switches, control products, DIN-rail components, enclosures, wiring accessories, instrumentation, drives, motors, generators, and power electronics systems. These products help customers to improve productivity, save energy and increase safety. Key applications include power distribution, protection and control, energy conversion, data acquisition and processing, and actuation. The majority of these applications are for industrial applications, with others provided for building construction, rail transportation, and utilities.

The Automation Products division is a global business that employs approximately 36,000 people worldwide and generated \$10.3 billion revenues in 2008 through sales activities in more than 100 countries. The division has more than 100 manufacturing sites in 50 countries. Each day, the division delivers around one million products.

A majority of the division's revenues comes from sales through distributors, wholesalers, machine builders and OEMs, system integrators, and panel builders, although a portion of the division's revenues come from direct sales to end-users.

#### The Automation Products Division

The Automation Products division manufactures low-voltage circuit breakers, switches and control products to protect people, installations and electronic equipment from electrical overloads. It also manufactures instrumentation products to measure and control the flow of fluids.

This division makes line protection products, wiring accessories and enclosures and cable systems that are primarily used for control and protection in building installations. It also produces European Installation Bus/Powernet systems, which integrate and automate a building's electrical installations, ventilation, security and data communication networks.

The process instrumentation products manufactured by this division interact with the Open Control System products from the Process Automation division and include products for the measurement of process variables such as pressure, temperature, volume and flow. The increasing sophistication of many process automation systems often requires thousands of measurement points for such variables. These instrumentation products are sold separately or in combination with control systems. The various analytical measurement devices produced by this division form an important part



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of instrumentation and control systems. These devices measure chemical characteristics while process instrumentation products measure physical characteristics.

This division also provides low-voltage and medium-voltage AC drive products and systems for industrial, commercial and residential applications. Drives provide motion and torque while adding control and efficiency to equipment such as fans, pumps, compressors, conveyors, kilns, centrifuges, mixers, hoists, cranes, extruders, printing machinery and textile machines. Our drives are used in the building automation, marine, power, transportation and manufacturing industries, among others.

The Automation Products division also produces a range of power electronics products. These include static excitation and synchronizing systems that provide stability for power stations, as well as high power rectifiers that convert AC power to DC power for very high-amperage applications such as furnaces in zinc plants and aluminum and magnesium smelters. The division also manufactures frequency converters that use semiconductor technology to convert electrical power into the type and frequency required by individual customers.

In addition, this division supplies a comprehensive range of electrical motors and generators, including high-efficiency motors that conform to leading environmental and efficiency standards. Efficiency is an important criterion for selection by customers, because electric motors account for nearly two-thirds of the electricity consumed by industrial plants. This division manufactures synchronous motors for the most demanding applications and a full range of low and high-voltage induction motors.

#### Sales and Marketing

Sales are made both through direct sales forces as well as through third-party channel partners, such as distributors, wholesalers, installers, machine builders and OEMs, system integrators, and panel builders. The proportion of direct sales compared to channel partner sales varies among the different industries, product technologies and geographic markets. For the division as a whole, the majority of products are sold through channel partners, with the remainder sold through the division's own direct sales channels.

#### Competition

The Automation Products division's principal competitors vary by product line but include Alstom, Baldor Electric Company, Eaton Electric Corporation, Emerson Electric Co., Endress+Hauser, Legrand, Mitsubishi, Rockwell Automation, Schneider Electric SA, Siemens AG, Yokogawa Electric Corporation and WEG Industries.

#### Capital Expenditures

The Automation Products division's capital expenditures for property, plant and equipment were \$305 million in 2008, compared to \$193 million and \$148 million in 2007 and in 2006, respectively. Principal investments in 2008 were primarily related to ordinary course replacements of machinery and equipment mainly in Germany, Finland, Italy and China plus expansion investments in China, India and Estonia. Geographically, in 2008, Europe accounted for 71 percent of the capital expenditure, followed by 23 percent in Asia, 4 percent in Middle East and Africa and 2 percent in the Americas.

#### **Process Automation Division**

#### Overview

The Process Automation division provides products, systems, and services for the automation and optimization of industrial processes. Our main offerings are process automation, plant electrification and quality control systems, analytical measurement devices, turbochargers and marine propulsion and

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control systems. Our key end markets are the oil and gas, pulp and paper, metals and minerals, chemicals and pharmaceuticals, turbocharging and marine industries. The division had approximately 26,800 employees as of December 31, 2008, and generated revenues of \$7.8 billion in 2008.

The Process Automation division offers its products both as separately sold devices and as part of a total automation system. Our technologies are marketed both through direct sales forces and third-party channels.

#### The Process Automation Division

The Process Automation division offers integrated process control systems, plant electrification systems, information management systems and industry-specific application knowledge for a variety of industries, primarily pulp and paper, minerals and mining, metals, chemicals and pharmaceuticals, oil and gas, turbocharging, power and the marine industry. Some of the Automation Product and Power Product divisions' products are integrated into the offering of the Process Automation division.

Our control systems are used in such applications as batch management, asset optimization, energy management and safety control. They are the hubs that link instrumentation, devices and systems for control and supervision of an industrial process and enable customers to integrate their production systems with their enterprise, resource and planning systems, thereby providing a link to their ordering, billing and shipping processes. This link allows customers to manage their entire manufacturing and business process based on real-time access to plant information. Additionally, it allows customers to increase production efficiency, optimize their assets and reduce environmental waste.

This division emphasizes Open Control Systems, including batch control systems, supervisory control and data acquisition systems, and, to a lesser extent, programmable logic controls and remote terminal units.

Batch control systems control the production of a variety of products in shorter runs, such as certain pharmaceuticals and food and beverage products. Supervisory control and data acquisition systems are used to collect and manage data over wide areas or long distances such as those involved in operating electric power networks.

In December 2003, this division commercially released the System 800xA process automation platform. This system extends the capability of traditional process control systems, introducing advanced functions such as batch management, asset optimization and field device integration which "plug in" to a common user environment. The same user interface may also be used to manage components of existing multiple ABB control systems that have been installed in the market over the past approximately 20 years. In this way, System 800xA gives customers a way to migrate to new functions one step at a time, rather than having to make a large-scale capital investment to replace their entire control system. By creating a common user interface that can be used to manage multiple systems, the System 800xA also reduces the research and development investment needed to achieve a "one size fits all" solution across our large installed systems base.

The division's product offerings for the pulp and paper industries include quality control systems for pulp and paper mills, control systems, drive systems, on-line sensors, actuators and field instruments. On-line sensors measure product properties, such as weight, thickness, color, brightness, moisture content and additive content. Actuators allow the customer to make automatic adjustments during the production process to improve the quality and consistency of the product. Field instruments measure properties of the process, such as flow rate, chemical content and temperature.

We offer our customers in the metals and minerals industries specialized products and services, as well as total production systems. We design, plan, engineer, supply, erect and commission electric equipment, drives, motors and equipment for automation and supervisory control within a variety of



areas including mining, mineral handling, aluminum smelting, hot and cold steel applications and cement production.

In the oil and gas sector, we provide solutions for onshore and offshore production and exploration, refining, and petrochemical processes, and oil/gas transportation and distribution. In the pharmaceuticals and fine chemicals areas, we offer applications to support manufacturing, packaging, quality control and compliance with regulatory agencies.

In the marine field, we provide global shipbuilders with power and automation technologies for luxury cruise liners, ferries, tankers, offshore oil rigs and special purpose vessels. We design, engineer, build, supply and commission electrical systems for marine power generation, power distribution and diesel electric propulsion, as well as turbochargers to improve efficiency for diesel and gasoline engines.

We also offer full-service contracts across all of our customer segments, in which we take over in-house maintenance activities for customers and apply strategies to reduce overall maintenance costs and helps optimize these investments. Demand for our process automation services is increasing as our customers seek to increase productivity by improving the performance of existing assets.

#### Customers

The Process Automation division's end customers are primarily companies in the pulp and paper, minerals and mining, metals, chemicals and pharmaceuticals, oil and gas, turbocharging, power and the marine industries. In each of these industries, we sell both through direct sales forces as well as through third-party channels, such as distributors, wholesalers, installers, system integrators and OEMs.

#### Sales and Marketing

The Process Automation division uses a direct sales forces as well as third-party channel partners, such as distributors, system integrators and OEMs. For the division as a whole, the majority of revenues are derived through the division's own direct sales channels.

#### Competition

The Process Automation division's principal competitors vary by industry or product line but include, Emerson Electric Co., Honeywell International Inc., Invensys plc, Metso Automation, Rockwell Automation, Schneider Electric SA, Siemens AG, Voith AG, Aspen Technologies, and Yokogawa Electric Corporation.

#### Capital Expenditures

The Process Automation division's capital expenditures for property, plant and equipment were \$79 million in 2008, compared to \$91 million and \$70 million in 2007 and in 2006, respectively. Principal investments in 2008 were primarily related to our turbocharging production facilities and service stations in Switzerland, China, Unites States, India, and ordinary course purchase of machinery and equipment mainly in Algeria, Finland, Sweden, and Germany. In 2008, Europe accounted for 64 percent of the capital expenditure, followed by 20 percent in Asia, 14 percent in the Americas and 2 percent in Middle East and Africa

#### **Robotics Division**

#### Overview

Our Robotics division offers robot products, systems and service for the automotive and manufacturing industries. The division develops standardized manufacturing cells for many applications including machine tending, welding, cutting, painting, finishing and packing. It also provides fully

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engineered systems to automobile manufacturers for press automation, paint process automation, body in white assembly and power train assembly. The division also provides a full range of robotics services, from product and system maintenance to system design. The division had approximately 5,300 employees as of December 31, 2008 and generated \$1.6 billion of revenues in 2008. The Robotics division's manufacturing and research and development locations are organized globally, with major centers in China, the United States, Sweden, Norway and France.

#### The Robotics Division

The Robotics division offers robot products, systems and service for the automotive manufacturers and their sub-suppliers as well as general manufacturing industries, to improve product quality, productivity and consistency in manufacturing processes. Robots are also used in inhospitable environments which may be hazardous to employee health and safety, such as repetitive lifting, cold rooms or painting booths.

In the automotive industry, the division's products and systems are used in such areas as press shop, body shop, paint shop, power train assembly, trim and final assembly. General industry segments in which robotics solutions are used range from metal fabrication, foundry, plastics, food & beverage, chemicals & pharmaceuticals to consumer electronics, solar and wood. Typical general industry applications include welding, material handling, painting, picking, packing and palletizing.

Shortened product life cycles and rapidly changing consumer preferences have brought new challenges to our robotics customers. They must be able to adapt their production lines to increasingly frequent changes in product design. At the same time, they have to continuously deliver their products faster and at higher quality standards. Furthermore, constant price pressure requires them to decrease production costs by improving manufacturing processes. Robots and robotics systems continue to play a key role in our customers' ability to adapt to their rapidly-changing business environment.

Our services include design and project management, engineering, installation, training and life-cycle care of the complete production line.

#### Customers

The Robotics division's end customers are primarily companies in the automotive and manufacturing industries. We sell to these customers through both direct and indirect sales forces. Our third-party channels include distributors, system integrators, OEMs and machine builders.

#### Sales and Marketing

Sales are made through both direct and indirect sales forces and third-party channel partners, such as distributors, system integrators, OEMs and machine builders. The proportion of direct sales compared to indirect sales varies among the different industries, product technologies and geographic markets. Sales from the systems and service businesses are made almost entirely through direct sales forces.

#### Competition

The Robotics division's principal competitors vary by product and system but major competitors include Fanuc Robotics Inc., Kuka Robot Group, Yaskawa Electric Corporation, Dürr AG, Kawasaki Robotics and Stäubli AG, as well as a growing base of small and medium-sized system integrators.

#### Capital Expenditures

The Robotics division's capital expenditures for property, plant and equipment were \$28 million in 2008, compared to \$14 million in both 2007 and in 2006, respectively. Geographically, in 2008, Europe



accounted for 43 percent of the capital expenditure, followed by 33 percent in Asia, 23 percent in the Americas and 1 percent in Middle East and Africa.

#### DISCONTINUED OPERATIONS

#### Overview

The following businesses and costs are included in our Consolidated Financial Statements as discontinued operations at December 31, 2008, 2007 and 2006:

Our Transformer business in South Africa, which was sold in 2008.

Our Lummus Global business, which was sold during 2007.

Our Building Systems business in Germany, which was sold during 2007.

Our Cable business in Ireland, which was sold during 2006.

In 2006, we and the buyer of the upstream oil and gas business entered into an agreement to settle certain items which were disputed by the buyer after the closing of the transaction in 2004. In 2007 and 2006, we recorded income in connection with the release of certain provisions related to the divestment.

Our Power Lines businesses in South Africa and Venezuela, which were sold in 2006, as well as the remaining Power Lines businesses in Brazil and Mexico, which were sold during 2007.

Provisions and other expenses incurred in connection with asbestos-related claims. The status of our potential asbestos obligation is described in "Note 15 Commitments and contingencies" to our Consolidated Financial Statements.

Legal, professional and other fees related to the above disposals.

See "Note 3 Acquisitions, divestments and discontinued operations" to the Consolidated Financial Statements for additional information.

#### CAPITAL EXPENDITURES

Total capital expenditures for property, plant and equipment including intangible assets amounted to \$1,171 million, \$756 million and \$536 million in 2008, 2007 and 2006, respectively. Compared to the depreciation expenses, capital expenditures were 77 percent higher in 2008, 27 percent higher in 2007 and 3 percent lower in 2006.

Due to the current geographic distribution of our production facilities, capital expenditures in 2008 remained at a significant level in western Europe and the United States. Investments for capital expenditures in western Europe were primarily driven by maintenance and upgrades of existing production facilities to improve productivity, mainly in Sweden, Germany and Switzerland. Capital expenditures in emerging markets increased significantly in 2008, particularly in China, India, Poland and Mexico. Investments in capital expenditures in emerging markets were mostly made to expand or build new facilities to increase the production capacity, as a result of the rapid growth in these geographical markets. The share of emerging market capital expenditure as a percentage of total capital expenditure increased from 37 percent in 2007 to 43 percent in 2008.

The carrying value of property, plant and equipment sold amounted to \$50 million, \$30 million and \$54 million in 2008, 2007 and 2006, respectively. Of the total sales of property, plant and equipment in 2008, the majority related to real estate properties in Switzerland, Mexico, Poland and Italy. Of the total sales of property, plant and equipment in 2007, a significant portion was related to real estate properties in Norway, Sweden and Italy. In 2006, the sale of property, plant and equipment was mostly related to real estate properties, primarily in Switzerland and Germany.
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Construction in progress for property, plant and equipment at December 31, 2008 was \$534 million, which mainly related to construction projects in Sweden, the United States, Switzerland, China and Germany. Construction in progress for property, plant and equipment at December 31, 2007 was \$285 million, mainly in Sweden, the United States, China, India, Switzerland and Germany. At December 31, 2006, the amount of construction in progress was \$173 million, mainly in Germany, Finland, China, Sweden and Switzerland.

In 2009, we plan to reduce our capital expenditures, but estimate the amount to be higher than our annual depreciation and amortization charge. We anticipate higher investments in Asia and relatively lower capital spending in Europe.

## SUPPLIES AND RAW MATERIALS

We purchase a variety of raw materials for use in our production and project execution processes. The primary materials used in our products, by weight, are steel, copper, aluminum, mineral oil and various plastics. We also purchase a wide variety of fabricated products and electronic components.

We operate a worldwide supply chain management network with employees dedicated to this function in business units and key countries. Additionally, over twenty global commodity teams have been established to take advantage of opportunities to leverage the scale of the ABB Group, to optimize the efficiency of our supply networks, and to capture lowest possible costs worldwide.

Our supply management organization's activities have continued to expand in recent years, to:

1.

pool and leverage procurement of materials and services used by many of our production facilities,

2.

improve our collaboration with supplier partners, through tools such as our supplier portal ASCC,

3.

enhance the transparency of our spending with further implementations to eSMART, our global sourcing and spend intelligence network, and

4.

evaluate processes and solutions that will allow us to speed our preparation, deployment and execution in our sourcing projects.

The price of raw materials is highly volatile, and has varied substantially, from year to year. For many commodities we purchase, such as steel, copper, aluminum and products derived from crude oil, continuing global economic growth in China and other emerging economies, coupled with the uncertainty brought upon the markets by the recent world financial crisis, and the volatility in foreign exchange rates, all led to significant fluctuations in raw material costs over the last few years. While some market volatility will be offset through the use of either long-term contracts or hedging, we expect global commodity prices to remain highly volatile. Declines in raw material prices in recent months are further testimony of the level of uncertainty and volatility we are facing.

We mitigate our exposure to commodity risk arising from changes in prices of raw materials by entering into hedges. For example, we manage copper and aluminum price risk using swap and forward contracts based on London Metal Exchange prices or on New York Mercantile Exchange prices for these commodities. Our hedging policy is designed to minimize price volatility and create a stable cost base for the ABB Group. Hedging has the effect of minimizing the unfavorable impact of price increases in commodities, but it also limits the favorable impact of decreasing prices. Certain gains and losses derived from our commodity hedging transactions are deferred and reflected in the cost of goods sold when the underlying physical transaction affects cost of goods sold. In addition to using hedging to reduce our exposure to fluctuations in raw materials prices, in some cases we can reduce this risk by incorporating changes in raw materials prices into the prices of our products.

Our costs for most of our electronic components, subassemblies and fabricated products remained stable, or in many cases decreased slightly, in 2008 compared to 2007. Procurement personnel in the

business units, and in the countries in which ABB operates, along with the global commodities teams, continued to focus on component cost reduction efforts in these areas to partially mitigate the impact of the cost increases in raw materials.

#### PATENTS AND TRADEMARKS

We believe that intellectual property is as important as tangible assets for a technology group such as ABB. Over the past ten years, we have almost doubled our total number of first patent filings, and we intend to continue our aggressive approach to seeking patent protection. Currently, we have over 16,000 patent applications and registrations, of which approximately 7,400 are pending applications. In 2008, we filed patent applications for approximately 620 new inventions. Based on our existing intellectual property strategy, we believe that we have adequate control over our core technologies. The "ABB" trademarks and logo are protected in all of the countries in which we operate. We aggressively defend the reputation associated with the ABB brand.

#### SUSTAINABILITY ACTIVITIES

Sustainability management is one of our highest business priorities. We address sustainability issues in all our business operations. Our goal is to improve our social and environmental performance continuously, and improve the quality of life in the communities and countries where we operate.

Our social and environmental efforts include:

Joining initiatives that foster economic, environmental, social and educational development;

Making positive contributions in the communities where we operate so they will welcome us and consider ABB an attractive employer and a good investment;

Offering our customers eco-efficient products that save energy and are safe to use, that optimize the use of natural resources, minimize waste and reduce environmental impact over their complete life cycles;

Applying non-financial risk assessment to projects;

Sharing our latest technologies with emerging markets by, for example, helping customers in developing countries implement environmentally sound processes and technologies and providing environmental awareness training;

Ensuring that our operations and processes comply with applicable environmental standards and social legislation. Specifically, every operating unit must implement an environmental management system that continuously improves its environmental performance;

Ensuring that our social and environmental policies are communicated and implemented;

Working towards achieving best practices in occupational health and safety, and ensuring the health and safety of our employees, contractors and others involved in or affected by our activities; and

Favoring suppliers that have sustainability policies and systems similar to our own.

To manage environmental aspects of our own operations, we have implemented environmental management systems according to the ISO 14001 standard at our manufacturing and service sites. Almost all such sites currently work in compliance with the requirements of the standard (approximately 350 sites) and our environmental management program now covers operations in almost 50 countries. For non-manufacturing sites we have implemented an adapted environmental management system in order to ensure management of aspects and continual improvement of performance.

We have Environmental Product Declarations to communicate the environmental performance of our core products. These describe the significant environmental aspects and impacts of a product line,

viewed over its complete life cycle. Declarations are based on Life Cycle Assessment studies, created according to the international standard ISO/TR 14025. More than 70 declarations for major product lines are published on our Web site (*www.abb.com*), some of which have been externally certified by agencies such as Det Norske Veritas (DNV) of Norway and the RINA Management System Certification Society in Italy.

We have expanded the scope of our environmental reporting in recent years. In 2008, a total of 85 percent of our employees were covered by confirmed data gathered through ABB's formal environmental reporting system that is verified by an independent verification body. The parts of our business that are not yet covered by our reporting system, mainly sales offices in countries where we do not perform manufacturing, have very limited environmental exposure. A total of 4 environmental incidents were reported in 2008, none of which had a material environmental impact.

In 2008, a total of 93 percent of employees are covered by confirmed data gathered through ABB's formal social reporting system that is verified by an independent verification body. The parts of our business that are not yet covered by our reporting system, mainly sales offices in countries where we do not perform manufacturing, have very limited social exposure.

One of our corporate objectives is to phase out the use of the hazardous substances that are recorded on our list of "restricted" substances. Priorities for replacement are set by each business using criteria such as the environmental aspects of alternatives, the risk of the substance escaping into the environment, how hazardous the substance is, whether we can use the substance under strict control and whether there are any technically acceptable alternatives.

We have retained liability for environmental remediation costs at two sites in the United States that were operated by our former nuclear business, which we have sold to BNFL. The primary environmental liabilities associated with these sites relate to the costs of remediating radiological contamination upon decommissioning the facilities. See "Note 15 Commitments and contingencies" to our Consolidated Financial Statements.

#### REGULATION

Our operations are subject to numerous governmental laws and regulations including those governing antitrust and competition, corruption, the environment, securities transactions and disclosures, import and export of products, currency conversions and repatriation, taxation of foreign earnings and earnings of expatriate personnel and use of local employees and suppliers.

As a reporting company under Section 12 of the U.S. Securities Exchange Act of 1934, we are subject to the FCPA's antibribery provisions with respect to our conduct around the world.

Our operations are also subject to the 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, as implemented by the 34 signatory countries. The convention obliges signatories to adopt national legislation that makes it a crime to bribe foreign public officials. As of December 31, 2008, those countries which have adopted implementing legislation and have ratified the convention include the United States and several European nations in which we have significant operations.

We conduct business in certain countries known to experience governmental corruption. While we are committed to conducting business in a legal and ethical manner, our employees or agents have taken, and in the future may take, actions that violate the U.S. FCPA, legislation promulgated pursuant to the 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, antitrust laws or other laws or regulations. These actions have resulted and could result in monetary or other penalties against us and could damage our reputation and, therefore, our ability to do business. For more information, see "Item 8. Financial Information Legal Proceedings."

## SIGNIFICANT SUBSIDIARIES

ABB Ltd, Zurich, Switzerland is the ultimate parent company of the ABB Group, which is comprised of 254 consolidated operating and holding subsidiaries worldwide, as of February 28, 2009. In addition to ABB Ltd Zurich, the only other listed company in the ABB Group is ABB Limited, India, which is listed on the Bombay Stock Exchange and the National Stock Exchange in India.

The following table sets forth, as of February 28, 2009, the name, country of incorporation and ownership interest of ABB Ltd in its significant subsidiaries:

Commony Nome	Country	ABB Group
ABBS A Buenos Aires	ARGENTINA	100 00
ABB Australia Pty Limited Sydney	AUSTRALIA	100.00
ABB AG. Vienna	AUSTRIA	100.00
ABB N V Zaventem	RELGIUM	100.00
ABB I tda Osasco	BRAZII	100.00
ABB Bulgaria FOOD Sofia	BULGARIA	100.00
ABB Inc. St. Laurent Quebec	CANADA	100.00
ABB (China) Ltd. Beijing	CHINA	100.00
Asea Brown Boyeri Ltda Bogotá	COLOMBIA	00.00
ABB Technology SA Abidian	COTE D'IVOIRE	99.00
ABB I td. Zagreb	CROATIA	100.00
ABB s r o Prague	CZECH REPUBLIC	100.00
ABB A/S Skovlunde	DENMARK	100.00
ABB Equador S A Quito	ECHADOR	96.87
Asea Brown Boyeri S A F. Cairo	EGYPT	100.00
ABB AS Tallinn	ESTONIA	100.00
ABB Ov Helsinki	FINLAND	100.00
ABB S A Rueil-Malmaison	FRANCE	100.00
ABB AG Mannheim	GERMANY	100.00
ABB Automation GmbH Mannheim	GERMANY	100.00
ABB Automation Products GmbH Ladenburg	GERMANY	100.00
ABB Beteiligungs- und Verwaltungsges mbH Mannheim	GERMANY	100.00
ABB Stotz-Kontakt GmbH Heidelberg	GERMANY	100.00
Busch-Jaeger Elektro GmbH Mannheim/Lüdenscheid	GERMANY	100.00
Asea Brown Boyeri S A Metamorphossis Attica	GREECE	100.00
ABB (Hong Kong) Ltd., Hong Kong	HONG KONG	100.00
ABB Engineering Trading and Service Ltd., Budapest	HUNGARY	100.00
ABB Limited. Bangalore	INDIA	52.11
ABB Ltd. Dublin	IRELAND	100.00
ABB Technologies Ltd., Tirat Carmel	ISRAEL	99.99
ABB S.p.A., Milan	ITALY	100.00
ABB K.K., Tokyo	JAPAN	100.00
ABB Ltd., Seoul	KOREA, REPUBLIC	100.00
	OF	
ABB Holdings Sdn. Bhd., Subang Jaya	MALAYSIA	100.00
Asea Brown Boveri S.A. de C.V., Tlalnepantla	MEXICO	100.00
ABB BV, Rotterdam	NETHERLANDS	100.00
ABB Finance B.V., Amsterdam	NETHERLANDS	100.00
ABB Holdings BV, Amsterdam	NETHERLANDS	100.00
ABB Limited, Auckland	NEW ZEALAND	100.00
ABB Holding AS, Billingstad	NORWAY	100.00
ABB S.A., Lima	PERU	80.60
ABB, Inc., Paranaque, Metro Manila	PHILIPPINES	100.00
ABB Sp. zo.o., Warsaw	POLAND	99.88
ABB (Asea Brown Boveri), S.A., Paco de Arcos	PORTUGAL	100.00
32		

		ABB Group
Company Name	Country	Interest %
Asea Brown Boveri Ltd., Moscow	RUSSIAN	100.00
	FEDERATION	
ABB Contracting Company Ltd., Riyadh	SAUDI ARABIA	65.00
ABB Holdings Pte. Ltd., Singapore	SINGAPORE	100.00
ABB Holdings (Pty) Ltd., Sunninghill	SOUTH AFRICA	80.00
Asea Brown Boveri S.A., Madrid	SPAIN	100.00
ABB AB, Västerås	SWEDEN	100.00
ABB Norden Holding AB, Västerås	SWEDEN	100.00
ABB Asea Brown Boveri Ltd, Zurich	SWITZERLAND	100.00
ABB Schweiz AG, Baden	SWITZERLAND	100.00
ABB LIMITED, Bangkok	THAILAND	100.00
ABB Holding A.S., Istanbul	TURKEY	99.95
ABB Ltd., Kiev	UKRAINE	100.00
ABB Holdings Limited, Warrington	UNITED KINGDOM	100.00
ABB Limited, Warrington	UNITED KINGDOM	100.00
ABB Holdings Inc., Norwalk	UNITED STATES	100.00
ABB Inc., Norwalk CT	UNITED STATES	100.00
Asea Brown Boveri S.A., Caracas	VENEZUELA	100.00

#### **DESCRIPTION OF PROPERTY**

As of December 31, 2008, the ABB Group owns or leases real estate in approximately 100 countries throughout the world. The facilities consist mainly of manufacturing plants, office buildings, research centers and warehouses. A substantial portion of our production and development facilities are situated in Germany, Sweden, the United States, Switzerland, China, Finland, India and Italy. We own essentially all of the machinery and equipment used in our manufacturing operations.

From time to time, we have a surplus of space arising from acquisitions, production efficiencies and/or restructuring of operations. Normally, we seek to sell such surplus space which may involve leasing property to third parties for an interim period.

The net book value of our property, plant and equipment as of December 31, 2008 was \$3,562 million, of which machinery and equipment represented \$1,467 million, land and buildings represented \$1,561 million and construction in progress of \$534 million. We believe that our current facilities are in good condition and are adequate to meet the requirements of our present and foreseeable future industrial operations.

#### Item 4A. Unresolved Staff Comments

Not applicable.

#### Item 5. Operating and Financial Review and Prospects

You should read the following discussion of our financial condition and results of operations in conjunction with our Consolidated Financial Statements and the related notes and other financial information contained elsewhere in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties, including those discussed in "Item 3. Key Information Risk Factors." See "Forward-looking statements" at the beginning of this annual report.

## MANAGEMENT OVERVIEW

During 2008, we continued to focus on our core strengths: power and automation products, systems and services that increase grid reliability and industrial productivity and result in significant energy savings.

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Despite uncertainties surrounding the economic situation especially in the second half of 2008, we have continued to benefit from our technological leadership, our flexible global production base and the operational improvements we continue to make in our businesses. Our strategy continues to focus on business execution, cost and risk management and organic growth, which continue to enable improvements in operating performance with stronger financial results in our businesses.

Our efforts for 2008 were aimed at three key areas: Strategy, Execution and People.

#### Strategy

We believe our strategy in 2008 remained sound. Our businesses supported both growth and profitability as a result of their leading market positions and competitive technologies. Furthermore, our global geographic scope has provided us with strong positions in Asia with particular focus on China and India and the Middle East, and we have continued to serve established, mature markets in Europe and North America.

#### Execution

Execution continued to be our top priority. We have maintained in 2008 attractive organic growth through our range of technologies and superior service. We continued to improve our gross profit margins through cost control, productivity improvements and risk control in all of our divisions. Our execution framework has centered around our business processes, regular business and project reviews, a flat organizational structure and a focus on compliance.

#### People

During 2008 we continued to build on our strong foundation as an attractive, dynamic global employer. We focused on retaining and recruiting quality people for our growth areas. Together with our zero tolerance policy, we continued to implement our Code of Conduct through employee education programs focusing on values, leadership and business ethics.

#### Outlook

Given the disruption of the global financial system and the economic downturn it entailed, the outlook for 2009 remains uncertain.

We believe that the increased cost of capital and the scarcity of funding that started to delay many investment decisions in the fourth quarter of 2008, will continue for some time in the future and consequently contribute to weakening industrial and construction-related demand.

At the same time, we expect the need in the global market for power transmission and distribution infrastructure, both in terms of equipment replacement and new projects, to remain essentially unchanged in 2009. In addition, we believe governments may leverage infrastructure investments in the energy sector to stimulate the economy. There are political commitments in the EU, the U.S, and Asia to increase the share of renewable energy sources, which could spur activity in the sector.

However, given the overall uncertainty in the global markets, we are unable to forecast when the various government stimulus programs will take effect or when the availability of funding will improve.

Therefore, our priority for 2009 will be to ensure that we have the flexibility to respond quickly to changing market conditions. For this purpose, we have initiated a program to be completed by the end of 2010 to sustainably reduce our cost base. In February 2009, we reaffirmed our targets for 2011. We intend to take advantage of our global footprint, our strong balance sheet and our leading technologies to further strengthen our competitive position.

## APPLICATION OF CRITICAL ACCOUNTING POLICIES

#### General

We prepare our Consolidated Financial Statements in accordance with United States generally accepted accounting principles (U.S. GAAP).

The preparation of our financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis, including, but not limited to, those related to: costs expected to be incurred to complete projects; costs of product guarantees and warranties; provisions for bad debts; recoverability of inventories, investments, fixed assets, goodwill and other intangible assets; income tax related expenses and accruals; provisions for restructuring; gross profit margins on long-term construction-type contracts; pensions and other postretirement benefit assumptions and contingencies and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from our estimates and assumptions.

We deem an accounting policy to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made and if different estimates that reasonably could have been used, or if changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact our Consolidated Financial Statements. We also deem an accounting policy to be critical when the application of such policy is essential to our ongoing operations. We believe the following critical accounting policies require us to make difficult and subjective judgments, often as a result of the need to make estimates regarding matters that are inherently uncertain. These policies should be considered when reading our Consolidated Financial Statements.

#### Revenues and cost of sales recognition

We generally recognize revenues when persuasive evidence of an arrangement exists to sell products and/or services, the price is fixed or determinable, collectibility is reasonably assured and upon transfer of title, including the risks and rewards of ownership, or upon the rendering of services.

Revenues under long-term contracts are recognized using the percentage-of-completion method of accounting pursuant to Statement of Position 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts* (SOP 81-1). We principally use the cost-to-cost or delivery events method to measure progress towards completion on contracts. Management determines the method used by type of contract based on its judgment as to which method best measures progress towards completion on contracts.

The percentage-of-completion method of accounting involves the use of assumptions and projections, principally relating to future material, labor and overhead costs. As a consequence, there is a risk that total contract costs will exceed those we originally estimated and the margin will decrease. This risk increases if the duration of a contract increases, because there is a higher probability that the circumstances upon which we originally developed estimates will change, resulting in increased costs that we may not recover. Factors that could cause costs to increase include:

unanticipated technical problems with equipment supplied or developed by us which may require that we incur additional costs for us to remedy;

changes in the cost of components, materials or labor;

difficulties in obtaining required governmental permits or approvals;

project modifications creating unanticipated costs;

suppliers', subcontractors' or consortium partners' failure to perform;

penalties incurred as a result of not completing portions of the project in accordance with agreed upon time limits and

delays caused by unexpected conditions or events.

Changes in our initial assumptions, which we review on a regular basis between balance sheet dates, may result in revisions to estimated costs, current earnings and anticipated earnings. We recognize these changes in the period in which the changes in estimates are determined. By recognizing changes in estimates cumulatively, recorded revenue and costs to date reflect the current estimates of the stage of completion of each project. Additionally, losses on long-term contracts are recognized in the period when they are identified and are based upon the anticipated excess of contract costs over the related contract revenues.

Short-term construction-type contracts or long-term contracts for which reasonably dependable estimates cannot be made or for which inherent hazards make estimates doubtful are accounted for under the completed-contract method as required by SOP 81-1. Revenues under the completed-contract method are recognized upon substantial completion that is acceptance by the customer, compliance with performance specifications demonstrated in a factory acceptance test or similar event.

When multiple elements, such as products and services, are contained in a single arrangement or in related arrangements with the same customer, we allocate revenue to each element based on its relative fair value or according to the residual method should no evidence for the fair value of the delivered item be available, provided that such element meets the criteria for treatment as a separate unit of accounting. The allocation of the sales price between delivered elements and undelivered elements might affect the amount of revenue recorded in certain periods, but would not change the total revenue recognized on the contract.

Unless the percentage-of-completion or completed contract method applies, revenues from contracts that contain customer acceptance provisions are deferred, in whole or in part, until customer acceptance occurs, or we have demonstrated the customer-specified objective criteria are satisfied or the contractual acceptance period has lapsed.

These revenue recognition methods require the collectibility of the revenues recognized to be reasonably assured. When recording the respective accounts receivable, allowances are calculated to estimate those receivables that will not be collected. These reserves assume a level of default based on historical information, as well as knowledge about specific invoices and customers. The risk remains that a different number of defaults will occur than originally estimated. As such, the amount of revenues recognized might exceed or fall below that which will be collected, resulting in a change in earnings in the future. The risk of deterioration is likely to increase during periods of significant negative industry or economic trends.

As a result of the above policies, judgment in the selection and application of revenue recognition methods must be made.

#### Contingencies

As more fully described in the section below entitled "Environmental liabilities", in "Item 8. Financial Information Legal Proceedings" and in "Note 15 Commitments and contingencies" to our Consolidated Financial Statements, we are subject to proceedings, litigation or threatened litigation and other claims and inquiries related to environmental, labor, product, regulatory and other matters. We are required to assess the likelihood of any adverse judgments or outcomes to these matters, as well as potential ranges of probable losses. A determination of the provision required, if any, for these

contingencies is made after analysis of each individual issue, often with assistance from both internal and external legal counsel and technical experts. The required amount of a provision for a contingency of any type may change in the future due to new developments in the particular matter, including changes in the approach to its resolution.

We record a provision for our contingent obligations when it is probable that a loss will be incurred and the amount can be reasonably estimated. Any such provision is generally recognized on an undiscounted basis using our best estimate of the amount of loss incurred or at the lower end of an estimated range when a single best estimate is not determinable. In some cases, we may be able to recover a portion of the costs relating to these obligations from insurers or other third parties; however, we record such amounts only when it is probable that they will be collected.

We provide for anticipated costs for warranties when we recognize revenues on the related products or contracts. Warranty costs include calculated costs arising from imperfections in design, material and workmanship in our products. Although we generally make assessments on an overall, statistical basis, we make individual assessments on contracts with risks resulting from order-specific conditions or guarantees. There is a risk that actual warranty costs may exceed the amounts provided for, which would result in a deterioration of earnings in the future when these actual costs are determined.

We may have a legal obligation to perform environmental clean-up activities as a result of the normal operation of our business or have other asset retirement obligations in the scope of Statement of Financial Accounting Standards No. 143, *Accounting for Asset Retirement Obligations* (SFAS 143). In some cases, the timing or the method of settlement, or both are conditional upon a future event that may or may not be within our control, but the underlying obligation itself is unconditional and certain. We recognize a provision for these and other asset retirement obligations when a liability for the retirement or clean-up activity has been incurred and a reasonable estimate of its fair value can be made. These provisions are initially recognized at fair value, and subsequently adjusted for accrued interest and changes in estimates.

#### Pension and postretirement benefits

As more fully described in "Note 17 Employee benefits" to our Consolidated Financial Statements, we operate pension plans that cover a large percentage of our employees. We use actuarial valuations to determine our pension and postretirement benefit costs and credits. The amounts calculated depend on a variety of key assumptions, including discount rates, mortality and expected return on plan assets. Under U.S. GAAP, we are required to consider current market conditions in making these assumptions. In particular, the discount rates are reviewed annually based on changes in long-term, highly rated corporate bond yields. Decreases in the discount rates result in an increase in the projected benefit obligation to employees (PBO) and in pension costs. Conversely, an increase in the discount rates results in a decrease in the projected benefit obligation and in pension costs. The mortality assumptions are reviewed annually by the Company. Decreases in mortality rates result in an increase in the projected benefit obligation and in pension costs. Conversely, an increase in mortality rates result in a decrease in the projected benefit obligation and in pension costs. Conversely, an increase in mortality rates result in a decrease in the projected benefit obligation and in pension costs. Conversely, an increase in mortality rates result in a decrease in the projected benefit obligation and in pension costs.

Holding all other assumptions constant, a 0.25 percentage point decrease in the discount rate would have increased the PBO related to our pension plans by approximately \$210 million, while a 0.25 percentage point increase in the discount rate would have decreased the PBO related to our pension plans by approximately \$199 million.

The expected return on plan assets is reviewed regularly and considered for adjustment annually based on current and expected asset allocations and represents the long-term return expected to be achieved. Decreases in the expected return on plan assets result in an increase to pension costs. An

increase or decrease of 0.5 percent in the expected long-term rate of asset return would have decreased or increased, respectively, the net periodic benefit cost in 2008 by approximately \$44 million.

Under U.S. GAAP, we accumulate and amortize over future periods actual results that differ from the assumptions used. Therefore, actual results generally affect our recognized expense for pension and other postretirement benefit obligations in future periods.

The funded status, which can increase or decrease based on the performance of the financial markets or changes in our assumptions regarding rates, does not represent a mandatory short-term cash obligation. Instead, the funded status of a pension plan is the difference between the PBO and the fair value of the plan assets. The funded status of our pension plans as of December 31, 2008 was \$710 underfunded compared to an overfunding as of December 31, 2007, of \$22 million. Our other postretirement plans were underfunded by \$207 million and \$215 million at December 31, 2008 and 2007, respectively.

We have multiple non-pension postretirement benefit plans. Our health care plans are generally contributory with participants' contributions adjusted annually. For purposes of estimating our health care costs, we have assumed health care cost increases to be 9.82 percent per annum for 2009, gradually declining to 4.97 percent per annum by 2017 and to remain at that level thereafter.

## Taxes

In preparing our Consolidated Financial Statements, we are required to estimate income taxes in each of the jurisdictions in which we operate. We account for deferred taxes by using the asset and liability method. Under this method, we determine deferred tax assets and liabilities based on temporary differences between the financial reporting and the tax bases of assets and liabilities. Deferred taxes are measured using the enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. We recognize a deferred tax asset when it is more likely than not that the asset will be realized. We regularly review our deferred tax assets for recoverability and establish a valuation allowance based upon historical losses, projected future taxable income and the expected timing of the reversals of existing temporary differences. To the extent we increase or decrease this allowance in a period, we recognize the change in the allowance within provision for taxes in the Consolidated Income Statements unless the change relates to discontinued operations, in which case the change is recorded in income (loss) from discontinued operations, net of tax. Unforeseen changes in tax rates and tax laws, as well as differences in the projected taxable income as compared to the actual taxable income, may affect these estimates.

We operate in numerous tax jurisdictions and, as a result, are regularly subject to audit by tax authorities. We provide for tax contingencies, including potential tax audits, on the basis of the technical merits of the contingency, including applicable tax law, Organisation for Economic Co-operation and Development (OECD) guidelines and our best knowledge of the facts and circumstances. Although we believe that our tax estimates are reasonable and that appropriate tax reserves have been made, the final determination of tax audits and any related litigation could be different than that which is reflected in our income tax provisions and accruals.

Financial Accounting Standards Board Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* (FIN 48) requires that an estimated loss from a tax contingency be accrued as a charge to income if it is more likely than not that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. The required amount of provisions for contingencies of any type may change in the future due to new developments.

## Goodwill and other intangible assets

We review goodwill for impairment annually as of October 1, and additionally whenever events or changes in circumstances indicate the carrying value may not be recoverable in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets* (SFAS 142). SFAS 142 requires that a two-step impairment test be performed on goodwill. In the first step, we compare the fair value of each reporting unit to its carrying value. Our reporting units represent the reportable segments identified in "Note 22 Operating segment and geographic data" to our Consolidated Financial Statements, except in our Power Products and Process Automation divisions where our reporting units are represented by the level below these reportable segments. We use a discounted cash flow model to determine the fair value of reporting units, unless there is a readily determinable fair market value. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not impaired and no further testing is performed. If the carrying value of the net assets assigned to the reporting unit value of the reporting unit, then we perform the second step to determine the implied fair value of the reporting unit's goodwill and compare it to the carrying value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then we record an impairment loss equal to the difference.

We review intangible assets in accordance with SFAS 144 and accordingly test for impairment upon the occurrence of certain triggering events, such as a decision to divest a business or projected losses of an entity.

Cash flow models used in evaluating impairments are dependent on a number of factors including estimates of future cash flows and other variables and require that we make significant estimates and judgments, involving variables such as sales volumes, sales prices, sales growth, production and operating costs, capital expenditures, market conditions and other economic factors. Further, discount rates used in the discounted cash flow model to calculate the fair value require the determination of variables such as the risk free rate and the equity market risk premium. We base our fair value estimates on assumptions we believe to be reasonable, but which are unpredictable and inherently uncertain. Actual future results may differ from those estimates. Additionally, we consider our market capitalization on the date we perform the analysis.

We record any related impairment charge in other income (expense), net, in our Consolidated Income Statements, unless it is related to a discontinued operation, in which case the charge is recorded in income (loss) from discontinued operations, net of tax.

#### NEW ACCOUNTING PRONOUNCEMENTS

For a description of accounting changes and recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our Consolidated Financial Statements, see "Note 2 Significant accounting policies" to our Consolidated Financial Statements.

## **RESEARCH AND DEVELOPMENT**

Each year, we invest significantly in research and development. Our research and development area focuses on developing and commercializing the core technologies of our businesses that are of strategic importance to our future growth. In 2008, 2007 and 2006, we invested \$1,027 million, \$871 million and \$758 million, respectively, or approximately 2.9 percent, 3.0 percent, and 3.3 percent of annual consolidated revenues, respectively, on research and development activities. We also had expenditures of \$214 million, \$302 million and \$319 million, respectively, or approximately 0.6 percent, 1.0 percent and 1.4 percent, respectively, of annual consolidated revenues in 2008, 2007 and 2006, on order-related development activities. These are customer- and project-specific development efforts that we undertake to develop or adapt equipment and systems to the unique needs of our customers in connection with specific orders or projects. Order-related development amounts are initially recorded in

inventories as part of the work in process of a contract and then are reflected in cost of sales at the time revenue is recognized in accordance with our accounting policies.

In addition to continuous product development, and order-related engineering work, we develop future technology platforms for technology applications in our automation and power businesses in our Group research and development labs, which operate on a global basis. Through active management of our investment in research and development, we seek to maintain a balance between short-term and long-term research and development programs and optimize our return on investment.

Our research and development strategy focuses on three objectives:

1.

To monitor and develop emerging technologies and create an innovative, sustainable technology base for the Company;

2.

To develop technology platforms that enable efficient product design for our power and automation customers; and

3.

To create the next generation of power and automation products and systems that we believe will be the engines of profitable growth.

Universities are the incubators of future technology, and a central task of our research and development team is to transform university research into industry-ready technology platforms. We collaborate with a number of universities and research institutions to build research networks and foster new technologies. We believe these collaborations shorten the amount of time required to turn basic ideas into viable products, and they additionally help us recruit and train new personnel. We have built more than 50 university partnerships in the U.S., Europe and Asia, including long-term, strategic relationships with institutions such as Stanford University, the Massachusetts Institute of Technology, Carnegie Mellon University, Cambridge University, ETH Zurich or Imperial College London. Our collaborative projects include research on materials, sensors, micro-engineered mechanical systems, robotics, controls, manufacturing, distributed power and communication.

Common platforms for power and automation technologies are developed around advanced materials, efficient manufacturing, information technology and data communication, as well as sensor and actuator technology. Common applications of basic power and automation technologies can also be found in power electronics, electrical insulation, and control and optimization. Our power technologies, including our insulation technologies, current interruption and limitation devices, power electronics, flow control and power protection processes, apply as much to large, reliable, blackout-free transmission systems as they do to everyday household needs. Our automation technologies, including our control and optimization processes, power electronics, sensors and microelectronics, mechatronics and wireless communication processes, are designed to improve efficiency in plants and factories around the world including our own.

Group research and development is carried out in two global laboratories for power and automation technologies, combining research units in the U.S., Europe and Asia. The cultural diversity and closeness to our customers and the world's best universities create a breeding ground for success. We continue to expand our research and development activities in India and China, reflecting our growth strategy in Asia. Our corporate research center in Bangalore, India focuses on software research and develops platforms for both automation and power technologies. In China, research and development activity is focused on power transmission and distribution, manufacturing and robotics. It is centered in Beijing and Shanghai, where our researchers are in close contact with Chinese universities and customers.

### ACQUISITIONS, INVESTMENTS AND DIVESTITURES

#### Acquisitions and investments

During 2008, 2007 and 2006, we invested \$653 million, \$54 million and \$3 million in 12, 14 and 11 new businesses, joint ventures or affiliated companies, respectively.

#### Acquisitions in 2008

On August 25, 2008, ABB completed the acquisition of Kuhlman Electric Corporation (Kuhlman), a U.S. based transformer company. The acquisition was integrated into our Power Products division in north America and complements both our product range and geographical presence. Kuhlman manufactures a wide range of high-quality transformers for the industrial and electric utility sectors and has a strong reputation for innovative products and solid, long-term customer relationships. The estimated purchase price, including assumed debt, was \$520 million (including \$5 million cash acquired). The preliminary purchase price allocation resulted in \$114 million intangible assets subject to amortization and \$400 million in goodwill, recorded in our Consolidated Balance Sheet at December 31, 2008.

For more information on our acquisitions, see "Note 3 Acquisitions, divestments and discontinued operations" to our Consolidated Financial Statements.

#### Divestitures of businesses, joint ventures and affiliated companies

In 2008, 2007 and 2006, we received cash, net of cash disposed, from sales of businesses, joint ventures and affiliated companies of \$46 million, \$1,142 million and \$27 million, respectively. In relation to transactions included in continuing operations, we recognized gains in 2008, 2007 and 2006, within other income (expense), net, of \$24 million, \$11 million and \$3 million, respectively. We also recognized gain (loss) from dispositions, net of tax in 2008, 2007 and 2006, within income (loss) from discontinued operations, net of tax, of \$9 million, \$530 million and \$(83) million, respectively. The divestment of these businesses is discussed separately below under "Divestitures in 2008", "Divestitures in 2007" and "Divestitures in 2006". All revenues and income reported in the year of sale are through the date of divestment.

#### Divestitures in 2008

During the first quarter of 2008, we sold our 50 percent stake in the shares of ABB Powertech Transformers, located in South Africa, to Powertech, a wholly-owned subsidiary of the Altron Group at a gain of \$11 million. This business was part of our Power Products division prior to being reclassified to discontinued operations. The Transformer business in South Africa had revenues of \$29 million, \$167 million and \$146 million for the years ended December 31, 2008, 2007 and 2006, respectively. Income for 2008, 2007 and 2006 was \$2 million, \$15 million and \$16 million, respectively, recorded in income (loss) from discontinued operations, net of tax.

#### Divestitures in 2007

In November 2007, we completed the sale of Lummus Global (Lummus) to Chicago Bridge & Iron Company (CB&I) and received net cash proceeds of approximately \$810 million. Lummus had revenues of \$870 million and \$985 million for the years ended December 31, 2007 and 2006, respectively. Income for 2007 and 2006 was \$9 million in each year and we had a gain on sale of \$530 million, all recorded in income (loss) from discontinued operations, net of tax. In 2008, we recorded certain adjustments that reduced the gain on sale by \$5 million.

In April 2007, we completed the sale of our Building Systems business in Germany, which was reported in discontinued operations. The business had revenues of \$47 million and \$286 million for the



years ended December 31, 2007 and 2006, respectively. Losses for 2007 and 2006 were \$2 million and \$65 million, respectively, recorded in income (loss) from discontinued operations, net of tax. Of the loss reported for 2006, \$67 million was an impairment charge based upon the proceeds which were expected from the sale of the business.

In May 2007, we completed the sale of our stake in Jorf Lasfar Energy Company S.C.A. (Jorf Lasfar), a power plant based in Morocco and our stake in S.T.CMS Electric Company Private Limited (Neyveli), a power plant in India. Our share of the pre-tax earnings of Jorf Lasfar was \$21 million and \$67 million for the years ended December 31, 2007 and 2006, respectively. Our share of the pre-tax earnings of Neyveli for the years ended December 31, 2007 and 2006, respectively. The sale of these investments resulted in a gain of approximately \$38 million which was included in continuing operations. In 2008, we recorded adjustments to the gain on sale of \$16 million related to the favorable outcome on an outstanding tax case.

In 2007, we sold our Power Lines businesses in Brazil and Mexico for a sales price of \$20 million and a gain of \$0 million. These businesses had revenues of \$39 million and \$80 million and losses of \$3 million and \$4 million for the years ended December 31, 2007 and 2006, respectively. The losses were recorded in income (loss) from discontinued operations, net of tax.

#### Divestitures in 2006

In December 2006, we sold our Cable business in Ireland. The business had revenues of \$95 million and losses of \$48 million for the year ended December 31, 2006. The loss was recorded in income (loss) from discontinued operations, net of tax. The majority of the \$48 million loss reported in 2006 related to the sale of the business.

In 2006, we sold our Power Lines businesses in Venezuela and South Africa. These businesses had revenues of \$8 million and a loss of \$1 million for the year ended December 31, 2006. The loss was recorded in income (loss) from discontinued operations, net of tax.

## EXCHANGE RATES

We report our financial results in U.S. dollars. Due to our global operations, a significant amount of our revenues, expenses, assets and liabilities are denominated in other currencies. As a consequence, movements in exchange rates between currencies may affect:

our profitability;

the comparability of our results between periods and

the carrying value of our assets and liabilities.

We translate non-USD denominated results of operations, assets and liabilities to USD in our Consolidated Financial Statements. Balance sheet items are translated to USD using year-end currency exchange rates. Income statement and cash flow items are translated to USD using the average currency exchange rate over the relevant period.

Increases and decreases in the value of the USD against other currencies will affect the reported results of operations in our Consolidated Income Statements and the value of certain of our assets and liabilities in our Consolidated Balance Sheets, even if our results of operations or the value of those assets and liabilities have not changed in their original currency. Because of the impact foreign exchange rates have on our reported results of operations and the reported value of our assets and liabilities, changes in foreign exchange rates could significantly affect the comparability of our reported results of operations between periods and result in significant changes to the reported value of our assets, liabilities and shareholders' equity, as has been the case during the period from 2006 through 2008.

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While we operate globally and report our financial results in USD, because of the location of our significant operations and because our corporate headquarters are in Switzerland, exchange rate movements between the USD and both the euro (EUR) and the Swiss francs (CHF) are of particular importance to us.

The exchange rates between the USD and the EUR and the USD and the CHF at December 31, 2008, 2007 and 2006, were as follows:

Exchange rates into \$	2008	2007	2006
EUR 1.00	1.40	1.47	1.32
CHF 1.00	0.94	0.89	0.82

The average exchange rates between the USD and the EUR and the USD and the CHF for the years ended December 31, 2008, 2007 and 2006, were as follows:

Exchange rates into \$	2008	2007	2006
EUR 1.00	1.47	1.37	1.25
CHF 1.00	0.93	0.84	0.80

When we incur expenses that are not denominated in the same currency as the related revenues, foreign exchange rate fluctuations could affect our profitability. To mitigate the impact of exchange rate movements on our profitability, it is our policy to enter into forward foreign exchange contracts to manage the foreign exchange transaction risk of our operations.

In 2008, approximately 88 percent of our consolidated revenues were reported in currencies other than USD. Of that amount, the following percentages were reported in the following currencies:

Euro, approximately 29 percent;

Chinese renminbi, approximately 9 percent;

Swiss francs, approximately 6 percent;

Swedish krona, approximately 5 percent and

Indian rupee, approximately 4 percent.

In 2008, approximately 90 percent of our cost of sales and selling, general and administrative expenses were reported in currencies other than USD. Of that amount, the following percentages were reported in the following currencies:

Euro, approximately 33 percent;

Swiss francs, approximately 10 percent;

Swedish krona, approximately 8 percent;

Chinese renminbi, approximately 7 percent and

Indian rupee, approximately 3 percent.

We also incur expenses other than cost of sales and selling, general and administrative expenses in various currencies.

The results of operations and financial position of many of our subsidiaries outside of the United States are reported in the currencies of the countries in which those subsidiaries reside. We refer to these currencies as "local currencies." Local currency financial information is then translated into USD at applicable exchange rates for inclusion in our Consolidated Financial Statements.

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The discussion of our results of operations below provides certain information with respect to orders, revenues, earnings before interest and taxes and other measures as reported in USD (as well as in local currencies). We measure period-to-period variations in local currency results by using a constant foreign exchange rate for all periods under comparison. Differences in our results of operations in local currencies as compared to our results of operations in USD are caused exclusively by changes in currency exchange rates.

While we consider our results of operations as measured in local currencies to be a significant indicator of business performance, local currency information should not be relied upon to the exclusion of U.S. GAAP financial measures. Instead, local currencies reflect an additional measure of comparability and provide a means of viewing aspects of our operations that, when viewed together with the U.S. GAAP results and our reconciliations, provide a more complete understanding of factors and trends affecting the business. Because local currency information is not standardized, it may not be possible to compare our local currency information to other companies' financial measures that have the same or a similar title. We encourage investors to review our financial statements and publicly filed reports in their entirety and not to rely on any single financial measure.

#### ORDERS

We book and report an order when a binding contractual agreement has been concluded with the customer covering, at a minimum, the price and scope of products or services to be supplied, the delivery schedule and the payment terms. The reported value of an order corresponds to the undiscounted value of revenues that we expect to recognize following delivery of the goods or services subject to the order, less any trade discounts and excluding any value added or sales tax. The value of orders received during a given period of time represents the sum of the value of all orders received during the period, adjusted to reflect the aggregate value of any changes to the value of orders received during the period and orders existing at the beginning of the period. These adjustments, which may in the aggregate increase or decrease the orders reported during the period, may include changes in the estimated order price up to the date of contractual performance, changes in the scope of products or services ordered and cancellations of orders.

The undiscounted value of revenues we expect to generate from our orders at any point in time is represented by our order backlog. Approximately 16 percent of the value of total orders we recorded in 2008 were "large orders," which we define as orders from third parties involving a value of at least \$15 million for products or services. Approximately 46 percent of the large orders in 2008 were recorded by our Power Systems division and 32 percent in our Process Automation division. The Power Products, Automation Products and Robotics divisions account for the remainder of the total large orders recorded during 2008. The remaining portion of total orders recorded in 2008 was "base orders," which we define as orders from third parties with a value of less than \$15 million for products or services.

The level of orders fluctuates from year to year. Arrangements included in any particular order can be complex and unique to that order. Portions of our business involve orders for long-term projects that can take months or years to complete and many large orders result in revenues in periods after the order is booked. However, the level of large orders and orders generally cannot be used to accurately predict future revenues or operating performance. Orders that have been placed can be cancelled, delayed or modified by the customer. These actions can reduce or delay any future revenues from the order or may result in the elimination of the order.

The near-term outlook is highly uncertain due to the volatility of key drivers such as economic growth and costs of raw materials. The impact of the slow or declining global economy has caused a decrease in the demand for total orders, particularly in large orders relating to the timing of projects awarded and lack of funding. It is still uncertain how the global economy will develop throughout 2009;



however, we believe our portfolio of products and services is well-balanced both geographically and in terms of product diversity. Beyond the near-term market uncertainties, we anticipate the need for more energy efficient products to remain stable in the course of a continued economic downturn as industrial customers address their need for productivity improvements in the face of low-cost competition.

### PERFORMANCE MEASURES

We evaluate the performance of our divisions primarily based on orders received, revenues, earnings before interest and taxes (EBIT) and EBIT as a percentage of revenues (EBIT margin). EBIT is the amount resulting from the subtraction of our cost of sales, selling, general and administrative expenses and other income (expense), net, from our revenues.

#### ANALYSIS OF RESULTS OF OPERATIONS

Our consolidated results form operations were as follows:

	Year ended December 31,		
	2008	2007	2006
	(\$ in millions, except		
	per s	share data in	\$)
Orders	38,282	34,348	27,048
Order backlog <sup>(1)</sup>	23,837	22,715	15,829
Revenues	34,912	29,183	23,281
Cost of sales	(23,972)	(20,215)	(16,537)
Gross profit	10,940	8,968	6,744
Selling, general and administrative expenses	(5,822)	(4,975)	(4,326)
Other income (expense), net	(566)	30	139
Earnings before interest and taxes	4,552	4,023	2,557
Net interest and other finance expenses	(34)	(13)	(160)
Provision for taxes	(1,119)	(595)	(686)
Minority interest	(260)	(244)	(179)
Income from continuing operations	3,139	3,171	1,532
Income (loss) from discontinued operations, net of tax	(21)	586	(142)
Net income	3,118	3,757	1,390
Basic earnings (loss) per share:			
Income from continuing operations	1.37	1.40	0.72
Income (loss) from discontinued operations, net of tax	(0.01)	0.26	(0.07)
Net income	1.36	1.66	0.65
Diluted earnings (loss) per share:			
Income from continuing operations	1.37	1.38	0.69
Income (loss) from discontinued operations, net of tax	(0.01)	0.25	(0.06)
Net income	1.36	1.63	0.63

(1)

At December 31

A more detailed discussion of the orders, revenues and EBIT for our individual divisions and other businesses follows in the sections below entitled "Power Products," "Power Systems," "Automation Products," "Process Automation," "Robotics" and "Corporate and Other." Orders and revenues of our core divisions include interdivisional transactions which are eliminated in the Corporate and Other line.

#### Orders

	Year ended December 31,			
	2008	2007	2006	
	(\$ in millions)			
Power Products	13,627	11,320	8,572	
Power Systems	7,408	7,744	5,733	
Automation Products	10,872	9,314	7,706	
Process Automation	8,657	7,935	6,550	
Robotics	1,658	1,488	1,240	
Core divisions	42,222	37,801	29,801	
Corporate and Other <sup>(1)</sup>	(3,940)	(3,453)	(2,753)	
Total	38,282	34,348	27,048	

(1)

Including interdivisional eliminations

Total orders in 2008 increased by 11 percent (7 percent in local currencies). Demand for power transmission and distribution products and energy-efficient industrial equipment was strong in most markets during the first half of 2008 but weakened in the last few months of the year due to the global economic crisis. Orders in our Power Products division grew 20 percent (15 percent in local currencies), as demand for Transformers, High Voltage (HV) Products and Medium Voltage (MV) Products remained solid particularly in the first half of 2008. Orders in our Power Systems division decreased 4 percent (8 percent in local currencies), primarily the result of a lower volume of large orders in the utilities sector compared to the prior year due to the timing of project awards. Orders in our Automation Products division rose 17 percent (11 percent in local currencies), benefiting from higher investments in the industrial sector as customers in this market looked for energy-efficient technologies to improve productivity. Our Process Automation division recorded an increase in orders of 9 percent (4 percent in local currencies), backed by higher demand in the marine, metal and turbocharging sectors. Orders in our Robotics division increased 11 percent (5 percent in local currencies) reflecting higher demand particularly in the Robot Automation and Systems businesses. In our Power Products and Automation Products divisions, order growth was also driven by sale price increases to offset higher raw material costs.

Large orders in 2008 increased by 5 percent (flat in local currencies) to \$5,984 million, compared to the 57 percent increase (47 percent in local currencies) reported in 2007. The relative share of large orders compared to the total orders decreased from 17 percent in 2007 to 16 percent in 2008.

Total orders in 2007 increased by 27 percent (19 percent in local currencies). This strong growth was driven by high demand for power products and systems required to install new power infrastructure to expand or refurbish existing facilities in order to improve energy efficiency. Demand for more energy-efficient technologies and the need for capacity expansions to improve productivity also grew in most industrial sectors during 2007. All divisions benefited from favorable market conditions in 2007, resulting in the increase of both base and large orders.

In 2007, orders in the Power Products division grew 32 percent (25 percent in local currencies), supported by strong demand for Transformers and High Voltage Products and to a lesser extent Medium Voltage Products. Orders in the Power Systems division increased 35 percent (26 percent in local currencies), as it obtained a few very large grid system and substation projects during 2007. Orders in the Automation Products division rose 21 percent (13 percent in local currencies), benefiting from investments by industrial customers in efficiency improvements due to higher raw material and energy costs. The Process Automation division recorded a 21 percent increase (13 percent in local currencies) in orders, backed by strong demand in the metals, minerals and marine sectors. Orders in the Robotics division grew 20 percent (13 percent in local currencies), reflecting the positive trend in general industry, particularly in the electronics, food processing and packaging sectors, amid continued

weak demand in the automotive industry. In our Power Products and Automation Products divisions, order growth was also driven by sale price increases to offset higher raw material costs.

We determine the geographic distribution of our orders based on the location of the customer, which may be different from the ultimate destination of the products' end use. The geographic distribution of our consolidated orders was approximately as follows:

	Year ended December 31,				
	2008	2007	2006		
	(\$	(\$ in millions)			
Europe	16,633	15,655	12,124		
The Americas	7,235	6,013	5,064		
Asia	10,242	9,186	6,504		
Middle East and Africa	4,172	3,494	3,356		
Total	38,282	34,348	27,048		

Orders from the Americas increased 20 percent (19 percent in local currencies) backed by strong demand in the U.S., Canada, Mexico, Brazil and Argentina. Orders in this region grew in all divisions except Robotics. Higher investments to install new power infrastructure and increased spending by industrial customers to improve production capacity in growing economies, particularly Korea, China and Singapore, contributed to the increase in orders in the Asian market which reported 11 percent (7 percent in local currencies) growth. Orders in this region increased strongly in all divisions except Power Systems in which orders decreased due to a lower volume of large orders. Orders in Europe increased 6 percent (decreased 1 percent in local currencies). Orders from Finland, Spain, Turkey, Iceland and Sweden were up significantly. However, orders in Germany and United Kingdom were substantially lower. Orders of a similar size as the offshore windfarm project in Germany and the cable order to connect the United Kingdom with the Netherlands with values of approximately \$400 million and \$350 million, respectively, were not received in 2008. Orders in MEA markets increased 19 percent (17 percent in local currencies) driven by higher investments for new infrastructures in the utility and industrial sectors. A strong increase in orders in the MEA region in 2008 was attributable to the higher demand in Saudi Arabia, United Arab Emirates (UAE), South Africa and the Republic of Congo.

The share of orders from Europe remained the largest at 43 percent, although lower than the 46 percent share reported last year. The share of orders from Asia is unchanged at 27 percent. The share of orders from the Americas increased by 2 percentage points in 2008 to 19 percent, while MEA increased its share to 11 percent from 10 percent last year.

In 2007, orders from Europe increased by 29 percent (19 percent in local currencies), boosted by investments in power grid upgrades, interconnection projects and equipment replacement. In particular, we experienced significant increases in Germany, the United Kingdom, Russia and Norway. Orders from the Americas increased by 19 percent (15 percent in local currencies), as demand for refurbishing aging equipment and upgrades in the industrial sector to improve energy efficiency were strong particularly in the United States, Brazil and to a lesser extent, in Chile. Orders from Asia increased by 41 percent (31 percent in local currencies), following higher demand in the utilities and industrial sectors to support rapid economic growth, particularly in China and India. Compared to the very high level of orders received in 2006, orders from MEA increased by 4 percent and were almost flat in local currencies.

Europe accounted for the largest share of orders and increased to 46 percent in 2007 from 45 percent in 2006, while the share of orders from the Asian market increased from 24 percent to 27 percent during the same period. As compared to 2006, the share of orders from the Americas and MEA decreased by 2 percentage points in 2007 to 17 percent and 10 percent, respectively.

## Order backlog

	December 31,			
	2008	2007	2006	
	(\$	in millions)		
Power Products	7,977	6,932	4,845	
Power Systems	7,704	8,209	5,627	
Automation Products	3,863	3,490	2,439	
Process Automation	6,111	5,951	3,991	
Robotics	545	529	441	
Core divisions	26,200	25,111	17,343	
Corporate and Other <sup>(1)</sup>	(2,363)	(2,396)	(1,514)	
Total	23,837	22,715	15,829	

(1)

Including interdivisional eliminations

Order backlog at the end of 2008 increased by \$1,122 million, or 5 percent (14 percent in local currencies), from the end of 2007.

Order backlog continued to grow in 2008 despite strong revenue growth of 20 percent (16 percent in local currencies), as the amount of orders received during the year, in absolute terms, was 10 percent higher than the amount of revenues. Order backlog increased in all divisions except Power Systems which saw a decline due to a lower volume of large orders received in 2008, compared to 2007.

Order backlog at the end of 2007 increased by \$6,886 million, or 44 percent (32 percent in local currencies), from the end of 2006 due to strong order growth in all divisions.

Order backlog grew at a high rate in 2007 despite strong revenue growth of 25 percent (18 percent in local currencies), as the amount of orders received during the year, in absolute terms, was 18 percent higher than the amount of revenues. Growth in the order backlog was further increased by a higher volume of large orders with long delivery schedules, particularly in our Power Systems and Process Automation divisions.

## Revenues

	Year ended December 31,		
	2008	2007	2006
	(\$	in millions)	
Power Products	11,890	9,777	7,275
Power Systems	6,912	5,832	4,544
Automation Products	10,250	8,644	6,837
Process Automation	7,815	6,420	5,448
Robotics	1,642	1,407	1,288
Core divisions	38,509	32,080	25,392
Corporate and Other <sup>(1)</sup>	(3,597)	(2,897)	(2,111)
Total	34,912	29,183	23,281

(1)

Including interdivisional eliminations

In 2008, revenues increased by \$5,729 million or 20 percent (16 percent in local currencies) supported by all divisions, benefiting from high order backlog available at the beginning of the year and high volume of book and bill orders received in the first two quarters of the year. Further, revenue growth was supported by efficiency improvements in the production and order execution processes.

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Revenues in Power Products and Automation Products divisions grew 22 percent (18 percent in local currencies) and 19 percent (13 percent in local currencies), respectively, as these product divisions continued operating at high capacity levels. The increase in revenues in the product divisions was also driven partly by increases in sales prices to compensate the increase of commodity costs. Power Systems and Process Automation divisions reported revenue growth of 19 percent (16 percent in local currencies) and 22 percent (18 percent in local currencies) respectively. The growth of revenues in our Power Systems and Process Automation divisions was primarily driven by progress made in the execution of large orders. High order backlog at the beginning of 2008 was also the main factor contributing to the growth of revenues in the Robotics division, which for this year increased by 17 percent (11 percent in local currencies).

Revenues in 2007 increased by \$5,902 million, or 25 percent (18 percent in local currencies). Growth in revenues in 2007 was primarily driven by a high order backlog at the beginning of the year, an increasing volume of book and bill orders and high utilization of production capacity. The Power Products and Automation Products divisions recorded revenue growth of 34 percent (27 percent in local currencies) and 26 percent (18 percent in local currencies), respectively, as these product divisions benefited from favorable market conditions and sales price increases to compensate for the higher costs of raw materials. Revenue growth was reported at 28 percent (20 percent in local currencies) in our Power Systems division and 18 percent (10 percent in local currencies) in our Process Automation division, in 2007, reflecting further progress achieved in the execution of the large orders received during 2006 and in the first half of 2007. Revenue growth in the Robotics division of 9 percent (3 percent in local currencies) in 2007 was lower than the growth reported by other divisions, due to a relatively small backlog at the beginning of the year.

We determine the geographic distribution of our revenues based on the location of the customer, which may be different from the ultimate destination of the products' end use. The geographic distribution of our consolidated revenues was approximately as follows:

	Year en	Year ended December 31,			
	2008	2007	2006		
	(\$	(\$ in millions)			
Europe	15,815	13,322	10,969		
The Americas	6,428	5,247	4,394		
Asia	8,967	7,480	5,863		
Middle East and Africa	3,702	3,134	2,055		
Total	34,912	29,183	23,281		

In 2008, revenues in Europe increased by 19 percent (13 percent in local currencies). In particular, we experienced significant revenue increases in Germany, United Kingdom, Spain, Finland and Turkey. The revenues from Asia, which increased by 20 percent (16 percent in local currencies), were driven mainly by the increases in China, India, Korea and Singapore. Revenues from the Americas increased by 23 percent (22 percent in local currencies), with strong increase in the United States, Canada and Brazil. Strong growth in revenues was reported in Qatar, UAE, South Africa and Saudi Arabia. High revenues in these countries led to the 18 percent (16 percent in local currencies) growth in MEA region. The increase in revenues in all regions was the result of high production efficiency and sound execution of projects from the initial backlog and book and bill orders received during 2008.

The revenues from Europe contributed 45 percent of the group revenues in 2008. The share of revenues from Asia to the total group revenues was 26 percent while the Americas and MEA reported revenue shares of 18 percent and 11 percent, respectively. The share of revenues in each region in 2008, as a percentage of the total group revenues, was unchanged from the prior year.

In 2007, revenues in Europe increased by 21 percent (12 percent in local currencies). In particular, we experienced significant revenue increases in Russia, Germany, Italy and Spain. However, as a result

of rapid revenue growth in other regions, the relative share of revenues from the European market decreased to 46 percent of our total revenues in 2007, compared to 47 percent in 2006. The revenues from Asia, which increased by 28 percent (20 percent in local currencies), were driven mainly by the increases in China and India and accounted for 25 percent of total revenues, compared to 25 percent in 2006. Revenues from the Americas increased by 19 percent (16 percent in local currencies), mainly contributed by the United States and at December 31, 2007, represented 18 percent of the total revenues, compared to 19 percent in 2006. Revenues from MEA accounted for 11 percent of total revenues, compared to 9 percent in 2006, which represented an increase of 53 percent (47 percent in local currencies), compared to 2006. Revenue growth in this region was particularly strong in Saudi Arabia and Qatar.

#### Cost of sales

Cost of sales increased by \$3,757 million, or 19 percent (15 percent in local currencies), to \$23,972 million in 2008, after an increase of \$3,678 million, or 22 percent (15 percent in local currencies), in 2007. The increase in cost of sales in 2008 was attributable to the growth in sales volumes, as well as increases in certain raw material costs, particularly in the product divisions.

Cost of sales consists primarily of labor, raw materials and components. Cost of sales also includes expenses for warranty, contract losses and project penalties, as well as order-related development expenses incurred in connection with projects for which corresponding revenues were recognized.

As a percentage of revenues, cost of sales decreased, as reflected in the increase in gross profit margin to 31.3 percent in 2008 from 30.7 percent in 2007 and 29.0 percent in 2006. The higher gross margin in 2008 reflected a continuing trend from 2007, as the operations benefited from increased business volume, higher capacity utilization, better project execution and process improvement programs in the areas of risk management and project cost control. Furthermore, the progress made in the implementation of our cost migration strategy delivered financial benefits through cost savings in 2008.

#### Selling, general and administrative expenses

The components of selling, general and administrative expenses for the years ended December 31, 2008, 2007 and 2006 were as follows:

	Year ended December 31,		
	2008	2007	2006
	<b>(\$</b> i	in millions)	
Selling expenses	(2,943)	(2,531)	(2,202)
Selling expenses as a percentage of orders received	7.7%	7.4%	8.1%
General and administrative expenses	(2,879)	(2,444)	(2,124)
General and administrative expenses as a percentage of revenues	8.2%	8.4%	9.1%
Total selling, general and administrative expenses	(5,822)	(4,975)	(4,326)
Total selling, general and administrative expenses as a percentage of			
revenues	16.7%	17.0%	18.6%
Total selling, general and administrative expenses as a percentage of			
the average of orders received and revenues	15.9%	15.7%	17.2%

Selling, general and administrative expenses increased by \$847 million, or 17 percent (12 percent in local currencies), in 2008, after increasing by \$649 million, or 15 percent (8 percent in local currencies), in 2007. Total selling, general and administrative expenses, which are related to both orders received and revenues, expressed as a percentage of the average of orders received and revenues, increased in 2008 by 0.2 percentage points to 15.9 percent from 15.7 percent in 2007, after decreasing 1.5 percent from 2006. The slight increase in selling expenses as a percentage of orders received in the last two quarters of 2008.

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Selling expenses in 2008 increased by \$412 million, or 16 percent (11 percent in local currencies), from 2007. The increases in selling expenses were primarily due to increasing activities in sales and marketing areas and growth of company sales personnel. Expressed as a percentage of orders received, selling expenses increased by 0.3 percentage points in 2008.

Selling expenses in 2007 increased by \$329 million, or 15 percent (7 percent in local currencies), from 2006. These increases were primarily due to volume-related expenses such as sales commissions, hiring of additional resources employed in the developing markets and more intensified sales programs to expand market shares and enter into new markets. Expressed as a percentage of orders received, selling expenses decreased by 0.7 percentage points in 2007.

General and administrative expenses increased by \$435 million, or 18 percent (13 percent in local currencies), in 2008, primarily related to the growth of business. General and administrative expenses include non-order related R&D, which increased 18 percent (12 percent in local currencies) to \$1,027 million in 2008, relative to 2007, reflecting the continued spending on product development activities, particularly in the Power Products, Automation Products and Process Automation divisions. Total general and administrative expenses, as a percentage of revenues, remained at the same level as 2007, despite increased growth during the period. This was partly due to increased focus on the monitoring and controlling of administrative costs both at the corporate and operating unit levels.

General and administrative expenses increased by \$320 million, or 15 percent (8 percent in local currencies), in 2007, which were primarily driven by operational requirements to support the fast growing business. Additional resources and investments were made in that year to improve the business process. General and administrative expenses include non-order related R&D which increased 15 percent (7 percent in local currencies) to \$871 million in 2007, relative to 2006, reflecting the continued spending on product development activities, particularly in the Power Products and Automation Products divisions.

The total selling, general and administrative expenses, as a percentage of revenues, decreased by 1.6 percentage points in 2007. Lower incremental expenses in general and administration expenses in 2007, despite increasing administrative requirements for growing business volumes, were partly due to lower costs associated with the internal control measures to comply with the provisions of the Sarbanes Oxley Act of 2002, higher savings from the group-wide process optimization programs and increased focus on the monitoring and controlling of costs both at the corporate and operating unit levels.

#### Other income (expense), net

	Year ended December 31,		
	2008	2007	2006
	( <b>\$ i</b>	n millions	)
Restructuring expenses	(5)	(8)	3
Capital gains, net	73	95	75
Asset write-downs	(11)	(66)	(12)
Income from licenses, equity accounted companies and other income (expense)	(623)	9	73
Total	(566)	30	139

Other income (expense), net, typically consists of restructuring expenses, gains or losses from the sale of businesses, gains or losses from the sale or disposal of property, plant and equipment, asset write-downs, our share of income or loss from equity accounted companies and license income.

Restructuring costs are recorded in various lines within the Consolidated Income Statements depending on the nature of the charges. In 2008, restructuring costs reported under other income (expense) amounted to \$5 million, incurred for restructuring projects mainly in Power Products,

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Automation Products and Process Automation. In 2007, restructuring costs reported under other income (expense) amounted to \$8 million that primarily consisted of \$3 million costs incurred to streamline the operations in the Power Products division, \$2 million restructuring costs for capacity expansion in the Power Systems division, \$2 million restructuring costs in Real Estate operations and \$1 million of costs in the Automation Products division. In 2006, due to a change in the restructuring liability estimate, restructuring costs resulted in an income of \$3 million.

Capital gains, net, during 2008 amounted to \$73 million which mainly consisted of \$14 million in gains from the sale of shares and participations, \$10 million gain from the release of provision from a legal claim settlement related to the sold Air Handling business and \$47 million capital gains from the sale of real estate properties, mainly in Switzerland, Brazil, Italy, Norway, United Kingdom, Mexico, and Poland. Additionally, in 2008, we recorded adjustments to the gain on sale of Jorf Lasfar and Neyveli of \$16 million related to the favorable outcome on an outstanding tax case.

Capital gains, net, during 2007 amounted to \$95 million which consisted of \$49 million in gains from the sale of equity investments, including a \$38 million gain from the divestment of our equity investments in Jorf Lasfar and Neyveli, a \$41 million gain from the sale of real estate properties mainly in Switzerland, Italy and to a lesser extent in Brazil, Norway and France and a \$5 million gain on sale of various machinery and equipment. In 2006, capital gains, net, included approximately \$65 million of gains from the sale of land and buildings in Europe.

Asset write-downs in 2008 mainly related to the Distributed Energy business in Great Britain and other minor impairments. Asset write-downs during 2007 included an impairment charge of \$42 million in respect of one of our equity investments, which we intend to divest, as the anticipated market value was less than our book value. Asset write-downs in 2006 included the impairment of long-lived assets of \$8 million, primarily in Europe and several minor write-downs on loans and investments.

In 2008, income from licenses, equity accounted companies and other income (expense) primarily consisted of provisions for the ongoing investigations in the Power Transformer business by the European Commission, the German Federal Cartel Office, as well as the investigations by the U.S. Securities and Exchange Commission (SEC) and the U.S. Department of Justice (DoJ) which were recorded in Corporate and Other. (See "Note 15 Commitments and contingencies" to our Consolidated Financial Statements.)

Additionally, income from equity accounted companies in 2008 was generated from our equity ventures investment in Colombia and other investments in Italy, Finland and Germany and license income mainly from Japan. Income from equity accounted companies in 2007 included \$36 million, which was primarily related to Jorf Lasfar prior to its sale in the second quarter of 2007. During 2007, this income was also offset by charges towards several businesses that were sold or closed in earlier years. Income in 2006 was mainly derived from Jorf Lasfar and relatively smaller amounts of income were derived from various other equity accounted companies in India and in the United States.

## Earnings before interest and taxes

	Year ended December 31,		
	2008	2007	2006
	<b>(\$</b> i	in millions)	1
Power Products	2,100	1,596	939
Power Systems	592	489	279
Automation Products	1,908	1,477	1,053
Process Automation	926	683	541
Robotics	9	79	1
Core divisions	5,535	4,324	2,813
Corporate and Other	(983)	(301)	(256)
Total	4,552	4,023	2,557

EBIT increased by \$529 million, or 13 percent (6 percent in local currencies), in 2008, despite the compliance related provisions charged to other income (expense), net and by \$1,466 million, or 57 percent (47 percent in local currencies), in 2007.

The EBIT margins for our core divisions and on a consolidated basis for the years ended December 31, 2008, 2007 and 2006, were as follows:

	Year end	Year ended December 31,		
	2008	2007	2006	
		(%)		
Power Products	17.7	16.3	12.9	
Power Systems	8.6	8.4	6.1	
Automation Products	18.6	17.1	15.4	
Process Automation	11.8	10.6	9.9	
Robotics	0.5	5.6	0.1	
Core divisions	14.4	13.5	11.1	
Consolidated	13.0	13.8	11.0	

The higher group EBIT and EBIT margin in the core operations were achieved through higher margin contributed by significant volumes of incremental revenues and higher capacity utilization, better execution of large projects and increased sourcing of production capacity, components and materials from emerging markets. The compliance related charges recorded in Corporate and Other negatively impacted the consolidated margin compared to 2007.

## Net interest and other finance expense

Net interest and other finance expense consists of interest and dividend income offset by interest and other finance expense.

Interest and other finance expense includes interest expense on our debt, the amortization of upfront costs associated with our credit facility and our debt securities, commitment fees on our bank facility and exchange losses on financial items, offset by gains on marketable securities and exchange gains on financial items.

	Year ended December 31,		
	2008	2007	2006
	(\$ in millions)		
Interest and dividend income	315	273	147
Interest and other finance expense	(349)	(286)	(307)
Net interest and other finance expense	(34)	(13)	(160)

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Interest and dividend income increased in 2008 compared to 2007, reflecting the improvement in our liquidity during the first half of 2008 through cash generated from operations and the change in investment strategy compared to 2007 with more cash placed in time deposits. In the first three quarters of 2007, we invested a significant amount of our excess liquidity in accumulating net asset value money-market funds, where the income is not distributed but is reflected by an increase in value of the funds' shares and is realized upon the sale of such investments. As interest on deposits is recorded in interest and dividend income, while gains on sales of securities are netted against interest and other finance expense, this change in investment strategy explains part of the increase in interest rates, our acceptance of lower yields in favor of security in an increasingly difficult market and, despite positive cash flow from operations, a lower excess cash balance as cash was expended for, amongst other, the nominal value reduction, acquisitions and the share buyback program. (See "Liquidity and capital resources" for discussion of our investment strategy.)

Interest and dividend income increased in 2007 compared to 2006, reflecting the improvement in our liquidity during the year, with the aggregate of the cash and equivalents and marketable securities and short-term investments balances increasing to \$8,110 million at December 31, 2007, from \$4,726 million at December 31, 2006. Up to the third quarter of 2007, we invested a significant amount of our excess liquidity in accumulating net asset value money-market funds, where the income is not distributed but is reflected by an increase in value of the funds' shares and is realized upon the sale of such investments. However, due to the then turbulence in the financial markets, we decided to realize our gains on such securities and invest the cash in term deposits with banks. As gains on sales of securities are recorded in interest and other finance expense, while interest on deposits is recorded in interest and dividend income, this change in investment strategy compared to 2006, combined with our improved liquidity resulted in an increase in interest income in 2007 of \$78 million, compared to 2006.

Both interest and dividend income and interest and other finance expense in 2007 include a gross-up in the amount of \$44 million, related to interest income and expense on certain balance sheet items that were economically related but did not meet the criteria for presentation on a net basis. This should be considered when comparing 2008 figures with 2007 and, similarly, 2007 figures with 2006.

Interest and other finance expense increased in 2008 compared to 2007, despite a reduction in overall debt levels. This increase was primarily due to two items in 2008. Firstly, we recorded a \$20 million other-than-temporary impairment on available-for-sale equity fund securities held by our Captive Insurance business, as we do not expect the market values of these securities to recover to their cost basis in the near term, given current market conditions. (See "Note 2 Significant accounting policies" to our Consolidated Financial Statements.) Secondly, at December 31, 2008, we recorded \$102 million in foreign exchange losses on the remeasurement into U.S. dollars of funding (in euros) of our EUR-denominated investment in government bonds designated as available-for-sale securities. The corresponding foreign exchange gain on these securities is part of their change in market value recorded in accumulated other comprehensive loss in equity and will be released to the income statement in the first quarter of 2009, when these securities mature. The loss is the result of the significant move in the EUR/USD exchange rate in the month of December 2008 and the amount of the EUR-denominated funding of these securities (1.06 billion euros).

Interest and other finance expense was lower in 2007 than in 2006. The reduction was the result of several factors. Firstly, interest and other finance expense in 2006 included \$55 million in expenses related to the induced conversion of our \$968 million convertible bonds during the second quarter of 2006. Secondly, as a result of the improvement in our liquidity position, we generated approximately \$18 million additional net gains on marketable securities in 2007, compared to 2006. While the induced conversion of our \$968 million convertible bonds during 2006 and the conversion by bondholders during 2007 of our 1 billion Swiss francs convertible bonds resulted in a significantly lower average debt level during 2007, compared to 2006, the savings in interest expense were partially offset by increases in interest rates (particularly in euros) as all of our remaining outstanding bonds were swapped using interest rate swaps into floating rate obligations.



#### **Provision for taxes**

	Year ended December 31,		
	2008	2007	2006
	( <b>\$</b> i	n millions)	
Income from continuing operations, before taxes and minority interest	4,518	4,010	2,397
Provision for taxes	(1,119)	(595)	(686)
Effective tax rate for the year	24.8%	14.8%	28.6%

The provision for taxes in 2008 was \$1,119 million, representing an effective tax rate for the year of 24.8 percent. The provision for taxes in 2008 includes the change in valuation allowance of approximately \$414 million on deferred taxes as we determined it was more likely than not that such deferred tax assets would be realized. The change in valuation allowance was predominantly related to our operations in north America with approximately \$330 million. In addition, the provision for taxes in 2008 included an expense of approximately \$140 million relating to a pending tax dispute in north Europe. Approximately \$100 million related to costs of previously disclosed investigations by the U.S. and European authorities into suspect payments and alleged anti-competitive practices that were deducted for financial accounting purposes, but were not tax deductible.

The provision for taxes in 2007 was \$595 million, representing an effective tax rate for the year of 14.8 percent. The provision for taxes in 2007 includes the change in valuation allowance of approximately \$698 million on deferred taxes as we determined it was more likely than not that such deferred tax assets would be realized. The change in valuation allowance was predominantly related to our operations in certain countries such as the United States with approximately \$490 million, but also including countries such as Canada and the United Kingdom. In addition, the provision for taxes in 2007 included an expense of approximately \$35 million relating to the interpretation of tax law and double tax treaty agreements by competent tax authorities in northern Africa and an expense of approximately \$45 million relating to a net increase in tax accruals.

The provision for taxes in 2006 was \$686 million, representing an effective tax rate for the year of 28.6 percent. The provision for taxes in 2006 includes an expense of approximately \$35 million relating to items that were deducted for financial accounting purposes but not for the purpose of computing taxable income, such as interest expense, state and local taxes on productive activities and other non-deductible expenses. Furthermore, the provision for taxes in 2006 also included an expense of approximately \$70 million relating to a net increase in tax accruals.

#### Income from continuing operations

Income from continuing operations decreased by \$32 million to \$3,139 million in 2008, after increasing by \$1,639 million to \$3,171 million in 2007. The improvement in EBIT in 2008 was largely offset by a lower net interest and other finance expense as well as a higher tax rate discussed above. Income from continuing operations in 2007 benefited from a sharp increase in EBIT as well as a very favorable tax rate compared to 2006.

#### Income (loss) from discontinued operations, net of tax

For a detailed discussion of the income (loss) from discontinued operations, net of tax, as well as a detailed discussion of the results of our discontinued operations, see "Discontinued operations," and "Note 3 Acquisitions, divestments and discontinued operations" to our Consolidated Financial Statements.

#### Net income

As a result of the factors discussed above, net income decreased by \$639 to \$3,118 million in 2008 and increased by \$2,367 million to \$3,757 million in 2007 from \$1,390 million in 2006.



## Earnings (loss) per share

	Year end	Year ended December 31,		
	2008	2007	2006	
		(\$)		
Income from continuing operations:				
Basic	1.37	1.40	0.72	
Diluted	1.37	1.38	0.69	
Income (loss) from discontinued operations, net of tax:				
Basic	(0.01)	0.26	(0.07)	
Diluted	(0.01)	0.25	(0.06)	
Net income:				
Basic	1.36	1.66	0.65	
Diluted	1.36	1.63	0.63	

Basic earnings (loss) per share is calculated by dividing income (loss) by the weighted-average number of shares outstanding during the year. Diluted earnings (loss) per share is calculated by dividing income (loss) by the weighted-average number of shares outstanding during the year, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities comprise: outstanding written call options; outstanding options and shares granted subject to market and/or vesting conditions under our share-based payment arrangements and, prior to September 2007, shares issuable in relation to our outstanding convertible bonds. (See "Note 20 Earnings per share" to our Consolidated Financial Statements.)

#### **Divisional analysis**

#### **Power Products**

The financial results of our Power Products division were as follows:

	Year end	Year ended December 31,		
	2008	2007	2006	
	(\$	(\$ in millions)		
Orders	13,627	11,320	8,572	
Order backlog <sup>(1)</sup>	7,977	6,932	4,845	
Revenues	11,890	9,777	7,275	
EBIT	2,100	1,596	939	

(1)

At December 31

## Orders

Orders increased by \$2,307 million, or 20 percent (15 percent in local currencies) in 2008 after improving \$2,748 million, or 32 percent (25 percent in local currencies) in 2007. These improvements were primarily due to growth in demand for electricity, particularly in emerging markets, and the expansion and improvement of power grid infrastructure, with a focus on environmental sustainability. The increase in orders reflected growth in all businesses, led by Transformers. Base orders, which grew by 18 percent and 30 percent (12 percent and 22 percent in local currencies), made up the vast majority of orders, in 2008 and 2007, respectively. Price increases to cover the increase in the cost of raw materials also contributed to the order increase in 2007.

The geographic distribution of orders as a percentage of total orders in 2008, 2007 and 2006 for our Power Products division was approximately as follows:

	Y De	Year ended December 31,		
	2008	2008 2007		
		(%)		
Europe	38	39	36	
The Americas	24	24	25	
Asia	30	30	31	
Middle East and Africa	8	7	8	
Total	100	100	100	

The share of orders from Europe, which continued to be the largest regional source of orders, decreased marginally. However, it recorded order growth in absolute terms in 2008. This growth was driven by the need to replace aging infrastructure and increased demand for power grid interconnections and renewable energy sources. The share of orders from the Americas remained flat and was considerably influenced by orders from the United States, driven by the need to replace aging infrastructure and to meet existing mandated reliability standards and load growth. The share of orders from Asia remained stable compared to 2007. Demand was driven by the growth in energy needs, particularly in China and India, resulting from increasing levels of industrialization and urbanization. The share of orders from MEA improved in 2008, reflecting increased investment in infrastructure in the region, supported by high oil prices.

## **Order backlog**

Order backlog in 2008 increased by \$1,045 million, or 15 percent (24 percent in local currencies), after increasing by \$2,087 million, or 43 percent (32 percent in local currencies) in 2007, due to increased order intake in all businesses, led by Transformers which typically have longer delivery schedules.

## Revenues

Revenues increased by \$2,113 million, or 22 percent (18 percent in local currencies) in 2008 as a result of continued order growth and strong opening order backlog in almost all market segments, particularly in transformers.

Revenues increased by \$2,502 million, or 34 percent (27 percent in local currencies), in 2007, as a result of order growth experienced in many market segments, particularly in transformers and sales price increases to cover increased raw material costs.

The geographic distribution of revenues in 2008, 2007 and 2006, for our Power Products division was approximately as follows:

	Year ended December 31,		
	2008	2007	2006
		(%)	
Europe	38	39	37
The Americas	24	24	25
Asia	30	30	31
Middle East and Africa	8	7	7
Total	100	100	100

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The relative share of revenues among geographic regions in 2008 and 2007 remained similar to the distribution of orders, while all regions recorded growth in revenues as compared to the previous year. In Europe the growth in revenues was led by Spain, Switzerland and the United Kingdom. Revenue growth in Asia in 2008 was led by China and India, while revenue growth in the Americas was particularly strong in the United States. In MEA, the revenue increase was mainly driven by Saudi Arabia.

The growth in European revenues in 2007 was led by Russia and Germany. Revenue growth in Asia in 2007 was led by China and India, while revenue growth in the Americas was particularly strong in the United States. In MEA, the share of revenues remained similar compared to 2006 with the increase in revenues driven by Saudi Arabia.

#### Earnings before interest and taxes

EBIT grew by \$504 million, or 32 percent (24 percent in local currencies), in 2008, after increasing \$657 million, or 70 percent (60 percent in local currencies), in 2007. The EBIT margin for the division was 17.7 percent in 2008, as compared to 16.3 percent in 2007 and 12.9 percent in 2006. EBIT and EBIT margin benefited from higher contribution from increased revenues, improved capacity utilization across all businesses, operational and productivity improvements, supply chain savings and positive impacts from the transformer consolidation program. Total costs related to the transformer consolidation program in 2008 amounted to \$46 million (\$34 million in 2007)

#### Fiscal year 2009 outlook

Uncertainty in the lending environment may contribute to project delays and the general global economic slowdown may result in further weakening of industrial and construction-related demand which may affect our products linked to the distribution sector. However, we currently believe that utilities will continue to invest in equipment replacement and grid upgrades.

#### **Power Systems**

The financial results of our Power Systems division were as follows:

	Year en	Year ended December 31,		
	2008	2007	2006	
	(\$	(\$ in millions)		
Orders	7,408	7,744	5,733	
Order backlog <sup>(1)</sup>	7,704	8,209	5,627	
Revenues	6,912	5,832	4,544	
EBIT	592	489	279	

(1)

At December 31

## Orders

Order intake in 2008 decreased by \$336 million, or 4 percent (8 percent in local currencies) due to a lower volume of large orders, while the base order volume was maintained at the previous year's level. Large projects secured in 2008 included a \$233 million order from Hyundai Engineering and Construction (HDEC) of Korea to supply power systems and grid connections for a natural gas and steam turbine (combined-cycle) power plant to be built in Qatar. A \$170 million contract was received from Svenska Kraftnät and Fingrid Oyj, the transmission system operators in Sweden and Finland, for two HVDC converter stations for the Fenno-Skan 2 power link. A \$150 million order was received from Dutch utility Nuon to provide power systems and grid connections for a new power plant to be built in the Netherlands.

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The increase in orders in 2007 compared with 2006 reflected a significant growth of 52 percent (41 percent in local currencies) and 26 percent (18 percent in local currencies), of large and base orders, respectively, as demand for power transmission and distribution systems was strong in most markets. The large orders secured in 2007 included an offshore wind farm project in Germany with an order value of more than \$400 million, a \$350 million cable order to connect the United Kingdom with the Netherlands and an ultrahigh-voltage power link in China with an order value for the Power Systems division of approximately \$270 million.

The geographic distribution of orders as a percentage of total orders in 2008, 2007 and 2006 for our Power Systems division was approximately as follows:

	Y De	Year ended December 31,		
	2008	2008 2007		
		(%)		
Europe	39	46	39	
The Americas	16	11	17	
Asia	20	21	16	
Middle East and Africa	25	22	28	
Total	100	100	100	

Europe remained the largest region in terms of order intake in 2008, despite a decrease compared with the prior year. The order decrease in Europe mainly reflected the high volume of large projects received in this region in 2007, which could not be matched in 2008. MEA continued to show significant market growth for the division, as high fuel prices triggered investments in big infrastructure projects. Orders were also strong in the Americas, particularly in the United States, Canada and Brazil, resulting in a higher percentage share for the Americas region as compared to the previous year. The order share from Asia decreased marginally, mainly due to a relatively lower volume of large orders from China. Orders also decreased in India, primarily as the Power Systems division decided to discontinue the rural electrification business due to safety concerns.

The order growth in Europe in 2007 was fueled by large projects and a double-digit growth in base orders. Europe was the largest regional source of orders and increased its percentage share in 2007. Asia saw strong order growth in 2007 and was helped by a large ultrahigh-voltage project in China and strong base order growth led by India. The share of orders from the Americas and MEA decreased as Europe and Asia recorded significant increases in their respective order volumes and gained higher percentage shares compared to 2006. Base order growth in the Americas was offset by a lower level of large orders, resulting in lower overall order volumes in 2007 compared to 2006. 2007 orders in MEA slightly decreased despite the strong market growth, as the high level of large projects in 2006 did not recur in 2007.

### Order backlog

Order backlog in 2008 decreased by \$505 million, or 6 percent (increased 4 percent in local currencies), due mainly to a lower volume of large order intake. The order backlog increased by \$2,582 million, or 46 percent (34 percent in local currencies), at December 31, 2007, compared with December 31, 2006, reflecting the growth in large and base orders.

#### Revenues

Revenues increased by \$1,080 million, or 19 percent (16 percent in local currencies), in 2008 as compared with an increase of \$1,288 million, or 28 percent (20 percent in local currencies), in 2007.

Revenues in 2008, as in 2007 grew mainly as a result of an increased level of project execution of both backlog and new orders.

The geographic distribution of revenues in 2008, 2007 and 2006 for our Power Systems division was approximately as follows:

	Y De	Year ended December 31,		
	2008	2008 2007		
		(%)		
Europe	42	40	44	
The Americas	14	15	16	
Asia	18	20	20	
Middle East and Africa	26	25	20	
Total	100	100	100	

In 2008, all regions led recorded growth in revenues over the previous year with Europe and MEA taking the lead. The higher revenues from Europe in 2008 reflected strong revenue growth particularly from Germany, the United Kingdom and Italy, driven by the execution of large projects booked in 2007 and 2006. The revenue growth from MEA was also largely due to the execution of large orders booked in the region in 2007 and 2006.

All regions recorded growth in revenues over the previous year in 2007. Europe and the Americas saw a decrease in their respective shares of total revenues as MEA gained a higher share. Growth in Europe, in 2007, was led by central and eastern Europe, with a significant increase in Russia. The higher revenues from the Americas, in 2007, reflected strong revenue growth, particularly from Canada on the execution of the HVDC project booked in 2006 and also from increases in the United States and Brazil. The revenue increase in Asia related primarily to strong growth in India.

## Earnings before interest and taxes

EBIT of the Power Systems division grew by \$103 million, or 21 percent (19 percent in local currencies) in 2008, compared with growth of \$210 million, or 75 percent (63 percent in local currencies), in 2007, over the previous year. The EBIT margin for the division improved to 8.6 percent in 2008 compared with 8.4 percent and 6.1 percent in 2007 and 2006, respectively.

The increase in EBIT and EBIT margin in 2008 and 2007 can be attributed mainly to higher revenues and capacity utilization, bidding selectivity, project execution and the cost benefit from expanding engineering resources in emerging markets.

## Fiscal year 2009 outlook

Key market drivers for the Power Systems division are economic growth in emerging markets, upgrades of aging infrastructure, power reliability and quality concerns, increased focus on energy efficiency and environmental issues and the integration of renewable energy sources. Looking ahead, we believe the economic slowdown could result in a reduction of electricity consumption and uncertainties around financing could lead to postponement of large orders in some cases. At the same time, we believe governments may also leverage infrastructure investments in the energy sector, such as transmission interconnections, to stimulate the economy. There are also political commitments in the EU, U.S., and Asia to increase the share of energy from renewable sources, which could spur activity in the sector.
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# **Automation Products**

The financial results of our Automation Products division were as follows:

Year end	Year ended December 31,		
2008	2007	2006	
(\$ in millions)			
10,872	9,314	7,706	
3,863	3,490	2,439	
10,250	8,644	6,837	
1,908	1,477	1,053	
	Year end 2008 (\$ i 10,872 3,863 10,250 1,908	Year ended Decembra   2008 2007   (\$ in millions)   10,872 9,314   3,863 3,490   10,250 8,644   1,908 1,477	

(1)

At December 31

### Orders

Orders increased by \$1,558 million, or 17 percent (11 percent in local currencies), in 2008 and \$1,608 million, or 21 percent (13 percent in local currencies), in 2007.

The increase in 2008 was the result of high demand during the first three quarters of the year for all business units except wiring accessories which experienced a weakening construction market. In the fourth quarter demand for standard industrial and building products declined, reflecting the general global economic downturn. Orders for low-voltage drives, machines and low-voltage systems increased in the last quarter due to orders for energy conservation and renewable energy (mainly wind).

Demand in 2007 was high as many industrial customers increased their investments in efficiency improvements due to higher raw material and energy costs. Orders received increased for all business units with the highest growth in power electronics and MV drives which received a \$110 million order for an advanced railway power converter system in Germany. Also, standard products such as Low Voltage (LV) drives, breakers and switches, LV motors, control products, instrumentation, enclosures and DIN-rail components reached double-digit growth in local currencies.

The geographic distribution of orders as a percentage of total orders in 2008, 2007 and 2006 for our Automation Products division was approximately as follows:

	Year ended December 31,		
	2008	2007	2006
		(%)	
Europe	60	63	63
The Americas	11	11	12
Asia	23	21	20
Middle East and Africa	6	5	5
Total	100	100	100

The share of orders from Europe in 2008 decreased as total orders only grew 13 percent (5 percent in local currencies). The lower growth rate in orders reflected the weak construction market particularly in Germany and Spain. Furthermore, in 2007, we secured a \$110 million order for traction converters in Germany which was not repeated. The share of orders in the Americas was stable as high order growth in south America compensated for the weakening construction sector in United States. The share of orders from Asia increased as result of industrial infrastructure investments in China and India.

In 2007, the share of orders from Europe and MEA remained at the same level compared to 2006, while the share of orders from the Americas slightly decreased due to the increase in the share of

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orders from Asia, as a result of fast growing markets in that region, especially in China and India. Orders in Europe increased, supported by the growth in eastern Europe. Orders in the Americas increased, although north America grew at a lower pace than in 2006 due to slowdown in the United States, which was more than offset by growth in south America, particularly, Brazil. The increase in MEA was mainly the result of continued high investments in the oil and gas sector.

### Order backlog

Order backlog in 2008 increased by \$373 million, or 11 percent (18 percent in local currencies), as orders were higher than revenues for most business units, especially in Power Electronics and MV Drives which booked several larger MV drive projects during the last half of the year.

Order backlog increased by \$1,051 million, or 43 percent (31 percent in local currencies), at December 31, 2007, from December 31, 2006. The increase related mainly to growth in orders related to systems and engineered products, which have longer delivery times compared to standard products.

# Revenues

Revenues increased by \$1,606 million, or 19 percent (13 percent in local currencies) in 2008, compared with \$1,807 million, or 26 percent (18 percent in local currencies), in 2007.

The increases in 2008 were a result of higher order intake and execution of a strong order backlog. The revenue growth came from higher volumes as only minor price increases were made in 2008.

During 2007, revenues increased in all business units, such as Machines and Power Electronics and MV Drives, due to the high order backlog, with strong growth in engineered products and systems. The growth was mainly achieved by increased volumes but also by higher prices to compensate for increased raw material costs.

The geographic distribution of revenues in 2008, 2007 and 2006 for our Automation Products division was approximately as follows:

Year ended December 31, 2008