



Creating the future  
The ABB Group Annual Report 2015

# This is ABB

ABB is a pioneering technology leader in the fields of power and automation. We help our customers address the challenges of changing markets, technologies and regulations.

We deliver solutions that raise productivity and reduce environmental impacts for utilities, industry, transport and infrastructure.

Our operations are globally balanced and distinguished by strong positions in all of the world's principal markets.

We build long-lasting, value-creating partnerships with customers, suppliers, business partners, employees and the communities in which we operate.

Innovation and quality are the hallmarks of our offering, which ranges from switches to industrial robots to engineering and expert service, from transmission and distribution networks to software that manages entire factories.

With roots in power and automation that go back to the 19th century, our innovations have shaped the world we know today, and are helping to create the future.

## Key Figures 2015

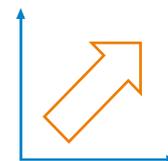
in US \$ unless otherwise stated



**\$36.4 bn**  
Orders received



**\$35.5 bn**  
Revenues



**11.8%**  
Op. EBITA  
margin



**\$1.9 bn**  
Net income



**\$3.0 bn**  
Free cash flow



**0.74 CHF**  
Dividend per share  
(Proposed)

# Contents

---

02	Chairman and CEO letter
06	Highlights of 2015
08	Innovation at ABB
14	The big shifts in power and automation
18	Alliance with Solar Impulse
20	Executive Committee
21	Regional and country managers
<hr/>	
23	Corporate governance report
41	Compensation report
69	Financial review of ABB Group
163	ABB Ltd Statutory Financial Statements
181	Supplemental information
182	Investor information

# Chairman and CEO letter

## Dear shareholders,

Digitalization is driving a fourth industrial revolution that is transforming many sectors of business more profoundly than at any time since the start of the industrial era. ABB's customers trust us to lead this process in our core business areas of power and automation, just as we have continuously led innovation and change in these segments since our origins in the 19th century.

ABB's strength is deeply rooted in technological innovation, and we can be found at the center of current developments in clean energy, smart grids, microgrids, robotics, industrial asset effectiveness and sustainable transport. This report provides many examples of our major contributions in these fields, along with information on our market position and strategy for the future, and, of course, our results from last year.

### **Big shifts in power and automation**

Today, we face two key global trends in our business. One is the shift towards renewables, which is accelerating despite the low oil price – 2015 was a strong year for investment in renewables, with 121 gigawatts of capacity added. This results in unprecedented demands to manage the complexity of the “digital grid” of the future. The other is what we call the industrial “Internet of Things, Services and People”, resulting for example in growing intelligence of machines that is driving quantum leap improvements in productivity and safety in industry. As a global leader in power and automation technologies, ABB is driving this change and supporting our customers to benefit from both of these shifts. We see them as key to our business, now and in the future, and essential to solving the underlying causes of key challenges that are affecting the world today, namely climate change and weak economic growth.

In power generation, renewables are transforming the energy mix, putting pressure on traditional producers to rethink their business models while lessening environmental impact and dramatically increasing grid complexity. The future grid will be far more complex with multiple feed-in points from traditional power plants to large-scale renewables on the supply

“ABB stands for groundbreaking innovations that are paving the way to the ongoing digital revolution.”

side, and a coexistence of traditional demand patterns and microgrids and nanogrids on the demand side. Managing this complexity will require intelligently automated, digital power grids that can anticipate demand and supply patterns, while routing and transporting power to the ever-increasing number of consumption points of electricity. This key part of ABB's offering now comes from one integrated business, which focuses on “power and automation for the grid” — our newly created Power Grids division, which became effective in January 2016.

On the automation side, advances in sensor technology, combined with ubiquitous connectivity and massive increases in our ability to process and store data, are enabling machines to become more and more intelligent, as well as to learn and to interact with humans in new ways. The basis for this is the industrial Internet of Things, Services and People. In time, this will enable the next stage of industrial automation, in which machines and entire process chains learn to reason and take decisions, making processes self-regulating and self-optimizing.

### Pioneering technology leader

ABB stands for groundbreaking innovations that are paving the way to the ongoing digital revolution. These technologies address the needs of our customers and the major shifts in the fields of power and automation.

ABB's innovations for the grid in 2015 included devices that can automatically adjust the voltage fluctuation across entire distribution networks. These address the major challenges to stability posed by the expanding role of renewable energy in the system. We also achieved again more world firsts in high-voltage direct current (HVDC) transmission, a technology pioneered and developed by ABB. These included the world's first multi-terminal ultra-HVDC link, activated in India, and the successful deployment of a new black out recovery system in Finland.

In 2015, we took many steps to turn our digital vision into reality. Our state-of-the-art dual-arm collaborative robot YuMi was launched to great acclaim at the Hanover Fair. This product demonstrates ABB's technology leadership in hardware, software and services. It is extremely accurate, able to learn, and is connected to our global remote condition monitoring center in India. Strengthening our leadership in automated buildings, our voice-controlled smart home system ABB-free@home significantly exceeded expectations with very strong growth. An order from Maersk Line for software for 140 container ships demonstrated our innovative capacity in this sector. Based on hull design, loads, weather and wave motion monitoring, the software optimizes each vessel's route to enhance safety, speed and energy efficiency.



“The divisional realignment, and our measures to improve productivity, will drive organic growth and make us leaner, faster and more agile.”

#### Next Level strategy

Staying at the forefront of the big shifts in power and automation requires technology leadership as well as an effective organization. In 2014, we introduced the Next Level strategy covering the 2015-2020 period to drive profitable growth and accelerate sustainable value creation in a fast-changing world. In 2015, we made significant progress toward many of our goals, reinforcing our focus on innovation, streamlining our organization and strengthening our performance culture. Our customers have noticed the improvement; their satisfaction, as measured by our Net Promoter Score, increased by four points in 2015 to 48. A major execution achievement was the successful turnaround of our Power Systems division, which entered its target margin corridor in the fourth quarter of last year.

In September 2015, we launched Stage 2 of the Next Level strategy to accelerate the transformation of ABB. Building on our three focus areas of profitable growth, relentless execution and business-led collaboration, we are continuing to drive the shift in our center of gravity toward higher growth, greater competitiveness and lower risk, while accelerating existing growth and execution improvement programs.

A key action of Stage 2 included the customer-oriented streamlining of our divisions from five to four, which was implemented in January 2016. The new Power Grids division – comprising parts of the former Power Products and Power Systems divisions – is a world leader in power and automation technologies for the grid, enabling the transmission and distribution of electricity. As such, it is an ideal partner to help utilities meet the new challenge of building a digital grid to manage network complexity and integrate renewable energies.

The newly created Electrification Products (EP) division is one of three focused on power and automation for the site of electricity consumption, which includes industry and transport and infrastructure. This new market-focused division brings together our strong portfolio of medium- and low-voltage solutions. Together with the Discrete Automation and Motion and Process Automation divisions, EP is well positioned to shape the new industrial era we are entering.

The divisional realignment, and our measures to improve productivity, will drive organic growth and make us leaner, faster and more agile to deliver our targets, close the gap in operating performance with our best-in-class peers, and unlock further value within ABB.

#### Looking back on what we have achieved ...

We are building on strong foundations and on the results of the homework we have done. In 2015, ABB delivered solid results in a challenging environment. In a year of weakening markets and uncertainty, we delivered steady orders and revenues on a comparable basis. The successful rollout of our framework of penetration, innovation and expansion (or “PIE”) across our markets and customer segments allowed us to realize profitable growth in many areas, mitigating some strong market headwinds. Our profitability, measured in operational EBITA margin, was up 60 basis points on the year to 11.8 percent.

Nevertheless, our far reaching restructuring measures – particularly in businesses impacted by the slump in commodity prices and our white collar productivity program – played a significant role in dampening net income for the year, which was just over \$1.9 billion, down 25 percent from 2014. Significant changes in foreign currency rates continued to impact our financial figures reported in US dollars. In addition, one of the challenges we are addressing is the decline in revenues and margins in our Discrete Automation and Motion division. The division suffered from weakening demand in process industries in key markets such as the US and China for products and services.

Faced with these significant headwinds, our decisive action on productivity, costs, working capital and organizational streamlining allowed us to increase our Group operational margin for the year while maintaining strong levels of cash flows.

Our solid financial performance is a good basis to maintain our commitment to delivering attractive returns to our shareholders. Last year we returned more than \$3.2 billion in cash through dividend payments and share repurchases. The Board of Directors is proposing a seventh consecutive dividend increase, to CHF 0.74 a share, at the 2016 annual general meeting.

### ... and looking ahead to new challenges and opportunities

Our markets remain challenging, with slower growth in China and steady conditions in Europe and the United States. We expect India to invest in power infrastructure and industrial development, but see continuing weakness in other emerging markets. In this environment, we will continue to focus on our opportunities for profitable growth, on mitigating the impact of sluggish markets by our relentless execution of productivity measures, cost reductions and cash actions, and on business-led collaboration designed to provide outstanding service to our customers.

**“We are building on strong foundations and on the results of the homework we have done. In 2015, ABB delivered solid results in a challenging environment.”**

The longer-term prospects for our business remain excellent; the digital revolution continues to unfold at high speed, and it is poised to yield significant improvements in productivity and business activity in the medium term. As the fourth industrial revolution gathers pace, we have laid the foundation to take ABB to the next level. We made solid progress towards our targets and remain highly focused on our goal to make ABB leaner, faster and more externally focused. ABB will continue to drive major shifts in power and automation.

We are proud to have such a dedicated and hard-working team at ABB, and we thank our employees, customers and partners around the world for their vital support. We would also like to extend our warm thank you to you – our shareholders – for your continued trust. ABB is a pioneering technology leader with strong positions in attractive markets, and we remain committed to delivering attractive returns to our shareholders, based on our clear transformation agenda.

Sincerely,



**Peter Voser**  
Chairman



**Ulrich Spiesshofer**  
CEO

February 25, 2016

# Highlights of 2015

**Increased operational EBITA margin** by 60 basis points to 11.8 percent, in a challenging market environment.

**Secured landmark orders** to connect the Norwegian power grid to those of Germany and the United Kingdom.

**Successfully turned around the Power Systems division**, which entered its target margin corridor in the fourth quarter.

**Took out \$1.2 billion in costs** by accelerating ongoing savings program that has now delivered annual savings of more than \$1 billion for seven consecutive years.

**Delivered strong cash performance**, with rising free cash flow demonstrating that ABB is moving towards a new cash culture.

**Initiated divisional realignment** from five divisions to four, to serve our customers in a better, more focused way that delivers additional value.

**Returned \$3.2 billion in cash to shareholders** – an all-time high – through dividend payments and share repurchases. Board proposes seventh consecutive dividend increase.

**Launched Stage 2 of Next Level strategy** to accelerate the transformation of ABB and drive organic growth.

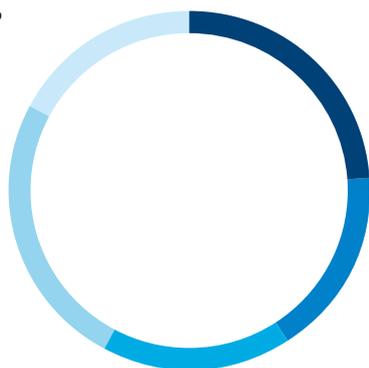
**Total ABB Group** (\$ in millions unless otherwise indicated)

	2015	2014
Orders	36,429	41,515
Revenues	35,481	39,830
Income from operations	3,049	4,178
as % of revenues	8.6%	10.5%
Operational EBITA <sup>(1)</sup>	4,169	4,475
as % of operational revenues <sup>(1)</sup>	11.8%	11.2%
Net income (attributable to ABB)	1,933	2,594
Basic earnings per share (\$)	0.87	1.13
Dividend per share in CHF (proposed)	0.74	0.72
Cash flow from operating activities	3,818	3,845
Free cash flow <sup>(1)</sup>	3,019	2,857
as % of net income	156%	110%
Cash return on invested capital <sup>(1)</sup>	13.4%	12.7%
Number of employees	135,800	140,400

<sup>(1)</sup> Refer to the Supplemental information section on page 181 for definitions

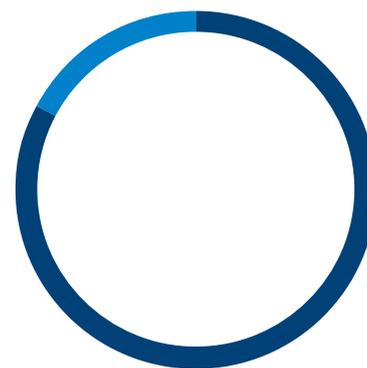
Revenues 2015 by division (unconsolidated)

- Discrete Automation and Motion, 24%
- Low Voltage Products, 17%
- Process Automation, 17%
- Power Products, 25%
- Power Systems, 17%



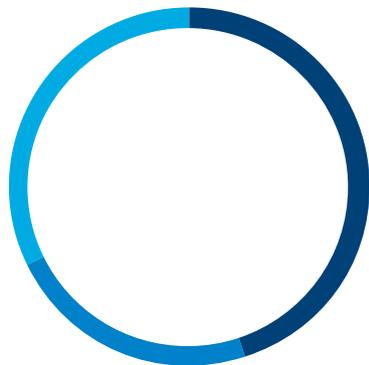
Service revenues as % of total revenues 2015

- Product revenues, 83%
- Service revenues, 17%



Employees by region 2015

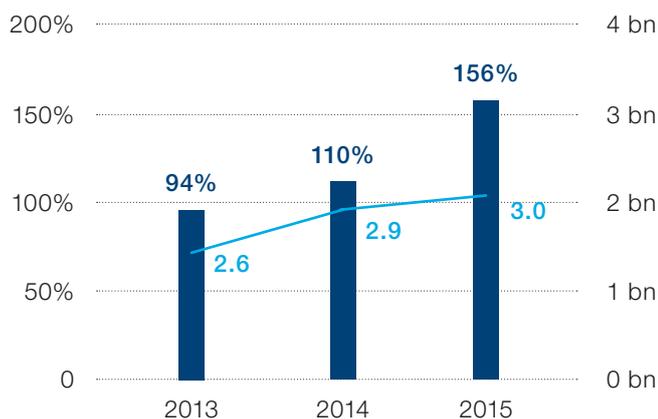
- Europe, 45%
- Americas, 23%
- AMEA<sup>(1)</sup>, 32%



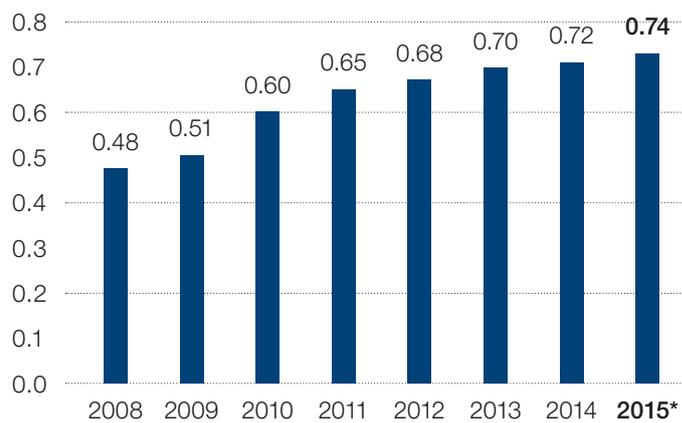
Orders 2015 by region

Europe, 34%  
Americas, 29%  
AMEA<sup>(1)</sup>, 37%

Free cash flow and conversion rate, \$ bn and % 2013-2015



Dividend payout (CHF per share) 2008-2015



(\*proposed)

<sup>(1)</sup> Asia, Middle East and Africa

# Innovation at ABB: the cornerstone of our competitiveness

ABB is one of the world's leading engineering companies, helping customers to use electrical power effectively and to increase industrial productivity in a sustainable way. Maintaining our position requires a global presence, application knowledge, strong local expertise and, above all, technological leadership.

Many of the benefits of the modern world, from electricity at the touch of a switch to the consistent high quality of industrial goods, are made possible by technology that was pioneered, improved and adapted by ABB over more than a century of innovation.

Technological innovation remains a cornerstone of ABB's competitiveness and a key driver of profitable organic growth. Each year we dedicate around \$1.5 billion, or close to 4 percent of revenues, to research and development by our 8,200 technologists.

In this way, we create and support a comprehensive range of products, systems and services that increase energy efficiency, reliability and productivity for our industrial, utility, and transport and infrastructure customers.

## Research and development

Historically, the core of ABB's innovation success has been the close proximity to customers that has allowed us to understand their needs, as well as the collaboration between

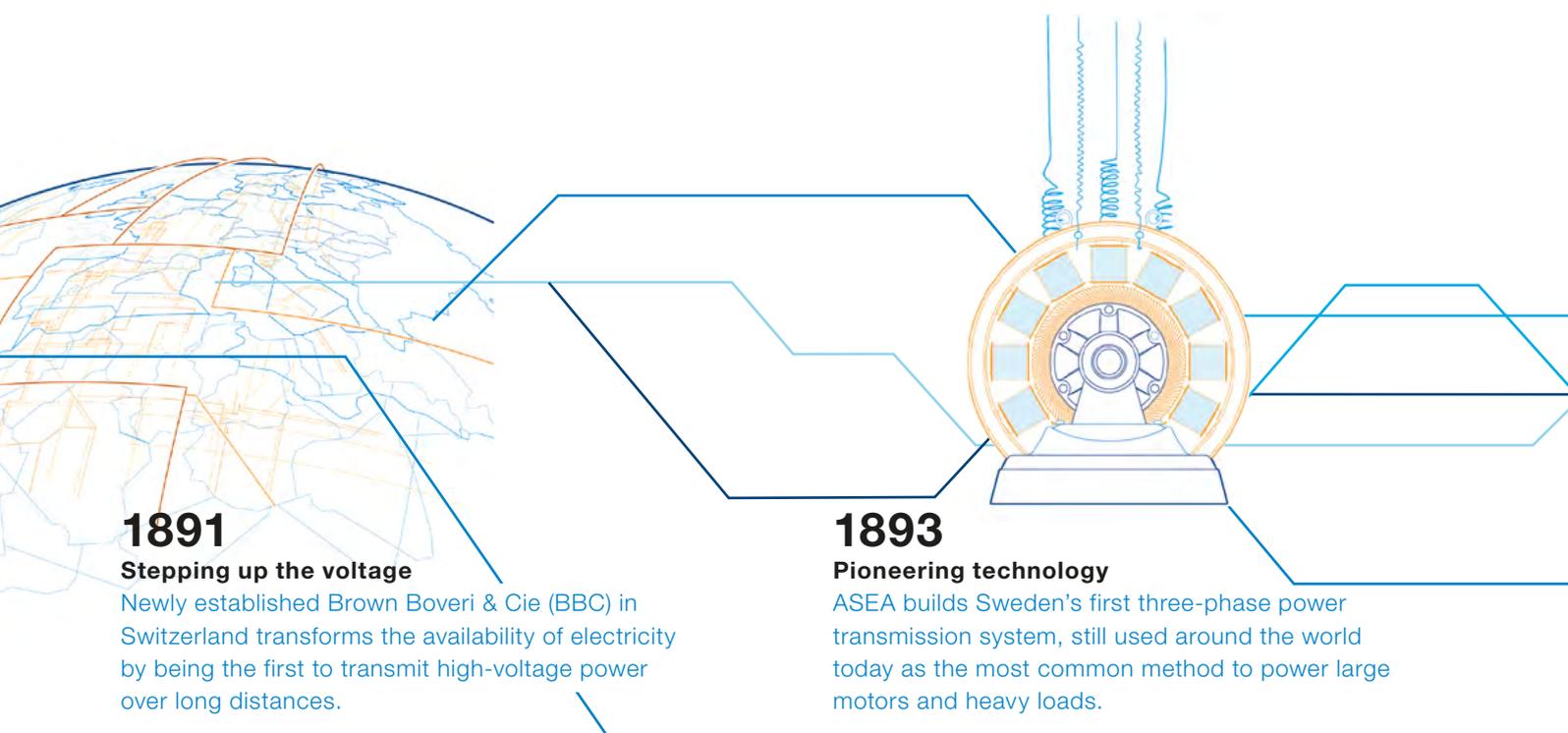
the Corporate Research unit that serves the entire company and the R&D teams in the businesses. These partnerships have provided the foundation for many of our pioneering technologies and is driving the transformation of power and automation (see pages 14-17).

We use our strategic framework of penetration, innovation and expansion (PIE) to maintain a sharp focus on the needs of the market in our R&D activity.

Corporate Research anchors and grows the core competencies of R&D in power and automation, including communication, control, electromagnetics, materials, mechanics, power electronics, sensors, software and switching.

With research centers in China, Germany, Poland, Sweden, Switzerland and the US, we are ideally positioned to access local talent, evaluate ideas emerging from academia all over the world, test the commercial viability of new products and solutions and, most critically, share technology to make it accessible throughout the entire group.

One core area of research is the Internet of Things, Services and People (IoTSP) that enables Web-based automation and control solutions to improve productivity and quality. For more than a decade we have been working to develop and enhance process control systems, communications solutions, sensors and software for the IoTSP.



# “Breaking boundaries with technology is exciting when it solves real problems”

Bazmi Husain, ABB's chief technology officer since January 2016, talks about changing models of innovation and the next big challenges for technology.

**Q: How is the process of innovation changing?**

**BH:** ABB has always been focused on technological innovation – it's in our DNA – and it used to be that we did most of it in-house, from basic research to product development. But with the explosion in technology today, no one can do everything themselves. To innovate at speed, you need an innovation ecosystem so we are working more closely with universities and often partner with other companies. We're entering the era of partnership innovation.

**Q: What are the benefits of 'frugal' innovation?**

**BH:** Frugal innovation is not just about cost but also about time and materials. As time to market keeps getting shorter and the rate at which products are introduced rises, frugal innovation becomes even more important – you have to move fast or somebody else will get there first. Because our R&D activities are dispersed globally, we're well placed to keep up with this trend.

**Q: How does collaboration with customers contribute to innovation?**

**BH:** Our customers expect quality and reliability so there can be no compromise on that. We're working even more closely with our customers and involving them earlier than before to ensure that the products we release fit their needs exactly.

**Q: How has ABB maintained its role as a pioneering technology leader?**

**BH:** Innovation is not a mathematical formula, but it's clear that companies like ABB can tap into it over and over again. That's what we mean when we say innovation is part of our DNA – it takes a long history to put that in place. My own



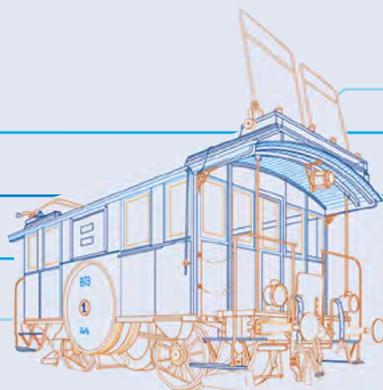
experience is that there's nothing about being big that prevents companies from being innovative. ABB works hard to keep its entrepreneurial culture. Our structure supports innovation because we're broken down into business units and product groups and each of them is an agile entity.

**Q: As the digital revolution advances, is cybersecurity a concern?**

**BH:** Any new technology brings exciting possibilities but also challenges, but there's no reason to believe cybersecurity is an insurmountable problem. When electricity was first introduced, people worried it was dangerous. That's why circuit breakers were invented. We're working on new protection mechanisms for some of our new technologies. That's what makes technology exciting; when it's used to solve real problems.

**Q: What are some of the next big challenges on the horizon?**

**BH:** We're at the start of another industrial revolution, in which human thought is being augmented by machine learning, automation, and robotics. Another exciting topic is the environment. We have to innovate to decarbonize our economies and to reduce human impact on the environment.



**1899**

**European first**

Europe's first electric standard-gauge locomotive with two motors ushers in a new era in railway electrification, improving acceleration and passenger comfort.

**1944**

**Railway efficiency**

BBC develops the first high-speed locomotive with a direct-drive system, improving efficiency and reliability.

**1954**

**ABB 'pioneers' HVDC**

First project delivered in Sweden using high-voltage direct current (HVDC), today's technology of choice for transmitting power efficiently and reliably over long distances.

### Start-ups and partnerships

The pace of innovation required today is increasing, due to societal changes and environmental concerns, as well as to the rapid development of technologies such as those related to the IoTSP. For these reasons, we are also pursuing new ways of driving innovation.

ABB Technology Ventures (ATV) was set up as the strategic venture capital investment arm of ABB five years ago to invest in high-potential industrial technology and energy companies aligned with our mission.

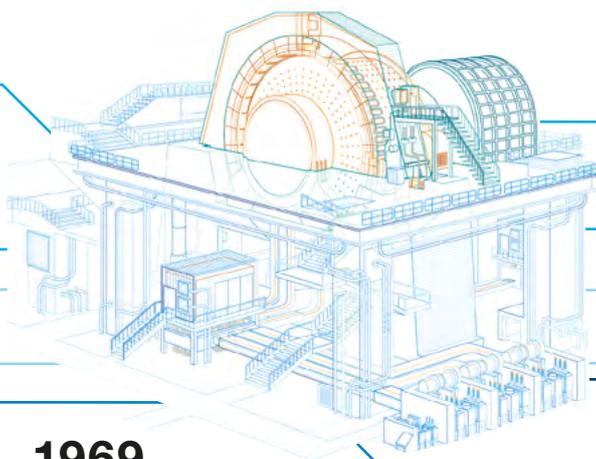
The unit's most recent investments are in businesses with disruptive technology in areas such as artificial intelligence and 3-D printing. ATV has acquired a stake in Vicarious, for example, which is building a unified algorithmic architecture,

which will take us closer to achieve human-level intelligence in vision, language and motor control.

As part of our Next Level strategy, we are also establishing partnerships with strong global or local players who can help us penetrate new markets and develop new offerings. A recent example is the electric vehicle fast-charging services platform launched with Microsoft, which combines our charging stations with Microsoft's cloud-based services. The collaboration will take advantage of machine learning and predictive analytic capabilities to drive future innovations.

### Shaping the future

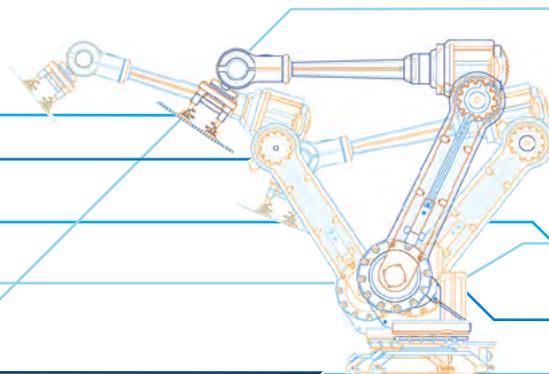
With roots in power and automation that go back to the 19th century, ABB innovations have helped build the world we know today and are helping to fashion the world we will live in tomorrow.



**1969**

#### Pioneering automation technology for industry

BBC creates the world's first gearless mill drive, transforming the crushing process for the mining and cement industries globally.



**1974**

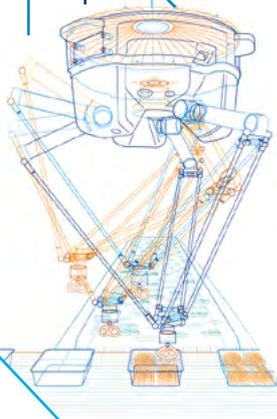
#### Robots enter the workforce

First industrial robots controlled by microprocessors introduced to the market. Since then ABB has sold more than 250,000 robots.

**2004**

**Improving industrial automation**

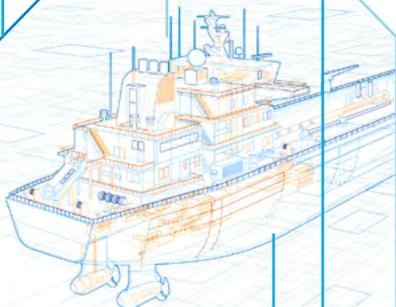
Introduction of the first industrial automation system that integrates automation and information systems within a single entity, enabling more cost-efficient and safer operations.



**1998**

**Robots get picky**

Launch of revolutionary parallel arm robot for high-speed picking and packing in food and pharma, optimizing their value chain.



**1990**

**Ruling the waves**

ABB transforms ship maneuverability and energy efficiency with a new propulsion system fixed outside the hull.

**1975**

**Energy efficient motor control**

Launch of groundbreaking device to control electric motors, enabling reductions in power consumption of around 50 percent in many applications.

**2008**

**Connecting power grids**

ABB commissions the world's longest submarine high-voltage cable, strengthening the reliability of the power supply in Norway and the Netherlands.

**2012**

**Shaping the grid of the future**

Development of world's first HVDC circuit breaker, solving a 100-year-old electrical engineering puzzle and paving the way for a more efficient and reliable electricity supply system.

**2013**

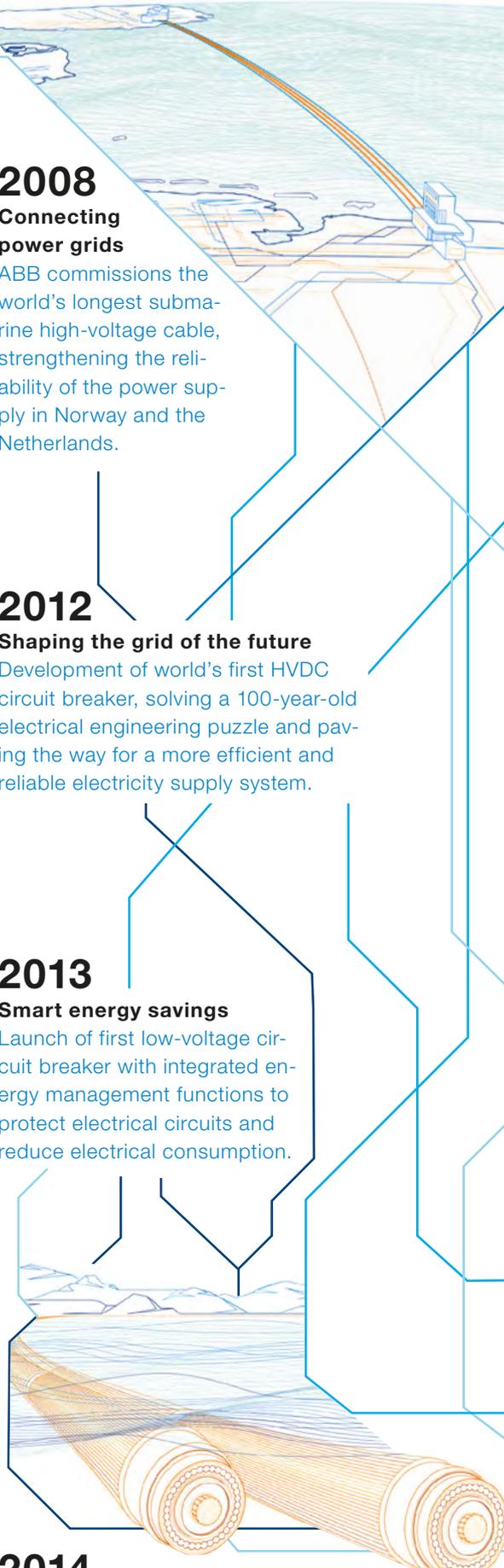
**Smart energy savings**

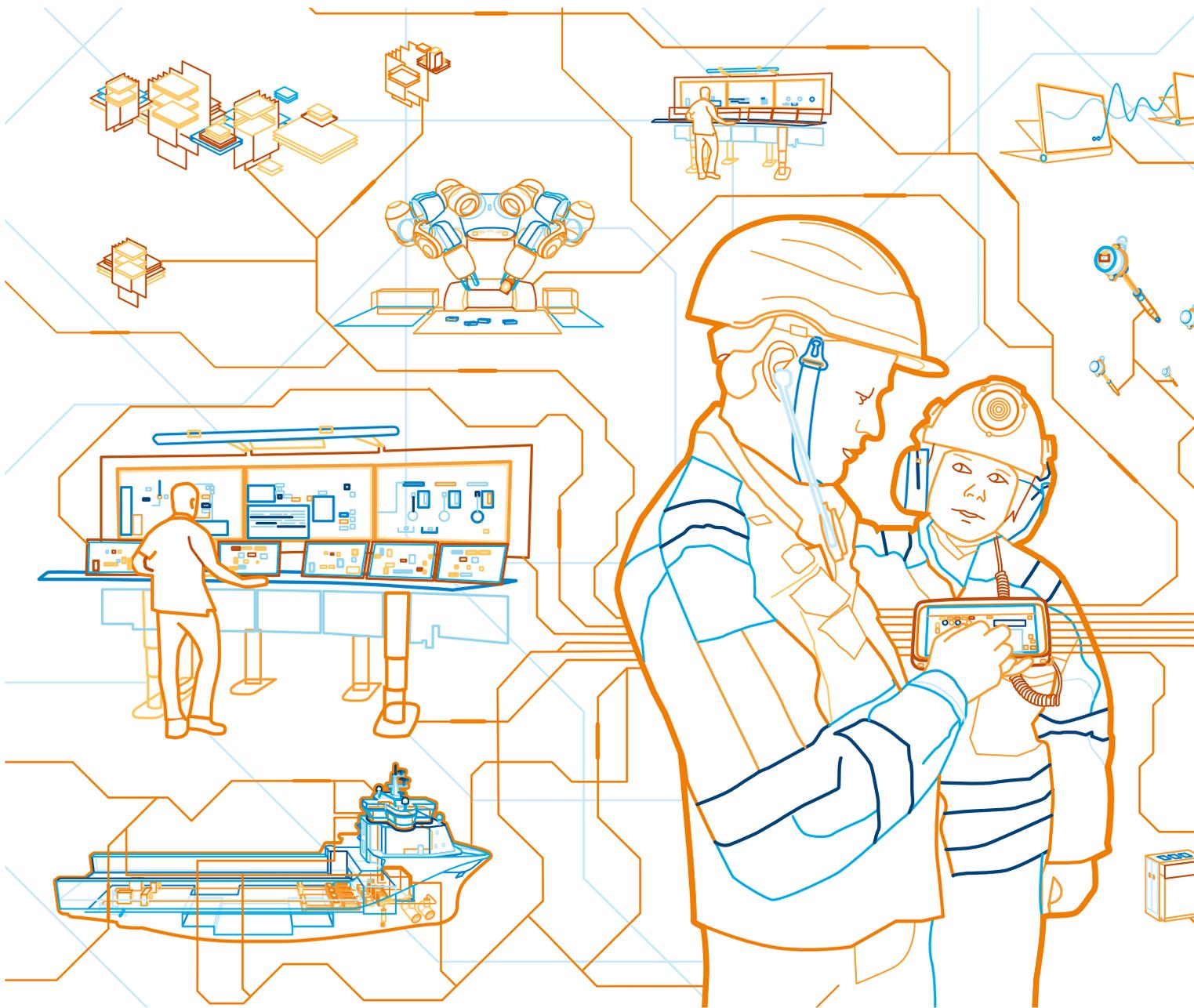
Launch of first low-voltage circuit breaker with integrated energy management functions to protect electrical circuits and reduce electrical consumption.

**2014**

**High-voltage breakthrough**

Introduction of world's most powerful cable system, making renewable energy installations more efficient and cost effective.





## Top innovations of 2015

### Utilities

#### Lower environmental impact

ABB commissioned the world's first gas-insulated switchgear (GIS) with a new eco-efficient gas developed as an alternative to sulfur hexafluoride ( $SF_6$ ). The new gas mixture, which has a global warming potential (GWP) almost 100 percent lower than that of  $SF_6$ , was developed with 3M.

#### Software improves asset management

Ellipse Select is a new enterprise software solution that helps customers to manage their assets more effectively through the life cycle and make better operational decisions, boosting both their performance and productivity. The solution illustrates ABB's unique ability to facilitate the convergence of operational and information technologies.

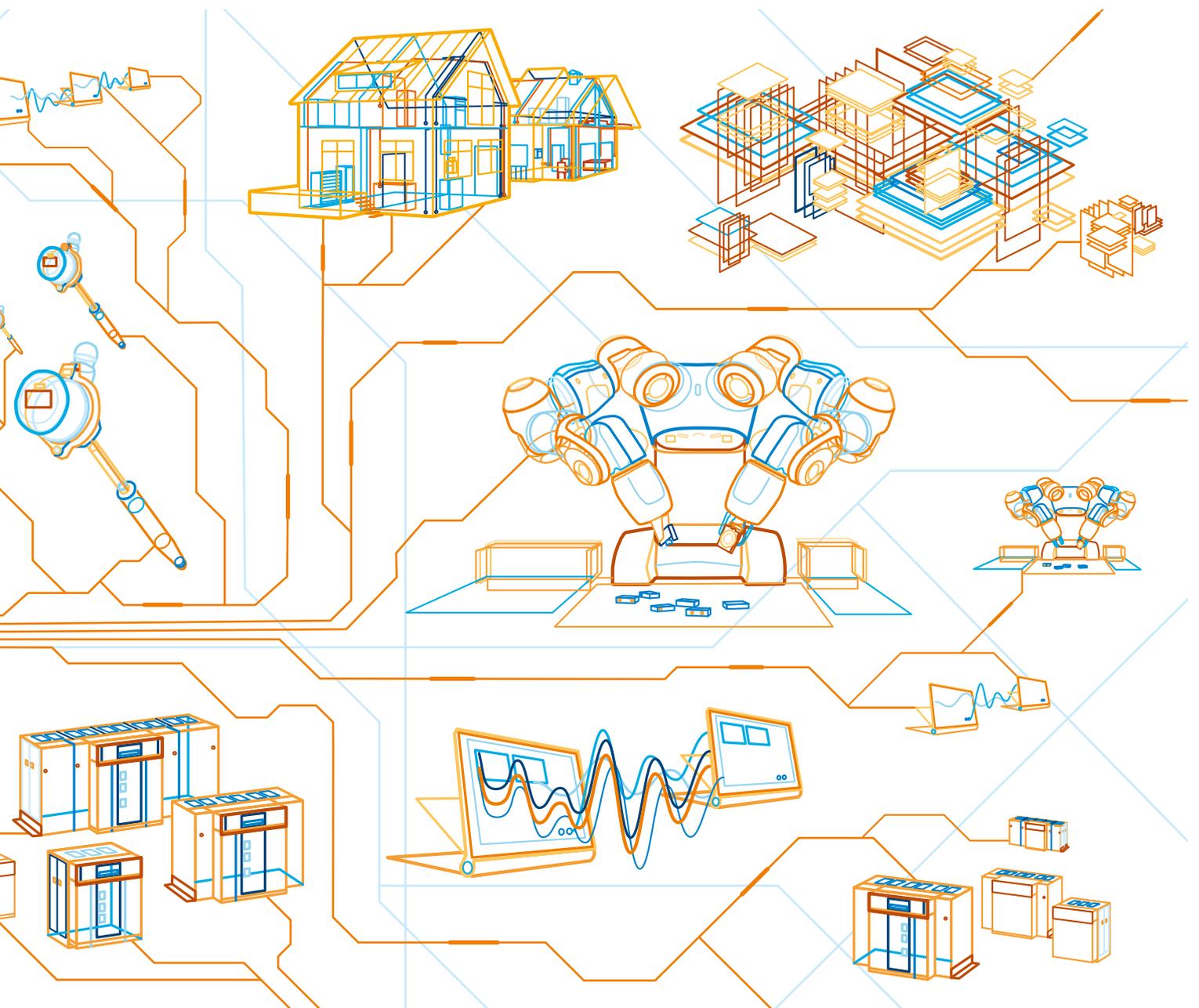
### Industry

#### Mine of the future

ABB deployed its System 800xA automation platform to transform Boliden AB's Garpenberg lead, silver and zinc mine in central Sweden into one of the world's most efficient and productive mines. Autonomous processes stretching a kilometer underground are unified in a single system driving efficiency and productivity to the next level.

#### First truly collaborative robot

YuMi, the first truly collaborative robot, was introduced to the market at Hanover Fair. Designed for a new era in manufacturing, where robots and humans work side-by-side on the same tasks, YuMi is flexible and dexterous. It can be integrated into production lines without the need to redesign the space.



## Transport

### Automated fast charging for electric buses

A new automated fast charging system removes the main hurdles to the more widespread use of electric buses. With a typical charging time of 4-6 minutes, the system speeds up the charging process and is easily integrated in existing bus lines thanks to its automated rooftop connection.

### Software for marine efficiency

ABB is collaborating with Dutch weather forecasting specialist, MeteoGroup, to equip 140 container ships from Maersk Line with advisory software to optimize routes, boost maritime safety and avoid conditions that could be harmful to the ship, its crew or its cargo.

## Infrastructure

### Voice-operated smart homes

ABB presented its voice-operated smart home automation system, ABB-free@home, at the IFA consumer electronics fair in Berlin. The system allows users to control over 60 smart-home automation functions, such as lighting, heating, blind control and door communication, with voice commands.

# The big shifts

## Major changes underway in power and automation

Power and automation, our core activities, are undergoing a transformation.

With the surge in demand for renewable energy, power grids are becoming increasingly complex. Wind and solar are intermittent sources of power, and the proliferation of rooftop solar panels is turning millions of consumers into producers of electricity.

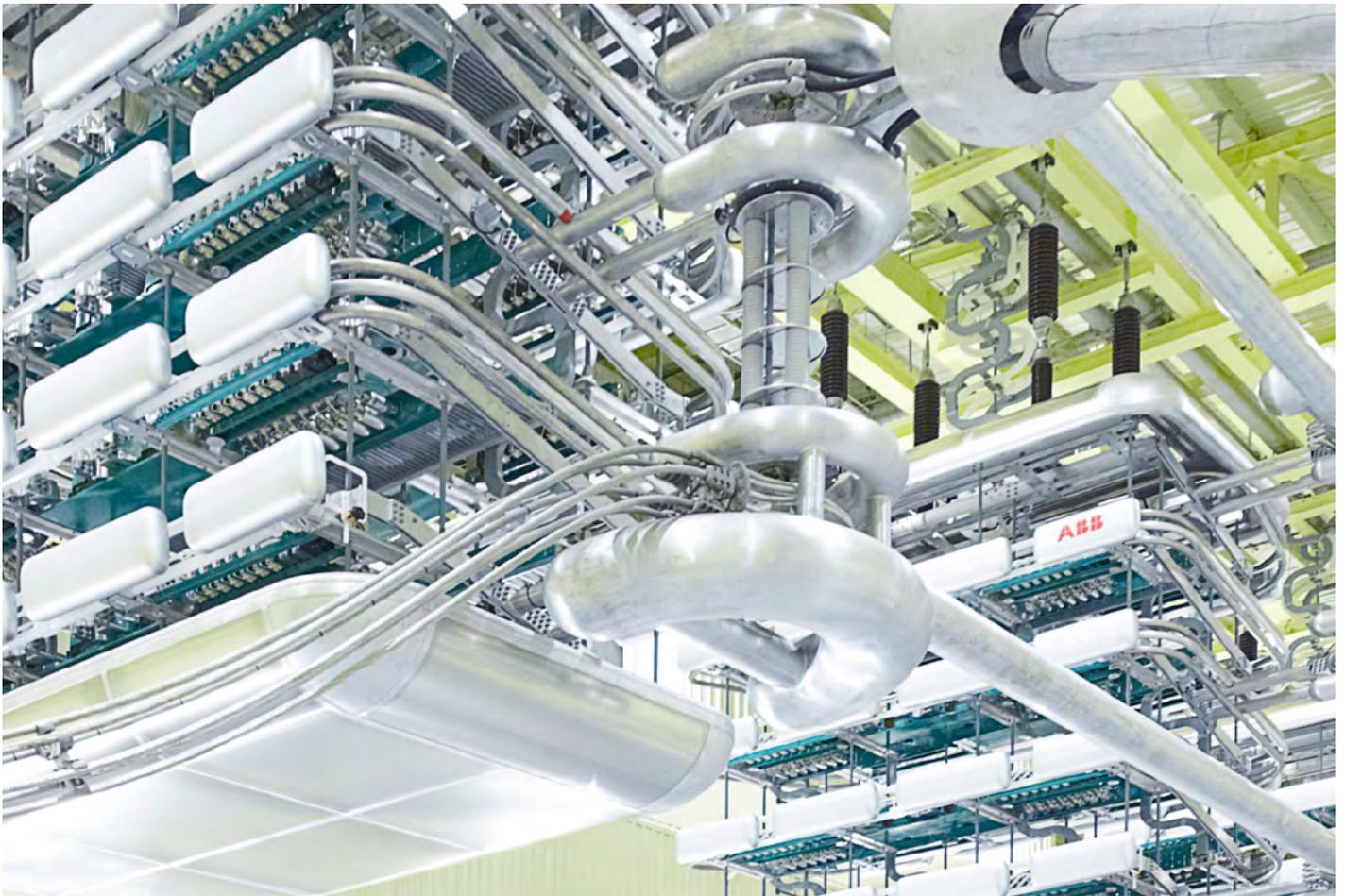
Furthermore, hundreds of millions of people are still without access to electricity, while the best sources of renewable energy – such as windy offshore sites, sunny deserts and steep valleys – are usually far from the cities and industries that use the power. In these conditions, new solutions are needed to improve the efficiency and reliability of the power supply that is so critical to the wellbeing of families and businesses alike.

In industry, the revolution in digital technology is opening up new possibilities to increase productivity. A new industrial era is beginning, in which machines are increasingly able to

perceive their surroundings and interact with human beings, creating the Internet of Things, Services and People.

In the next stage, these developments will converge with advances in industrial artificial intelligence and machine learning. Machines will in future not only be able to perceive the world and communicate with each other but also to reason and make decisions, without the need for human intervention.

**We are at the forefront of these changes in power and automation.**



## The digital grid

Rising demand for renewable energy is transforming the power grid and driving a new wave of innovation in the generation and distribution of electricity.

The power sector is undergoing change on a scale not seen since the era of mass electrification began over a century ago. The old model of power flowing in one direction, from generating plant to consumer, is being turned upside down, as rooftop solar turns consumers into producers of electricity. At the same time, electricity is being transmitted over longer distances as offshore wind farms and remote solar plants are integrated into the grid.

Managing this complexity is only possible with new technologies. These technologies can prevent intermittent wind and solar power from disrupting the grid, can handle multi-directional flows of power, and can balance supply and demand. Innovative solutions are managing the flow of electrons. But increasingly they also have to manage the flow of data needed to control the whole system.

With unrivalled knowledge of electrical energy and industrial automation, and an innovation track record stretching back over a century, ABB is ideally positioned to drive the digital grid. Our offerings cover the entire electrical value chain – from generation, transmission and distribution, to electric

mobility. We are at the forefront of technologies such as high-voltage direct current (HVDC), grid automation and smart grids, as well as energy efficient motors, drives and industrial automation technologies.

Among ABB's latest power technologies are ultrahigh-voltage DC transmission, which significantly reduces losses over long distances compared with conventional power lines, as well as microgrid solutions which incorporate renewables to electrify off-grid communities in places such as Africa and India, where hundreds of millions of people lack access to electricity.



## A new industrial era

The revolution in digital technology is ushering in a new industrial era, centered on the “Internet of Things, Services and People” (IoTSP).

Key drivers are the increased availability of data, ubiquitous connectivity, and the exponential growth in processing power. Thanks to these developments, the performance and health of machines can be tracked and monitored throughout their life cycle, boosting productivity and efficiency, for instance by enabling interventions before a service interruption.

At the same time, advances in robotics technology, exemplified by ABB’s YuMi – one of the most advanced industrial robots in existence today – are enabling a new era in human-robot collaboration, notably in small-parts assembly.

The next stage in this new industrial era will be driven to a significant extent by advances in artificial intelligence, such as machine learning. Machines will be able to take decisions based on their own analyses of data and to learn from the outcomes of those decisions.

In the industry of the future, we will see factories, mines, mills and offshore platforms run entirely by machines and robots. Human beings will be alerted only when machines encounter

problems or issues they cannot solve themselves. The outcome will be a dramatic increase in productivity, leading to new business models and the transformation of industry.

As a world leader in industrial automation and robotics, ABB is leading the way to this new era through the IoTSP, not only with our hardware and engineering expertise, but also with our consulting, service and software solutions.

With in-depth understanding of industries and their applications, and of the IoTSP, ABB has the knowledge and expertise to deploy the optimum mix between artificial intelligence and classical model-based technologies to bring safety, productivity, and energy efficiency in industry to the next level.



## Making machines more intelligent

Manuela Veloso is the Herbert A. Simon University Professor in Computer Science and Robotics at Carnegie Mellon University. She was a guest speaker at an ABB event during the World Economic Forum's 2016 annual meeting in Davos.

**Q: How do you define artificial intelligence?**

**MV:** AI has the goal of trying to make a computing device perform intelligently, integrating perception, cognition and actuation capabilities. Some researchers see it as the study of how humans are intelligent, both in behavior and at the brain level, so areas such as neuroscience and cognitive science share goals with AI. Others, including myself, focus on achieving intelligent performance, independently of the human process. There are different forms of research. But the goal is having intelligent machines.

**Q: In industry, what are some current applications?**

**MV:** Industry has traditionally addressed the automation of repetitive tasks, in particular using rule-based programs. Now industry is exploring less defined types of automation, using methods that can handle more uncertainty and can improve with experience and acquire knowledge from humans. A machine that becomes better through experience and then personalizes its behavior would be an AI product. In a factory, that could be a machine that can learn from instruction or be easily reprogrammed to do something new.

**Q: Is that what your so-called "CoBots" do?**

**MV:** Yes, the CoBots at Carnegie Mellon are a good example of autonomous task service, navigation and learning performance. Robots can move around indoors, but our goal was to deploy them to be completely independent. The moment we let the robot go, without anybody following it, was a compelling and memorable one. Now it has traveled more than a thousand kilometers on its own, based on a robust and novel algorithm for localization and navigation. It also interacts with humans, who can make requests using natural language, like, "Please take this book to the lab." The robot initially doesn't know the

names of locations or objects. But it can learn by asking people or going to the web. It keeps this information for future use.

**Q: How does the CoBot know where it is and where it's going?**

**MV:** CoBot makes a map of the building to capture the persistent features, like walls. When navigating, the robot localizes itself both by knowing where it has moved and by matching its map to its perception of these features. The robot perceives many other objects, like tables and chairs, which can vary in position, but they're also used for localization in a novel approach contributed by my student Joydeep Biswas.

**Q: Does the technology have any commercial use?**

**MV:** Robots like CoBot have clear commercial use. Its algorithms can be used in other autonomous mobile platforms. In addition, another one of my students, Richard Wang, introduced the idea of using these robots as mobile data-gathering platforms. As CoBot moves around, it gathers data, like Wi-Fi signals or temperature. Such data can help people make decisions about allocating resources in the building, such as where to put Wi-Fi access points. So a mobile robot can help improve data gathering just by being able to move around and acquire useful data.

**Q: Should people be afraid of AI?**

**MV:** Humankind will always follow its own route with new discoveries and societal goals. So research and development will inevitably proceed towards machines becoming more intelligent, which brings enormous potential benefits. The challenge and opportunity is to make good use of the AI technology. The good news, as Herbert Simon said, is that we are not spectators, but actors in the future of technology.



## Solar-powered flight ABB's innovation and technology alliance with Solar Impulse

2015 saw ABB take to the skies as a partner of Solar Impulse, a project to fly around the world using only the sun's rays. ABB and Solar Impulse are perfect partners, sharing the goal of addressing the world's energy challenges through ground-breaking technological innovation.

Three ABB engineers were embedded in the project. Nicolas Loretan and Stevan Marinkovic joined the electrical and propulsion team, helping to extract the maximum amount of power from the solar cells. Tamara Tursijan worked on upgrades to the mobile hangar.

In 2015, the plane flew from Abu Dhabi to Hawaii, breaking several records along the way. The last leg over the Pacific

– the longest ever solo flight at 117 hours and 51 minutes – was an epic feat of human endurance and pioneering spirit. The next stage of the round-the-world mission is expected to begin in April 2016.

As with any pioneering project, there were setbacks and unexpected challenges. The mark of pioneers is how they manage the unforeseeable, and the Solar Impulse team displayed the tenacity and unwavering passion demanded by a project that seeks to extend the boundaries of human experience. ABB remains committed to Solar Impulse and to the promise it holds for a future in which it is possible to decouple economic growth from energy consumption and environmental pollution – to run the world without consuming the earth.



## “Innovation is a way of inspiring people”

“A dream job! How else can I describe what I've been doing with Solar Impulse?”

I've had the privilege of being part of the ground crew that followed the plane around the world. I was in charge of the mobile hangar control system and helped in many other tasks at each stop. This plane, the only one of its kind, has successfully demonstrated the potential of a whole range of cutting-edge technologies, from its ultralight carbon fiber frame through to its super-efficient electrical systems.

But the real breakthrough is the way Solar Impulse has captured the imagination of millions. In India I saw thousands queuing up to get a glimpse of the plane, and large numbers came to the airfield in Hawaii

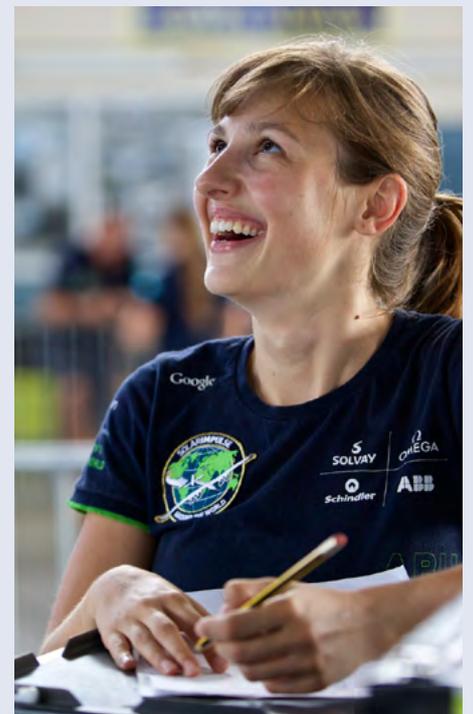
where André Borschberg completed his record-breaking flight over the Pacific.

At a time when climate change is on everyone's lips, Solar Impulse has shown that innovation is a way of inspiring people about technology that can solve the problem.

And I'm proud that ABB will continue to play a big role in this adventure.”

**Tamara Tursijan,**

ABB engineer



# Executive Committee



**Jean-Christophe Deslarzes**  
Chief Human Resources Officer

**Pekka Tiitinen**  
Discrete Automation and Motion division

**Tarak Mehta**  
Electrification Products division

**Peter Terwiesch**  
Process Automation division

**Frank Duggan**  
Asia, Middle East and Africa (AMEA) region

**Bernhard Jucker**  
Europe region

**Ulrich Spiesshofer**  
Chief Executive Officer

**Claudio Facchin**  
Power Grids division

**Diane de Saint Victor**  
General Counsel

**Greg Scheu**  
Americas region

**Eric Elzvik**  
Chief Financial Officer

# Regional and country managers

---

## AMERICAS Greg Scheu

[Argentina](#) Christian Newton  
[Bolivia](#) Christian Newton  
[Brazil](#) Rafael Paniagua  
[Canada](#) Nathalie Pilon  
[Central America & Caribbean](#) Blas Gonzalez  
[Chile](#) Marcelo Schumacker  
[Colombia](#) Ramon Monras  
[Ecuador](#) Ramon Monras  
[Mexico](#) Pierre Comptdaer  
[Peru](#) Vicente Magana  
[United States \(including US Virgin Islands\)](#)  
Greg Scheu  
[Uruguay](#) Christian Newton  
[Venezuela](#) Ramon Monras

---

## EUROPE Bernhard Jucker

[Austria](#) Franz Chalupecky  
[Azerbaijan](#) Rustam Gasimov  
[Balkans](#) Zeljko Struglin  
[Benelux](#) Alfons Goos  
[Bulgaria](#) Ekkehard Neureither  
[Cyprus](#) Apostolos Petropoulos  
[Czech Republic](#) Tania Vainio  
[Denmark](#) Claus Madsen  
[Estonia, Latvia, Lithuania](#) Bo Henriksson  
[Finland](#) Tauno Heinola  
[France](#) Jacques Mulbert  
[Georgia](#) Zaza Bakhia  
[Germany](#) Hans-Georg Krabbe  
[Greece](#) Apostolos Petropoulos  
[Hungary](#) Tanja Vainio  
[Ireland](#) Tom O'Reilly  
[Israel](#) Ronen Aharon  
[Italy](#) Mario Corsi  
[Kazakhstan and Central Asia](#)  
Artur Czerniejewski  
[Norway](#) Steffen Waal  
[Poland](#) Pawel Lojszczyk  
[Portugal](#) Miguel Pernes  
[Romania](#) Tomasz Wolanowski  
[Russian Federation](#) Anatolij Popov  
[Slovakia](#) Marcel van der Hoek  
[Slovenia](#) Franz Chalupecky  
[Spain](#) Carlos Marcos  
[Sweden](#) Johan Soderstrom  
[Switzerland](#) Remo Luetolf  
[Turkey](#) Sami Sevinc  
[Ukraine](#) Dmytro Zhdanov  
[United Kingdom](#) Ian Funnell

---

## AMEA Frank Duggan

[Algeria](#) Tarek Elgani  
[Angola](#) Celestino Bravo  
[Australia](#) Axel Kuhr  
[Bahrain](#) Brian Hull  
[Bangladesh](#) Joy-Rajarshi Banerjee  
[Botswana](#) Gift Nkwe  
[Cameroon](#) Magloire Elogne  
[Central Africa](#) Naji Jreijiri  
[China](#) Chunyuan Gu  
[Congo](#) Thryphon Mungono  
[Côte d'Ivoire](#) Magloire Elogne  
[Gambia](#) Magloire Elogne  
[Ghana](#) Hesham Tehemer  
[Egypt](#) Naji Jreijiri  
[India](#) Sanjeev Sharma  
[Indonesia](#) Richard Ledgard  
[Japan](#) Tony Zeitoun  
[Jordan](#) Loay Dajani  
[Kenya](#) Samuel Chiira  
[Korea](#) Min-Kyu Choi  
[Kuwait](#) Paul Dennis  
[Laos](#) Chaiyot Piyawannarat  
[Lebanon](#) Naji Jreijiri  
[Madagascar](#) Ajay Vij  
[Malaysia](#) Jukka Poutanen  
[Mauritius](#) Ajay Vij  
[Morocco](#) Khaled Torbey  
[Mozambique](#) Paulo David  
[Myanmar](#) Chaiyot Piyawannarat  
[Namibia](#) Hagen Seiler  
[New Caledonia](#) Axel Kuhr  
[New Zealand](#) Ewan Morris  
[Nigeria](#) Mohamed Hosseiny  
[Oman](#) Brian Hull  
[Pakistan](#) Najeeb Ahmad  
[Papua New Guinea](#) Axel Kuhr  
[Philippines](#) John Fyfe  
[Qatar](#) Mostafa Al Guezeri  
[Saudi Arabia](#) Mohammed Masri  
[Senegal](#) Issa Guisse  
[Singapore](#) Johan DeVilliers  
[Southern Africa](#) Leon Viljoen  
[Sri Lanka](#) Dusyantha Rupasingha  
[Taiwan](#) Kayee Ding  
[Tanzania](#) Michael Otonya  
[Thailand](#) Chaiyot Piyawannarat  
[Tunisia](#) Khaled Torbey  
[Uganda](#) Emmanuel Lagu  
[United Arab Emirates](#) Frank Duggan  
[Vietnam](#) Axel Kalt  
[Zambia](#) Russell Harawa  
[Zimbabwe](#) Charles Shamu



**Paul** – Product Management, Xiamen, China

“My team and I are always on the lookout for new ideas and applications for home and industry.... If one of us can conceptualize or design a product to improve some part of our lives, then it can probably be realized.”

# Corporate governance report

## Contents

---

24 Principles

---

25 Group structure and shareholders

---

28 Capital structure

---

29 Shareholders' participation

---

31 Board of Directors

---

34 Executive Committee

---

37 Business relationships

---

37 Employee participation programs

---

37 Duty to make a public tender offer

---

38 Auditors

---

38 Information policy

---

39 Further information on corporate governance

# 1. Principles

## 1.1 General principles

ABB is committed to the highest international standards of corporate governance, and supports the general principles as set forth in the Swiss Code of Best Practice for Corporate Governance, as well as those of the capital markets where its shares are listed and traded.

In addition to the provisions of the Swiss Code of Obligations, ABB's key principles and rules on corporate governance are laid down in ABB's Articles of Incorporation, the ABB Ltd Board Regulations & Corporate Governance Guidelines (which includes the regulations of ABB's Board committees and the ABB Ltd Related Party Transaction Policy), and the ABB Code of Conduct and the Addendum to the ABB Code of Conduct for Members of the Board of Directors and the Executive Committee (EC). It is the duty of ABB's Board of Directors (the Board) to review and amend or propose amendments to those documents from time to time to reflect the most recent developments and practices, as well as to ensure compliance with applicable laws and regulations.

This section of the Annual Report is based on the Directive on Information Relating to Corporate Governance published by the SIX Swiss Exchange. Where an item listed in the directive is not addressed in this report, it is either inapplicable to or immaterial for ABB.

According to the New York Stock Exchange's corporate governance standards (the Standards), ABB is required to disclose significant ways in which its corporate governance practices differ from the Standards. ABB has reviewed the Standards and concluded that its corporate governance practices are generally consistent with the Standards, with the following significant exceptions:

- Swiss law requires that the external auditors be elected by the shareholders at the Annual General Meeting rather than by the audit committee or the board of directors.
- The Standards require that all equity compensation plans and material revisions thereto be approved by the shareholders. Consistent with Swiss law such matters are decided by our Board. However, the shareholders decide about the creation of new share capital that can be used in connection with equity compensation plans.
- Swiss law requires that the members of the compensation committee are elected by the shareholders rather than appointed by our Board.
- Swiss law requires shareholders to approve the maximum aggregate Board compensation and the maximum aggregate Executive Committee compensation.

## 1.2 Duties of directors and officers

The directors and officers of a Swiss corporation are bound, as specified in the Swiss Code of Obligations, to perform their duties with all due care, to safeguard the interests of the corporation in good faith and to extend equal treatment to shareholders in like circumstances.

The Swiss Code of Obligations does not specify what standard of due care is required of the directors of a corporate board. However, it is generally held by Swiss legal scholars and jurisprudence that the directors must have the requisite capability and skill to fulfill their function, and must devote the necessary time to the discharge of their duties. Moreover, the directors must exercise all due care that a prudent and diligent director would have taken in like circumstances. Finally, the directors are required to take actions in the best interests of the corporation and may not take any actions that may be harmful to the corporation.

### Exercise of powers

Directors, as well as other persons authorized to act on behalf of a Swiss corporation, may perform all legal acts on behalf of the corporation which the business purpose, as set forth in the articles of incorporation of the corporation, may entail. Pursuant to court practice, such directors and officers can take any action that is not explicitly excluded by the business purpose of the corporation. In so doing, however, the directors and officers must still pursue the duty of due care and the duty of loyalty described above and must extend equal treatment to the corporation's shareholders in like circumstances. ABB's Articles of Incorporation do not contain provisions concerning a director's power, in the absence of an independent quorum, to vote on the compensation to each director; however, the maximum aggregate compensation of the directors for each term of office is subject to shareholder approval.

### Conflicts of interest

Swiss law does not have a general provision on conflicts of interest and our Articles of Incorporation do not limit our directors' power to vote on a proposal, arrangement or contract in which the director or officer is materially interested.

However, the Swiss Code of Obligations requires directors and officers to safeguard the interests of the corporation and, in this connection, imposes a duty of care and loyalty on directors and officers. This rule is generally understood and so recommended by the Swiss Code of Best Practice for Corporate Governance as disqualifying directors and officers from participating in decisions, other than in the shareholders' meeting, that directly affect them.

### Confidentiality

Confidential information obtained by directors and officers of a Swiss corporation acting in such capacity must be kept confidential during and after their term of office.

### Sanctions

If directors and officers transact business on behalf of the corporation with bona fide third parties in violation of their statutory duties, the transaction is nevertheless valid, as long as it is not explicitly excluded by the corporation's business purpose as set forth in its articles of incorporation. Directors and officers acting in violation of their statutory duties – whether transacting business with bona fide third parties or performing any other acts on behalf of the company – may, however, become liable to the corporation, its shareholders and its creditors for damages. The liability is joint and several, but the courts may apportion the liability among the directors and officers in accordance with their degree of culpability.

In addition, Swiss law contains a provision under which payments made to a shareholder or a director or any person(s) associated therewith, other than at arm's length, must be repaid to the company if the shareholder or director or any person associated therewith was acting in bad faith.

If the board of directors has lawfully delegated the power to carry out day-to-day management to a different corporate body, e.g., the executive committee, it is not liable for the acts of the members of that different corporate body. Instead, the directors can be held liable only for their failure to properly select, instruct and supervise the members of that different corporate body.

## 2. Group structure and shareholders

### 2.1 Group structure

ABB Ltd, Switzerland, is the ultimate parent company of the ABB Group, which at December 31, 2015, principally comprised approximately 320 consolidated operating and holding subsidiaries worldwide. ABB Ltd's shares are listed on the SIX Swiss Exchange, the NASDAQ OMX Stockholm Exchange and the New York Stock Exchange (where its shares are traded in the form of American depositary shares (ADS) – each ADS representing one registered ABB share). On December 31, 2015, ABB Ltd had a market capitalization of CHF 39 billion.

The only consolidated subsidiary in the ABB Group with listed shares is ABB India Limited, Bangalore, India, which is listed on the BSE Ltd. (Bombay Stock Exchange) and the National Stock Exchange of India. On December 31, 2015, ABB Ltd, Switzerland, directly or indirectly owned 75 percent of ABB India Limited, Bangalore, India, which at that time had a market capitalization of INR 237 billion.

#### Stock exchange listings (At December 31, 2015)

Stock exchange	Security	Ticker symbol	ISIN code
SIX Swiss Exchange	ABB Ltd, Zurich, share	ABBN	CH0012221716
SIX Swiss Exchange	ABB Ltd, Zurich, share buyback (second trading line)	ABBNE	CH0253301128
NASDAQ OMX Stockholm Exchange	ABB Ltd, Zurich, share	ABB	CH0012221716
New York Stock Exchange	ABB Ltd, Zurich, ADS	ABB	US0003752047
BSE Ltd. (Bombay Stock Exchange)	ABB India Limited, Bangalore, share	ABB*	INE117A01022
National Stock Exchange of India	ABB India Limited, Bangalore, share	ABB	INE117A01022

\*also called Scrip ID

The following table sets forth, as of December 31, 2015, the name, place of incorporation, ownership interest and share capital of the significant direct and indirect subsidiaries of ABB Ltd, Switzerland:

**ABB Ltd's significant subsidiaries**

<b>Company name/location</b>	<b>Country</b>	<b>ABB interest %</b>	<b>Share capital in thousands</b>	<b>Currency</b>
SARPI - Société Algérienne pour la réalisation de projets industriels, Alger	Algeria	50.00	814,500	DZD
ABB S.A., Buenos Aires	Argentina	100.00	278,860	ARS
ABB Australia Pty Limited, Moorebank, NSW	Australia	100.00	131,218	AUD
ABB Group Investment Management Pty. Ltd., Moorebank, NSW	Australia	100.00	355,312	AUD
ABB N.V., Zaventem	Belgium	100.00	13,290	EUR
ABB Ltda., Osasco	Brazil	100.00	994,708	BRL
ABB Bulgaria EOOD, Sofia	Bulgaria	100.00	65,110	BGN
ABB Canada Holding Limited Partnership, Saint-Laurent, Quebec	Canada	100.00	–	CAD
ABB Inc., Saint-Laurent, Quebec	Canada	100.00	– <sup>(1)</sup>	CAD
Thomas & Betts Limited, Saint-Jean-sur-Richelieu, Quebec	Canada	100.00	– <sup>(1)</sup>	CAD
ABB S.A., Santiago	Chile	100.00	4,741,936	CLP
ABB Beijing Drive Systems Co. Ltd., Beijing	China	90.00	5,000	USD
ABB (China) Ltd., Beijing	China	100.00	310,000	USD
ABB Engineering (Shanghai) Ltd., Shanghai	China	100.00	40,000	USD
ABB High Voltage Switchgear Co. Ltd., Beijing	China	60.00	11,400	USD
ABB Xiamen Low Voltage Equipment Co. Ltd., Xiamen	China	100.00	15,800	USD
ABB Xiamen Switchgear Co. Ltd., Xiamen	China	64.30	23,500	USD
ABB Xinhui Low Voltage Switchgear Co. Ltd., Xinhui	China	90.00	6,200	USD
ABB s.r.o., Prague	Czech Republic	100.00	400,000	CZK
ABB A/S, Skovlunde	Denmark	100.00	100,000	DKK
ABB for Electrical Industries (ABB ARAB) S.A.E., Cairo	Egypt	100.00	353,479	EGP
Asea Brown Boveri S.A.E., Cairo	Egypt	100.00	116,000	USD
ABB AS, Jüri	Estonia	100.00	1,663	EUR
ABB Oy, Helsinki	Finland	100.00	10,003	EUR
ABB France , Cergy Pontoise	France	99.83	25,778	EUR
ABB S.A., Cergy Pontoise	France	100.00	45,921	EUR
ABB Automation GmbH, Mannheim	Germany	100.00	15,000	EUR
ABB Automation Products GmbH, Ladenburg	Germany	100.00	10,620	EUR
ABB Beteiligungs- und Verwaltungsges. mbH, Mannheim	Germany	100.00	61,355	EUR
ABB Stotz-Kontakt GmbH, Heidelberg	Germany	100.00	7,500	EUR
Busch-Jaeger Elektro GmbH, Lüdenscheid	Germany	100.00	1,535	EUR
ABB Holding Ltd., Hong Kong	Hong Kong	100.00	27,887	HKD
ABB (Hong Kong) Ltd., Hong Kong	Hong Kong	100.00	20,000	HKD
ABB Global Industries and Services Private Limited, Bangalore	India	100.00	608,930	INR
ABB India Limited, Bangalore	India	75.00	423,817	INR
ABB S.p.A., Milan	Italy	100.00	110,000	EUR
ABB K.K., Tokyo	Japan	100.00	1,000,000	JPY
ABB Ltd., Seoul	Korea, Republic of	100.00	18,670,000	KRW
ABB Holdings Sdn. Bhd., Subang Jaya	Malaysia	100.00	4,490	MYR
ABB Malaysia Sdn. Bhd., Subang Jaya	Malaysia	100.00	3,500	MYR
ABB Mexico S.A. de C.V., San Luis Potosi SLP	Mexico	100.00	633,368	MXN
Asea Brown Boveri S.A. de C.V., San Luis Potosi SLP	Mexico	100.00	667,686	MXN
ABB B.V., Rotterdam	Netherlands	100.00	9,200	EUR
ABB Capital B.V., Rotterdam	Netherlands	100.00	1,000	USD
ABB Finance B.V., Rotterdam	Netherlands	100.00	20	EUR

**ABB Ltd's significant subsidiaries (continued)**

Company name/location	Country	ABB interest %	Share capital in thousands	Currency
ABB Holdings B.V., Rotterdam	Netherlands	100.00	119	EUR
ABB Investments B.V., Rotterdam	Netherlands	100.00	100	EUR
Thomas & Betts Netherlands B.V., Barendrecht	Netherlands	100.00	227	EUR
ABB AS, Billingstad	Norway	100.00	250,000	NOK
ABB Holding AS, Billingstad	Norway	100.00	240,000	NOK
ABB Sp. z o.o., Warsaw	Poland	99.92	350,656	PLN
ABB Ltd., Moscow	Russian Federation	100.00	5,686	RUB
ABB Contracting Company Ltd., Riyadh	Saudi Arabia	65.00	40,000	SAR
ABB Electrical Industries Ltd., Riyadh	Saudi Arabia	65.00	168,750	SAR
ABB Holdings Pte. Ltd., Singapore	Singapore	100.00	32,797	SGD
ABB Pte. Ltd., Singapore	Singapore	100.00	28,842	SGD
ABB Holdings (Pty) Ltd., Longmeadow	South Africa	100.00	4,050	ZAR
ABB South Africa (Pty) Ltd., Longmeadow	South Africa	74.91	1	ZAR
Asea Brown Boveri S.A., Madrid	Spain	100.00	33,318	EUR
ABB AB, Västerås	Sweden	100.00	400,000	SEK
ABB Norden Holding AB, Västerås	Sweden	100.00	2,344,783	SEK
ABB Asea Brown Boveri Ltd, Zurich	Switzerland	100.00	2,768,000	CHF
ABB Information Systems Ltd., Zurich	Switzerland	100.00	500	CHF
ABB Investment Holding GmbH, Zurich	Switzerland	100.00	92,054	CHF
ABB Management Services Ltd., Zurich	Switzerland	100.00	571	CHF
ABB Schweiz AG, Baden	Switzerland	100.00	55,000	CHF
ABB Turbo Systems AG, Baden	Switzerland	100.00	10,000	CHF
ABB LIMITED, Bangkok	Thailand	100.00	1,034,000	THB
ABB Elektrik Sanayi A.S., Istanbul	Turkey	99.95	13,410	TRY
ABB Industries (L.L.C.), Dubai	United Arab Emirates	49.00 <sup>(2)</sup>	5,000	AED
ABB Holdings Limited, Warrington	United Kingdom	100.00	226,014	GBP
ABB Limited, Warrington	United Kingdom	100.00	120,000	GBP
ABB Finance (USA) Inc., Delaware	United States	100.00	1	USD
ABB Holdings Inc., Cary, NC	United States	100.00	2	USD
ABB Inc., Cary, NC	United States	100.00	1	USD
ABB Treasury Center (USA), Inc., Wilmington, Delaware	United States	100.00	1	USD
Baldor Electric Company, Fort Smith, AR	United States	100.00	–	USD
Edison Holding Corporation, Delaware	United States	100.00	10	USD
Power-One Renewable Energy Solutions LLC, Delaware	United States	100.00	–	USD
Thomas & Betts Corporation, Knoxville, TN	United States	100.00	1	USD
Verdi Holding Corporation, Delaware	United States	100.00	–	USD

<sup>(1)</sup> Shares without par value.

<sup>(2)</sup> Company consolidated as ABB exercises full management control.

ABB's operational group structure is described in the "Financial review of ABB Group" section of this Annual Report under "Operating and financial review and prospects – Organizational structure".

## 2.2 Significant shareholders

Investor AB, Sweden, held 232,165,142 ABB shares as of December 31, 2015. This holding represents approximately 10.03 percent of ABB's total share capital and voting rights as registered in the Commercial Register on that date. The number of shares held by Investor AB does not include shares held by Mr. Jacob Wallenberg, the chairman of Investor AB and a director of ABB, in his individual capacity.

Cevian Capital II GP Limited, Channel Islands, disclosed that as per July 24, 2015, on behalf of its general partners, it held 119,377,120 ABB shares. This holding represents approximately 5.2 percent of ABB's total share capital and voting rights as registered in the Commercial Register on December 31, 2015.

BlackRock Inc., New York, U.S., disclosed that as per July 25, 2011, it, together with its direct and indirect subsidiaries, held 69,702,100 ABB shares. This holding represents 3.0 percent of ABB's total share capital and voting rights as registered in the Commercial Register on December 31, 2015.

To the best of ABB's knowledge, no other shareholder held 3 percent or more of ABB's total share capital and voting rights as registered in the Commercial Register on December 31, 2015.

Under ABB's Articles of Incorporation, each registered share represents one vote. Significant shareholders do not have different voting rights.

To our knowledge, we are not directly or indirectly owned or controlled by any government or by any other corporation or person.

## 3. Capital structure

### 3.1 Ordinary share capital

On December 31, 2015, ABB's ordinary share capital (including treasury shares) as registered with the Commercial Register amounted to CHF 1,990,679,207.04, divided into 2,314,743,264 fully paid registered shares with a par value of CHF 0.86 per share.

### 3.2 Changes to the ordinary share capital

In 2015, ABB paid a portion of its dividend relating to the year 2014 by way of a nominal value reduction in the par value of its shares from CHF 1.03 to CHF 0.86. Corresponding adjustments were made to the par value of ABB's contingent and authorized shares. Except as described above, there were no changes to ABB's ordinary share capital during 2015, 2014 and 2013.

### 3.3 Contingent share capital

At December 31, 2015, ABB's share capital may be increased by an amount not to exceed CHF 172,000,000 through the issuance of up to 200,000,000 fully paid registered shares with a par value of CHF 0.86 per share through the exercise

of conversion rights and/or warrants granted in connection with the issuance on national or international capital markets of newly or already issued bonds or other financial market instruments.

At December 31, 2015, ABB's share capital may be increased by an amount not to exceed CHF 8,600,000 through the issuance of up to 10,000,000 fully paid registered shares with a par value of CHF 0.86 per share through the exercise of warrant rights granted to its shareholders. The Board may grant warrant rights not taken up by shareholders for other purposes in the interest of ABB.

The pre-emptive rights of the shareholders are excluded in connection with the issuance of convertible or warrant-bearing bonds or other financial market instruments or the grant of warrant rights. The then current owners of conversion rights and/or warrants will be entitled to subscribe for new shares. The conditions of the conversion rights and/or warrants will be determined by the Board.

The acquisition of shares through the exercise of warrants and each subsequent transfer of the shares will be subject to the restrictions of ABB's Articles of Incorporation (see "Limitations on transferability of shares and nominee registration" in section 4.2 below).

In connection with the issuance of convertible or warrant-bearing bonds or other financial market instruments, the Board is authorized to restrict or deny the advance subscription rights of shareholders if such bonds or other financial market instruments are for the purpose of financing or refinancing the acquisition of an enterprise, parts of an enterprise, participations or new investments or an issuance on national or international capital markets. If the Board denies advance subscription rights, the convertible or warrant-bearing bonds or other financial market instruments will be issued at the relevant market conditions and the new shares will be issued pursuant to the relevant market conditions taking into account the share price and/or other comparable instruments having a market price. Conversion rights may be exercised during a maximum ten-year period, and warrants may be exercised during a maximum seven-year period, in each case from the date of the respective issuance. The advance subscription rights of the shareholders may be granted indirectly.

At December 31, 2015, ABB's share capital may be increased by an amount not to exceed CHF 80,873,368 through the issuance of up to 94,038,800 fully paid shares with a par value of CHF 0.86 per share to employees. The pre-emptive and advance subscription rights of ABB's shareholders are excluded. The shares or rights to subscribe for shares will be issued to employees pursuant to one or more regulations to be issued by the Board, taking into account performance, functions, level of responsibility and profitability criteria. ABB may issue shares or subscription rights to employees at a price lower than that quoted on a stock exchange. The acquisition of shares

within the context of employee share ownership and each subsequent transfer of the shares will be subject to the restrictions of ABB's Articles of Incorporation (see "Limitations on transferability of shares and nominee registration" in section 4.2 below).

### 3.4 Authorized share capital

At December 31, 2015, ABB had an authorized share capital in the amount of up to CHF 172,000,000 through the issuance of up to 200,000,000 fully paid registered shares with a par value of CHF 0.86 each, which is valid through April 29, 2017. The Board is authorized to determine the date of issue of new shares, the issue price, the type of payment, the conditions for the exercise of pre-emptive rights and the beginning date for dividend entitlement. In this regard, the Board may issue new shares by means of a firm underwriting through a banking institution, a syndicate or another third party with a subsequent offer of these shares to the shareholders. The Board may permit pre-emptive rights that have not been exercised by shareholders to expire or it may place these rights and/or shares as to which pre-emptive rights have been granted but not exercised at market conditions or use them for other purposes in the interest of the company. Furthermore, the Board is authorized to restrict or deny the pre-emptive rights of shareholders and allocate such rights to third parties if the shares are used (1) for the acquisition of an enterprise, parts of an enterprise, or participations, or for new investments, or in case of a share placement, for the financing or refinancing of such transactions; or (2) for the purpose of broadening the shareholder constituency in connection with a listing of shares on domestic or foreign stock exchanges. The subscription and the acquisition of the new shares, as well as each subsequent transfer of the shares, will be subject to the restrictions of ABB's Articles of Incorporation.

### 3.5 Convertible bonds and options

ABB does not have any bonds outstanding that are convertible into ABB shares. For information about options on shares issued by ABB, please refer to "Note 19 Stockholders' equity" to ABB's Consolidated Financial Statements contained in the "Financial review of the ABB Group" section of this Annual Report.

## 4. Shareholders' participation

### 4.1 Shareholders' voting rights

ABB has one class of shares and each registered share carries one vote at the general meeting. Voting rights may be exercised only after a shareholder has been registered in the share register of ABB as a shareholder with the right to vote, or with Euroclear Sweden AB (Euroclear), which maintains a subregister of the share register of ABB.

A shareholder may be represented at the Annual General Meeting by its legal representative, by another shareholder with the right to vote or the independent proxy elected by the shareholders (unabhängiger Stimmrechtsvertreter). All shares held by one shareholder may be represented by one representative only.

For practical reasons shareholders must be registered in the share register no later than 6 business days before the general meeting in order to be entitled to vote. Except for the cases described under section 4.2 below, there are no voting rights restrictions limiting ABB's shareholders' rights.

### 4.2 Limitations on transferability of shares and nominee registration

ABB may decline a registration with voting rights if a shareholder does not declare that it has acquired the shares in its own name and for its own account. If the shareholder refuses to make such declaration, it will be registered as a shareholder without voting rights.

A person failing to expressly declare in its registration / application that it holds the shares for its own account (a nominee), will be entered in the share register with voting rights, provided that such nominee has entered into an agreement with ABB concerning its status, and further provided that the nominee is subject to recognized bank or financial market supervision. In special cases the Board may grant exemptions. There were no exemptions granted in 2015.

The limitation on the transferability of shares may be removed by an amendment of ABB's Articles of Incorporation by a shareholders' resolution requiring two-thirds of the votes represented at the meeting.

### 4.3 Shareholders' dividend rights

The unconsolidated statutory financial statements of ABB Ltd are prepared in accordance with Swiss law. Based on these financial statements, dividends may be paid only if ABB Ltd has sufficient distributable profits from previous years or sufficient free reserves to allow the distribution of a dividend. Swiss law requires that ABB Ltd retain at least 5 percent of its annual net profits as legal reserves until these reserves amount to at least 20 percent of ABB Ltd's share capital. Any net profits remaining in excess of those reserves are at the disposal of the shareholders' meeting.

Under Swiss law, 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 ABB Ltd's Articles of Incorporation. 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 as compliant with Swiss law and ABB's Articles of Incorporation.

Dividends are usually due and payable no earlier than two trading days after the shareholders' resolution and the ex-date for dividends is normally two trading days after the shareholders' resolution approving the dividend. Dividends are paid out to the holders that are registered on the record date. Euroclear administers the payment of those shares registered with it. Under Swiss law, dividends not collected within five years after the due date accrue to ABB Ltd and are allocated to its other reserves. As ABB Ltd pays cash dividends, if any, in Swiss francs (subject to the exception for certain shareholders in Sweden described below), 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 depository, in accordance with the Amended and Restated Deposit Agreement dated May 7, 2001.

For shareholders who are residents of Sweden, ABB has established a dividend access facility (for up to 600,004,716 shares). With respect to any annual dividend payment for which this facility is made available, shareholders who register with Euroclear may elect to receive the dividend from ABB Norden Holding AB in Swedish krona (in an amount equivalent to the dividend paid in Swiss francs) without deduction of Swiss withholding tax. For further information on the dividend access facility, see ABB Ltd's Articles of Incorporation, a copy of which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

### 4.4 General meeting

Shareholders' resolutions at general meetings are approved with an absolute majority of the votes represented at the meeting, except for those matters described in article 704 of the Swiss Code of Obligations and for resolutions with respect to restrictions on the exercise of the right to vote and the removal of such restrictions, which all require the approval of two-thirds of the votes represented at the meeting.

At December 31, 2015, shareholders representing shares of a par value totaling at least CHF 344,000 may request items to be included in the agenda of a general meeting. Any such request must be made in writing at least 40 days prior to the date of the general meeting and specify the items and the motions of such shareholder(s).

ABB's Articles of Incorporation do not contain provisions on the convocation of the general meeting of shareholders that differ from the applicable legal provisions.

### 4.5 Compensation principles and "say on pay"

Compensation for the members of the Board consists of fixed compensation and for members of the EC consists of fixed and variable compensation. Compensation may be paid in the form of cash, shares or other types of benefits and for the EC also in the form of share-based instruments or units. The Board, or, to the extent delegated to it, the Compensation Committee, shall determine grant, vesting, exercise and forfeiture conditions relating to share-based instruments or units. Additional details on "ABB's General Compensation Principles" can be found in Article 33 of ABB's Articles of Incorporation and information about their implementation can be found in the Compensation report contained in this Annual Report.

Shareholders must approve the maximum aggregate amount of compensation for the Board for the following Board term and for the EC for the following financial year. If the approved compensation is not sufficient to cover new EC members or newly promoted EC members following the approval, then up to 30% of the last approved maximum aggregate EC compensation shall be available for payment as a supplementary amount for such new members or such newly promoted members. Additional details on ABB's "Approval of Compensation by the General Meeting of Shareholders" and "Supplementary Amount for Changes to the Executive Committee" can be found respectively in Articles 34 and 35 of ABB's Articles of Incorporation.

## 4.6 Mandates for Board and EC members outside of ABB

No member of the Board may hold more than ten additional mandates of which no more than four may be in listed companies. No member of the EC may hold more than five mandates of which no more than one may be in a listed company. Certain types of mandates, such as those in our subsidiaries and those in non-profit and charitable institutions, are not subject to those limits. Additional details on “Mandates Outside the Group” can be found in Article 38 of ABB’s Articles of Incorporation.

## 4.7 Credits to Board and EC members

ABB’s Articles of Incorporation prohibit the Company from granting credits to a member of the Board or to a member of the EC.

# 5. Board of Directors

## 5.1 Responsibilities and organization

The Board defines the ultimate direction of the business of ABB and issues the necessary instructions. It determines the organization of the ABB Group and appoints, removes and supervises the persons entrusted with the management and representation of ABB.

The internal organizational structure and the definition of the areas of responsibility of the Board, as well as the information and control instruments vis-à-vis the Executive Committee, are set forth in the ABB Ltd Board Regulations & Corporate Governance Guidelines, a copy of which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

The Board meets as frequently as needed but at least four times per annual Board term. Board meetings are convened by the chairman or upon request by a director or the chief executive officer (CEO). Documentation covering the various items of the agenda for each Board meeting is sent out in advance to each Board member in order to allow each member time to study the covered matters prior to the meetings. Decisions made at the Board meetings are recorded in written minutes of the meetings.

The CEO shall regularly, and whenever extraordinary circumstances so require, report to the Board about ABB’s overall business and affairs. Further, Board members are entitled to information concerning ABB’s business and affairs.

Additional details are set forth in the ABB Ltd Board Regulations & Corporate Governance Guidelines which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

## 5.2 Term and members

The members of the Board are elected individually at the annual general meeting of the shareholders for a term of one year; reelection is possible. Our Articles of Incorporation, a copy of which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance), do not provide for the retirement of directors based on their age. However, an age limit for members of the Board is set forth in the ABB Ltd Board Regulations & Corporate Governance Guidelines (although waivers are possible and subject to Board discretion), a copy of which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

As at December 31, 2015, the members of the Board (Board term April 2015 to April 2016) were:



### **Peter R. Voser**

Mr. Voser has been a member and chairman of ABB’s Board of Directors since April 2015. He is a member of the boards of directors of Roche Holdings Ltd (Switzerland), IBM Corporation (U.S.) and Temasek Holdings (Private) Limited (Singapore). He was formerly the chief executive officer of Royal Dutch Shell plc (The Netherlands). Mr. Voser was born in 1958 and is a Swiss citizen.



### **Jacob Wallenberg**

Mr. Wallenberg has been a member of ABB’s Board of Directors since June 1999 and Vice-Chairman since April 2015. He is the chairman of the board of Investor AB (Sweden). He is vice chairman of the boards of Telefonaktiebolaget LM Ericsson AB and SAS AB (both Sweden). He is also a member of the boards of directors of the Knut and Alice Wallenberg Foundation and the Stockholm School of Economics (Sweden) and the Swedish Swiss Chamber of Commerce (Switzerland). Mr. Wallenberg was born in 1956 and is a Swedish citizen.



**Roger Agnelli**

Mr. Agnelli has been a member of ABB’s Board of Directors since March 2002. He is the founding partner and chief executive officer of AGN Holding (Brazil). He is the chairman of B&A, a joint venture between BTG Pactual and AGN Holding (Brazil) and a director of WPP plc (U.K.). Mr. Agnelli was born in 1959 and is a Brazilian citizen.



**Michel de Rosen**

Mr. de Rosen has been a member of ABB’s Board of Directors since March 2002. He is the chief executive officer of and (until March 1, 2016) chairman of the board of Eutelsat Communications (France). He is also a member of the board of directors of Pharnext SAS (France). Mr. de Rosen was born in 1951 and is a French citizen.



**Matti Alahuhta**

Mr. Alahuhta has been a member of ABB’s Board of Directors since April 2014. He is the chairman of the board of Outotec Corporation and of DevCo Partners (both Finland). He is also a member of the boards of directors of KONE Corporation (Finland) and Volvo AB (Sweden). He is also the Chairman of the Confederation of Finnish Industries (Finland). Mr. Alahuhta was born in 1952 and is a Finnish citizen.



**Ying Yeh**

Ms. Yeh has been a member of ABB’s Board of Directors since April 2011. She is a member of the boards of directors of InterContinental Hotels Group (U.K.) and Samsonite International S.A. (Luxembourg). Ms. Yeh was born in 1948 and is a Chinese citizen.



**David Constable**

Mr. Constable has been a member of ABB’s Board of Directors since April 2015. He is the president and chief executive officer of and a member of the board of directors of Sasol Limited (South Africa). He was formerly the group-president of operations of Fluor Corporation (U.S.) where he served for more than 29 years in leadership positions. Mr. Constable was born in 1961 and is a Canadian citizen.



**Louis R. Hughes**

Mr. Hughes has been a member of ABB’s Board of Directors since May 2003. He is the chairman of the board of InZero Systems (formerly GBS Laboratories LLC) (U.S.). He is also a member of the supervisory board of Akzo Nobel (The Netherlands) and a member of the board of directors of Nokia Corporation (Finland). Mr. Hughes was born in 1949 and is a U.S. citizen.

As of December 31, 2015, all Board members were non-executive and independent directors (see also section 7 below), and none of ABB’s Board members held any official functions or political posts. Further information on ABB’s Board members can be found by clicking on the ABB Board of Directors CV link which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

**5.3 Board committees**

The Board has created three Board committees: the Finance, Audit and Compliance Committee (FACC), the Governance and Nomination Committee (GNC), and the Compensation Committee (CC). The duties and objectives of the Board committees are set forth in the ABB Ltd Board Regulations & Corporate Governance Guidelines, a copy of which can be found at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance). These committees assist the Board in its tasks and report regularly to the Board. The members of the Board committees either are required to be independent or are elected directly by the shareholders.

### 5.3.1 Finance, Audit and Compliance Committee

The FACC is responsible for overseeing (1) the integrity of ABB's financial statements, (2) ABB's compliance with legal, tax and regulatory requirements, (3) the independent auditors' qualifications and independence, (4) the performance of ABB's internal audit function and external auditors, and (5) ABB's capital structure, funding requirements and financial risk and policies.

The FACC must comprise three or more independent directors who have a thorough understanding of finance and accounting. The chairman of the Board and, upon invitation by the committee's chairman, the CEO or other members of the Executive Committee may participate in the committee meetings, provided that any potential conflict of interest is avoided and confidentiality of the discussions is maintained. In addition, the Chief Integrity Officer, the Head of Internal Audit and the external auditors participate in the meetings as appropriate. As required by the U.S. Securities and Exchange Commission (SEC) at least one member of the FACC has to be an audit committee financial expert. The Board has determined that each member of the FACC is an audit committee financial expert.

As at December 31, 2015, the members of the FACC were:

Louis R. Hughes (chairman)  
Roger Agnelli  
Matti Alahuhta

### 5.3.2 Governance and Nomination Committee

The GNC is responsible for (1) overseeing corporate governance practices within ABB, (2) nominating candidates for the Board, the role of CEO and other positions on the Executive Committee, and (3) succession planning and employment matters relating to the Board and the Executive Committee. The GNC is also responsible for maintaining an orientation program for new Board members and an ongoing education program for existing Board members.

The GNC must comprise three or more independent directors. The chairman of the Board (unless he is already a member) and, upon invitation by the committee's chairman, the CEO or other members of the Executive Committee may participate in the committee meetings, provided that any potential conflict of interest is avoided and confidentiality of the discussions is maintained.

As at December 31, 2015, the members of the GNC were:

Peter R. Voser (chairman)  
Matti Alahuhta  
Jacob Wallenberg

### 5.3.3 Compensation Committee

The CC is responsible for compensation matters relating to the Board and the Executive Committee.

The CC must comprise three or more directors who are elected by the shareholders. The chairman of the Board and, upon invitation by the committee's chairman, the CEO or other members of the Executive Committee may participate in the committee meetings, provided that any potential conflict of interest is avoided and confidentiality of the discussions is maintained.

As at December 31, 2015, the members of the CC were:

Michel de Rosen (chairman)  
David Constable  
Ying Yeh

## 5.4 Meetings and attendance

The Board and its committees have regularly scheduled meetings throughout the year. These meetings are supplemented by additional meetings (either in person or by conference call), as necessary.

The table below shows the number of meetings held during 2015 by the Board and its committees, their average duration, as well as the attendance of the individual Board members. The Board meetings shown include a strategic retreat attended by the members of the Board and the Executive Committee.

2015										
Meetings and attendance	Board Term 2014-2015					Board Term 2015-2016				
	Board		FACC	GNC	CC	Board		FACC	GNC	CC
	Mtg.	Conf. Call				Mtg.	Conf. Call			
Average duration (hours)	8.75	1.5	3.5	3.5	2	8.75	1.5	3.5	3.5	2
Number of meetings	2	1	3	3	3	5	1	3	4	3
Meetings attended:										
Hubertus von Grünberg <sup>(1)</sup>	2	1	—	3	—	—	—	—	—	—
Peter R. Voser <sup>(2)</sup>	—	—	—	—	—	5	1	—	4	—
Jacob Wallenberg	2	1	3	—	—	4	1	—	4	—
Roger Agnelli	2	—	2	—	—	5	1	3	—	—
Matti Alahuhta	2	1	—	3	—	5	1	3	4	—
David Constable <sup>(2)</sup>	—	—	—	—	—	4	1	—	—	3
Louis R. Hughes	2	1	3	—	—	5	1	3	—	—
Michel de Rosen	2	1	—	—	3	5	1	—	—	3
Michael Treschow <sup>(1)</sup>	2	1	—	3	3	—	—	—	—	—
Ying Yeh	2	1	—	—	3	5	1	—	—	3

<sup>(1)</sup> Hubertus von Grünberg and Michael Treschow did not stand for reelection at the April 2015 AGM.

<sup>(2)</sup> Peter R. Voser and David Constable were elected at the April 2015 AGM.

## 5.5 Board compensation and shareholdings

Information about Board compensation and shareholdings can be found in the section titled “Compensation and share ownership tables” of the Compensation report contained in this Annual Report.

## 5.6 Secretary to the Board

Diane de Saint Victor is the secretary to the Board.

# 6. Executive Committee

## 6.1 Responsibilities and organization

The Board has delegated the executive management of ABB to the CEO and the other members of the Executive Committee. The CEO and under his direction, the other members of the Executive Committee are responsible for ABB’s overall business and affairs and day-to-day management.

The CEO reports to the Board regularly, and whenever extraordinary circumstances so require, on the course of ABB’s business and financial performance and on all organizational and personnel matters, transactions and other issues relevant to the Group.

Each member of the Executive Committee is appointed and discharged by the Board.

## 6.2 Members of the Executive Committee

As at December 31, 2015, the members of the Executive Committee were:



### Ulrich Spiesshofer

Mr. Spiesshofer was appointed Chief Executive Officer in September 2013 and has been a member of the Executive Committee since 2005. From January 2010 to September 2013, Mr. Spiesshofer was Executive Committee member responsible for the Discrete Automation and Motion division. He joined ABB in November 2005, as Executive Committee member responsible for Corporate Development. From 2002 until he joined ABB, he was senior partner and global head of operations practice at Roland Berger AG (Switzerland). From 1991 to 2002, he held various management positions with A.T. Kearney Ltd. and its affiliates. Mr. Spiesshofer was born in 1964 and is a German citizen.



**Eric Elzvik**

Mr. Elzvik was appointed Chief Financial Officer and member of the Executive Committee in February 2013. From 2010 to 2013, Mr. Elzvik was the Chief Financial Officer of ABB's Discrete Automation and Motion division. He joined ABB in 1984 and has held a variety of other leadership roles in Sweden, Singapore and Switzerland, including head of Corporate Development, and head of Mergers & Acquisitions and New Ventures. Mr. Elzvik was born in 1960 and is a Swiss and Swedish citizen.



**Jean-Christophe Deslarzes**

Mr. Deslarzes was appointed Chief Human Resources Officer and member of the Executive Committee in November 2013. In April 2015, he was elected to the board of directors of the Adecco Group (Switzerland). From 2010 through 2013, he was the Chief Human Resources and Organization Officer of the Carrefour Group (France). From 2008 to 2010 he was President and CEO of the Downstream Aluminum Businesses of Rio Tinto (Canada). He was Senior Vice President Human Resources of Alcan Inc. (Canada) from 2006–2008 and in addition he co-led the integration of Rio Tinto and Alcan from 2007 to 2008. From 1994 and 2006, he held various human resources and management roles with Alcan Inc. Mr. Deslarzes was born in 1963 and is a Swiss citizen.



**Diane de Saint Victor**

Ms. de Saint Victor was appointed General Counsel, Company Secretary and member of the Executive Committee in January 2007. In March 2013, she was appointed as a non-executive director of Barclays plc and Barclays Bank plc (both U.K.). From 2004 to 2006, she was general counsel of the Airbus Group (France/Germany). From 2003 to 2004, she was general counsel of SCA Hygiene Products (Germany). From 1993 to 2003, she held various legal positions with Honeywell International (France/Belgium). From 1988 to 1993, she held various legal positions with General Electric (U.S.). Ms. de Saint Victor was born in 1955 and is a French citizen.



**Pekka Tiitinen**

Mr. Tiitinen was appointed President of the Discrete Automation and Motion division and member of the Executive Committee in September 2013 and was named Head of Group Marketing & Sales in January 2015. In 2013, prior to joining the Executive Committee, Mr. Tiitinen was the head of ABB's drives and controls global business unit. From 2003 to 2012, Mr. Tiitinen was the head of ABB's low voltage drives global business unit and from 1990 to 2003, he held various management roles with ABB. Mr. Tiitinen was born in 1967 and is a Finnish citizen.



**Tarak Mehta**

Mr. Mehta was appointed President of the Electrification Products division effective January 2016 and has been a member of the Executive Committee since October 2010. From October 2010 through December 2015, he was President of the Low Voltage Products division. From 2007 to 2010, he was head of ABB's transformers business. Between 1998 and 2006, he held several management positions with ABB. Mr. Mehta was born in 1966 and is a U.S. citizen.



**Peter Terwiesch**

Mr. Terwiesch was appointed President of the Process Automation division and member of the Executive Committee in January 2015. He is a member of the board of directors of Metall Zug AG (Switzerland). From 2011 to 2014, he was the head of ABB's Central Europe region. He was ABB's Chief Technology Officer from 2005 to 2011. From 1994 to 2005, he held several positions with ABB. Mr. Terwiesch was born in 1966 and is a Swiss and German citizen.



**Frank Duggan**

Mr. Duggan was appointed President of the Asia, Middle East and Africa region in January 2015 and has been a member of the Executive Committee since 2011. From 2011 to 2014, Mr. Duggan was the head of Global Markets. From 2008 to 2014, he was also ABB's region manager for India, Middle East and Africa. From 2008 to 2011, he was ABB's country manager for the United Arab Emirates. Between 1986 and 2008, he held several management positions with ABB. Mr. Duggan was born in 1959 and is an Irish citizen.



**Claudio Facchin**

Mr. Facchin was appointed President of the Power Grids division effective January 2016 and has been a member of the Executive Committee since December 2013. From December 2013 through December 2015, he was President of the Power Systems division. From 2010 to 2013, Mr. Facchin was head of ABB's North Asia region. From 2004 to 2009, Mr. Facchin was the head of ABB's substations global business unit and from 1995 to 2004, he held various management roles with ABB. Mr. Facchin was born in 1965 and is an Italian citizen.



**Greg Scheu**

Mr. Scheu as appointed President of the Americas region as well as Head of Group Service and Business Integration in January 2015 and has been a member of the Executive Committee since 2012. From 2013 to 2014, he was Head of Business Integration, Group Service and North America. From 2012 to 2013, he was Head of Marketing and Customer Solutions. Mr. Scheu, a former executive of Rockwell International, joined ABB in 2001 and was responsible for the integration of both Baldor Electric Co. and of Thomas & Betts into ABB. Mr. Scheu was born in 1961 and is a U.S. citizen.



**Bernhard Jucker**

Mr. Jucker was appointed President of the Europe region and Chairman of Divisional Transformation Team effective January 2016 and has been a member of the Executive Committee since January 2006. From 2006 through 2015, he was President of the Power Products division. From 2003 to 2005, he was ABB's country manager for Germany. From 1980 to 2003, he held various positions in ABB. Mr. Jucker was born in 1954 and is a Swiss citizen.



**Veli-Matti Reinikkala**

Mr. Reinikkala was President of the Europe region in 2015 and was a member of the Executive Committee from 2006 until his retirement at the end of 2015. He is a member of the board of directors of UPM-Kymmene Corporation (Finland). From 2006 to 2014, he was President of the Process Automation division. In 2005, he was head of the Process Automation business area. From 1993 to 2005, he held several positions with ABB. Mr. Reinikkala was born in 1957 and is a Finnish citizen.

Further information about the members of the Executive Committee can be found by clicking on the Executive Committee CV link at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

## 6.3 Executive Committee compensation and shareholdings

Information about Executive Committee compensation and shareholdings can be found in the section titled “Compensation and share ownership tables” of the Compensation report contained in this Annual Report.

## 6.4 Management contracts

There are no management contracts between ABB and companies or natural persons not belonging to the ABB Group.

# 7. Business relationships

This section describes important business relationships between ABB and its Board members, or companies and organizations represented by them. This determination has been made based on ABB Ltd’s Related Party Transaction Policy. This policy is contained in the ABB Ltd Board Regulations & Corporate Governance Guidelines, a copy of which can be found in the section “Corporate governance – Further information on corporate governance” at [www.abb.com/investor-relations](http://www.abb.com/investor-relations).

Atlas Copco AB (Atlas Copco) is an important business partner of ABB. ABB supplies Atlas Copco primarily with drives and motors through its Discrete Automation and Motion division. Jacob Wallenberg was vice chairman of Atlas Copco until April 2012.

IBM Corporation (IBM) is an important supplier to ABB. IBM supplies ABB primarily with IT related hardware, software and services. Peter Voser is a director of IBM.

Adecco S.A. (Adecco) is an important supplier to ABB. Adecco primarily supplies ABB with temporary personnel services. Jean-Christophe Deslarzes is a director of Adecco.

ABB has an unsecured syndicated \$2-billion, revolving credit facility. As of December 31, 2015, SEB Skandinaviska Enskilda Banken AB (publ) (SEB) and Barclays Bank plc (Bar-

clays Bank) had each committed to approximately \$74 million out of the \$2-billion total. In addition, ABB has regular banking business with SEB and Barclays. Jacob Wallenberg was the vice chairman of SEB until March 2014 and Diane de Saint Victor is a director of Barclays Bank and Barclays plc.

After reviewing the level of ABB’s business with Atlas Copco and the level of purchases from IBM and Adecco, and after reviewing the banking commitments of SEB and Barclays, the Board has determined that ABB’s business relationships with those companies are not unusual in their nature or conditions and do not constitute material business relationships. As a result, the Board concluded that all members of the Board are considered to be independent directors. This determination was made in accordance with ABB Ltd’s Related Party Transaction Policy which was prepared based on the Swiss Code of Best Practice for Corporate Governance and the independence criteria set forth in the corporate governance rules of the New York Stock Exchange.

# 8. Employee participation programs

In order to align its employees’ interests with the business goals and financial results of the company, ABB operates a number of incentive plans, linked to ABB’s shares, such as the Employee Share Acquisition Plan, the Management Incentive Plan and the Long-Term Incentive Plan. For a more detailed description of these incentive plans, please refer to “Note 18 Share-based payment arrangements” to ABB’s Consolidated Financial Statements contained in the “Financial review of ABB Group” section of this Annual Report.

# 9. Duty to make a public tender offer

ABB’s Articles of Incorporation do not contain any provisions raising the threshold (opting-up) or waiving the duty (opting out) to make a public tender offer pursuant to article 32 of the Swiss Stock Exchange and Securities Trading Act.

## 10. Auditors

### 10.1 Auditors

Ernst & Young are the auditors of ABB's statutory and consolidated financial statements.

### 10.2 Duration of the mandate and term of office of the auditor

Ernst & Young assumed the sole auditing mandate of the consolidated financial statements of the ABB Group beginning in the year ended December 31, 2001 (having previously been joint auditors since 1994). The auditor in charge and responsible for the mandate, Leslie Clifford, began serving in this function in respect of the financial year ended December 31, 2013. Pursuant to the Articles of Incorporation, the term of office of ABB's auditors is one year.

### 10.3 Auditing and additional fees paid to the auditor

The audit fees charged by Ernst & Young for the legally prescribed audit amounted to \$25.9 million in 2015. Audit services are defined as the standard audit work performed each fiscal year necessary to allow the auditors to issue an opinion on the consolidated financial statements of ABB and to issue an opinion on the local statutory financial statements.

This classification may also include services that can be provided only by the auditors, such as pre-issuance reviews of quarterly financial results and comfort letters delivered to underwriters in connection with debt and equity offerings.

In addition, Ernst & Young charged \$7.9 million for non-audit services performed during 2015. Non-audit services include primarily accounting consultations, audits of pension and benefit plans, accounting advisory services, other attest services related to financial reporting that are not required by statute or regulation, income tax and indirect tax compliance services, tax advisory services and consultations relating to conflict minerals compliance. In accordance with the requirements of the U.S. Sarbanes-Oxley Act of 2002 and rules issued by the SEC, ABB has, on a global basis, a process for the review and pre-approval of audit and non-audit services to be performed by Ernst & Young.

### 10.4 Supervisory and control instruments vis-à-vis the auditors

The FACC prepares proposals to the Board for the appointment and removal of the auditors. The FACC is also responsible for supervising the auditors to ensure their qualifications, independence and performance. It meets regularly with the auditors, at least four times each calendar year, to obtain reports about the results of their audit procedures. The FACC reports the material elements of its supervision of the auditors to the Board.

## 11. Information policy

ABB, as a publicly-traded company, is committed to communicating in a timely and consistent way to shareholders, potential investors, financial analysts, customers, suppliers, the media and other interested parties. ABB is required to disseminate material information pertaining to its businesses in a manner that complies with its obligations under the rules of the stock exchanges where its shares are listed and traded.

ABB publishes an annual report that provides audited financial statements and information about ABB including our business results, strategy, products and services, corporate governance and executive compensation. ABB also submits an annual report on Form 20-F to the SEC. In addition, ABB publishes its results on a quarterly basis as press releases, distributed pursuant to the rules and regulations of the stock exchanges on which its shares are listed and traded. Press releases relating to financial results and material events are also filed with the SEC on Form 6-K. An archive containing Annual Reports, Form 20-F reports, quarterly results releases and related presentations can be found in the "Financial results and presentations" section at [www.abb.com/investorrelations](http://www.abb.com/investorrelations). The quarterly results press releases contain unaudited financial information prepared in accordance with or reconciled to U.S. GAAP. To subscribe to important press releases, please click on the "Contacts and Services" and choose "Subscribe to updates" at [www.abb.com/investorrelations](http://www.abb.com/investorrelations). Ad hoc notices can also be found in the press releases section at [www.abb.com/news](http://www.abb.com/news)

ABB's official means of communication is the Swiss Official Gazette of Commerce ([www.shab.ch](http://www.shab.ch)). The invitation to the company's Annual General Meeting is sent to registered shareholders by mail.

Inquiries may also be made to ABB Investor Relations:

Affolternstrasse 44

CH-8050 Zurich, Switzerland

Telephone: +41 (0)43 317 7111

Fax: +41 (0)44 311 9817

E-mail: [investorrelations@ch.abb.com](mailto:investorrelations@ch.abb.com)

ABB's website is: [www.abb.com](http://www.abb.com)

## 12. Further information on corporate governance

The list below contains references to additional information concerning the corporate governance of ABB, which can be accessed at [www.abb.com/about/corporate-governance](http://www.abb.com/about/corporate-governance)

- Articles of Incorporation
- ABB Ltd Board Regulations & Corporate Governance Guidelines
- Regulations of the Finance, Audit and Compliance Committee
- Regulations of the Governance and Nomination Committee
- Regulations of the Compensation Committee
- Related Party Transaction Policy
- ABB Code of Conduct
- Addendum to the ABB Code of Conduct for Members of the Board of Directors and the Executive Committee
- Comparison of ABB's corporate governance practices to the New York Stock Exchange rules
- CVs of the Board members
- CVs of the Executive Committee members



**Jing** – Corporate Research, Raleigh, United States

“The core of my work [is] ... research, not product development, and this means asking open questions. But asking these questions allows you to come up with solutions that nobody has thought of before.”

# Compensation report

## Contents

---

**42** Letter from the Chairman  
of the Compensation Committee

---

**43** Key facts 2015 and  
Compensation Committee activities

---

**44** Compensation report

44 Board compensation

46 Executive Committee compensation

53 Additional information

54 Votes on compensation at the 2016 AGM

56 Compensation and share ownership tables

---

**67** Report of the Statutory Auditor  
on the Compensation report

# Letter from the Chairman of the Compensation Committee

Dear shareholders,

On behalf of the Board of Directors and the Compensation Committee (CC), I am pleased to present the Compensation report for 2015.

Following the election of the CC at the 2015 Annual General Meeting (AGM), we welcomed David Constable as a new member of the Committee. His extensive international experience and expertise will further enrich the Board of Directors and the Compensation Committee. We are deeply grateful to Michael Treschow, who, after 12 years of dedicated service, including as a member of the Compensation Committee, stepped down as a Member of the Board. We thank Michael for his valuable contribution.

In 2015, we implemented the key changes to the Executive Committee (EC) compensation system, which were already outlined in last year's Compensation report. The revised incentive system aims to improve ABB's business speed, agility and customer focus and to strengthen its operational and performance culture. Key changes to the compensation system are:

- incorporation of a better balance between Group and individual performance into the short-term incentive plan;
- expansion of key performance indicators (KPIs) related to short-term incentives to drive the execution of strategy and creation of shareholder value;
- payout of the short-term compensation above 100 percent is no longer at the Board's discretion, but is solely driven by achieved performance; and

- realignment of the long-term incentive plan components in order to give a greater emphasis on performance.

At the 2015 AGM, our shareholders approved the proposed maximum aggregate compensation amounts of the Board for the 2015-2016 Board term by a majority of 98 percent and of the EC for 2016 by a majority of 94 percent, demonstrating strong support for our revised compensation system. Furthermore, in a consultative, non-binding vote, the shareholders approved the 2014 Compensation report by a majority of almost 83 percent.

On the following pages you will find further details of ABB's compensation system, including the compensation principles, structure, governance, and the levels of compensation in 2015. This Compensation report will be submitted to a non-binding, consultative vote of the shareholders at the AGM in April 2016. You will also be asked to vote on maximum aggregate compensation to the Board for the 2016-2017 Board term, and on maximum aggregate EC compensation for 2017.

We encourage and pursue an open and regular dialogue with our stakeholders. Your feedback is highly valued and appreciated as we continue to evolve the compensation system. On behalf of ABB and the CC, as well as the Board, I would like to thank you for your continued trust in ABB and for your consistently constructive and supportive feedback regarding our compensation framework.

Michel de Rosen  
Chairman of the Compensation Committee  
Zurich, February 25, 2016

# Key facts 2015 and Compensation Committee activities

## Key facts

For the 2015-2016 term of office, aggregate Board compensation increased by 2.8 percent compared with the previous year, following the appointment of a vice chairman for the first time since 2007.

Aggregate EC compensation was higher in 2015 than in 2014, principally due to the addition of one EC member and the higher performance-based payout on short-term variable compensation. The other main factor was the higher grant reference value of the P2 component of the long-term incentive plan for the CEO in 2015, compared with the reduced value he was awarded for his first full year in office. EC membership was subsequently reduced in January 2016 to the same size as in 2014 as part of the organizational realignment under the second stage of the Next Level strategy.

### Exhibit 1: Overview of total compensation (in CHF)

Board term	<b>2015–2016</b>	2014–2015
Board of Directors	3,730,000	3,630,000
Calendar year	<b>2015</b>	2014
Executive Committee	45,521,908	38,699,707

## CC activities in 2015

The CC, on behalf of the Board, regularly reviews the compensation policy and structure, and makes specific recommendations to the Board on Board and EC compensation to ensure consistency with ABB's compensation principles. For an overview of the CC's activities in 2015, see Exhibit 2.

### Exhibit 2: Topics discussed during 2015

#### Items relating to past performance cycle

- Performance assessment of short-term variable compensation plan
- Approval of payout of long-term variable compensation plan
- Look-back assessment of ABB's performance over past three years

#### Items relating to upcoming performance cycle

- Setting of performance targets for short-term variable compensation
- Setting of performance targets for P1 and P2 components of long-term variable compensation

#### EC compensation and performance

- Performance assessment of the prior year
- Discussion of EC compensation relative to external benchmarks
- Approval of individual compensation for EC members

#### Overall EC compensation review and planning

- Quarterly updates on status of various performance plans
- Review of EC pay mix
- Review of pensions and benefits
- Review of shareholding levels of each EC member

#### Compensation of Board of Directors

- Review level of compensation of Board members
- Comparison of compensation levels against external benchmarks

#### Compliance and regulatory

- Approval of Compensation report for publication
- Decision on maximum aggregate EC compensation for following financial year to be proposed at AGM
- Decision on maximum aggregate Board compensation for following Board term to be proposed at AGM

Further information on responsibilities of the CC can be found in section 5.3.3 of the Corporate governance report, and in sections 1.1 and 2.2 of the Compensation report.

# Compensation report

## 1. Board compensation

### 1.1 Compensation principles and governance

The compensation system for the members of the Board of Directors is designed to attract and retain experienced people in the role. Compensation for Board members takes into account the responsibilities, time and effort required to fulfill their roles on the Board and its committees.

The compensation of Board members is fixed. They do not receive variable compensation, underscoring their focus on corporate strategy, supervision and governance. However, in order to further align the interests of Board members with those of ABB's shareholders, half of each member's compensation has to be paid in the form of ABB shares, although Board members can choose to receive all of their compensation in shares. The shares are kept in a blocked account for three years. Departing Board members are entitled to the shares when they leave the company.

Board members are paid for their service over a 12-month period that starts with their election at the AGM. Payment is made in semi-annual installments in arrears. The number of shares delivered is calculated prior to each semi-annual payment by dividing the sum to which the Board members are entitled by the average closing price of the ABB share over a predefined 30-day period. Board members do not receive pension benefits and are not eligible to participate in any of ABB's employee incentive programs. In accordance with Swiss law, none of ABB's Board members receive golden parachutes or other special benefits in the event of a change of control. Furthermore, no credits and loans may be granted to Board members.

The CC is responsible for making recommendations to the Board regarding the level of compensation of Board members. Based on the recommendation of the CC and subject to any limits approved by the shareholders, the Board determines the compensation of each of its members.

From time to time the Board and CC review the levels and mix of compensation of Board members against the compensation of non-executive board members of publicly traded companies in Switzerland that are part of the Swiss Market Index.

**Exhibit 3: Approval process for Board compensation**

	CC	Board	Shareholders at AGM
Maximum aggregate compensation	■ Proposal	■ Recommendation	■ Approval
Compensation of individual members	■ Recommendation	■ Approval	

■ Proposal    ■ Recommendation    ■ Approval

*Shareholders decide on the maximum aggregate compensation to the Board.*

## 1.2 Level and development of Board compensation

The compensation amounts per Board member for the 2015–2016 and 2014–2015 terms of office were:

**Exhibit 4: Total compensation per Board member (audited)**

Name	Specific Board Roles	Board term	Board term
		2015-2016	2014-2015
		CHF	CHF
Peter Voser <sup>(1)</sup>	Chairman of the Board and Chairman of GNC 2015-2016	1,200,000	-
Hubertus von Grünberg <sup>(1)</sup>	Chairman of the Board and GNC member 2014-2015	-	1,200,000
Jacob Wallenberg	Vice-Chairman of the Board and GNC member 2015-2016; FACC member 2014-2015	450,000	330,000
Roger Agnelli	FACC member	330,000	330,000
Matti Alahuhta	FACC member 2015-2016 and GNC member	360,000	320,000
David Constable <sup>(2)</sup>	CC member 2015-2016	320,000	-
Louis R. Hughes	Chairman of FACC	400,000	400,000
Michel de Rosen	Chairman of CC	350,000	350,000
Michael Treschow <sup>(3)</sup>	Chairman of GNC 2014-2015	-	380,000
Ying Yeh	CC member	320,000	320,000
<b>Total</b>		<b>3,730,000</b>	<b>3,630,000</b>

<sup>(1)</sup> Peter Voser joined the Board as Chairman at the 2015 ABB Ltd AGM succeeding Hubertus von Grünberg who did not stand for re-election

<sup>(2)</sup> David Constable joined the Board at the 2015 ABB Ltd AGM

<sup>(3)</sup> Michael Treschow did not stand for re-election at the 2015 ABB Ltd AGM

Key:

CC: Compensation Committee

FACC: Finance, Audit & Compliance Committee

GNC: Governance & Nomination Committee

For compensation amounts per Board member in the calendar years 2015 and 2014, see Exhibit 19 on page 56.

The increase in the total compensation of the Board members is due to the addition of a vice-chairman role in the 2015-2016 term. The roles and responsibilities of Board members are described in the Corporate governance report, section 5, page 31.

## 2. Executive Committee compensation

### 2.1 Compensation principles

The Board considers the Group's compensation system an important factor in attracting, motivating and retaining people with the talent necessary to strengthen ABB's position as a global leader in power and automation.

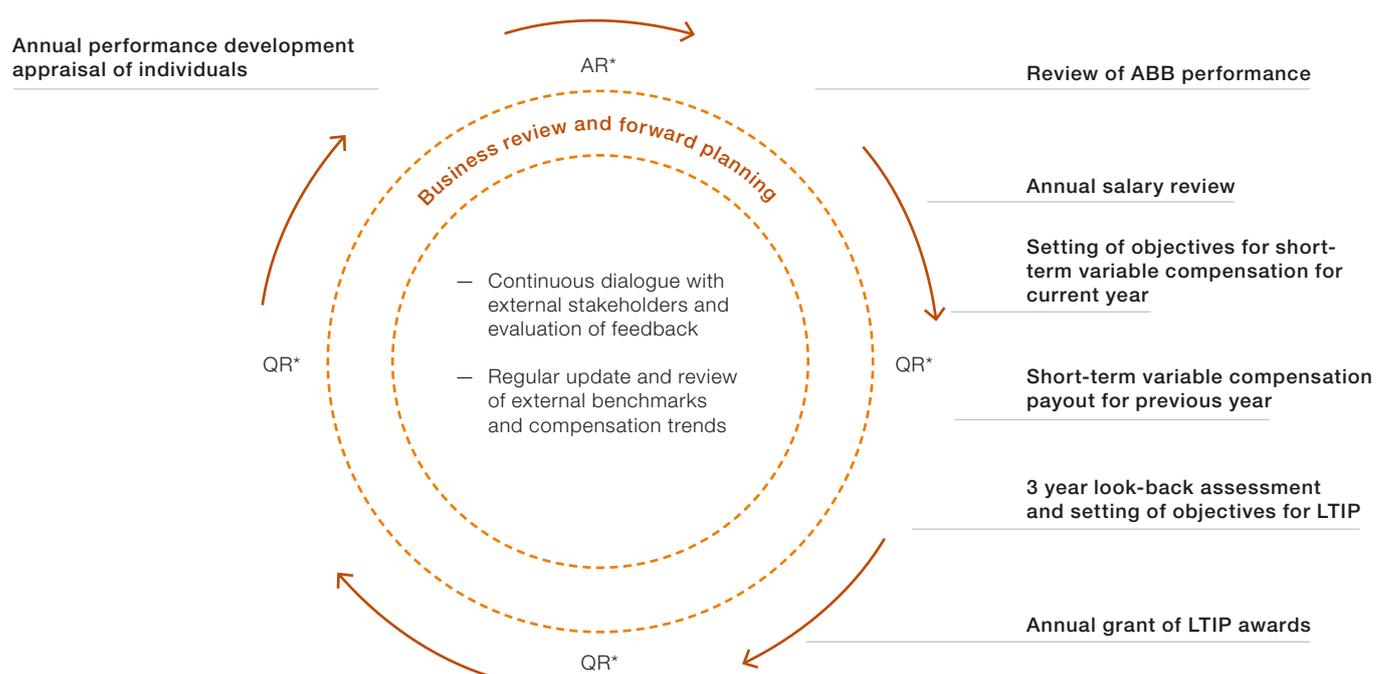
The revised EC compensation system, which was first described in the 2014 Compensation report, creates a framework to provide competitive compensation and to encourage employees to deliver outstanding results while rewarding Group and individual performance in a balanced way. At the same time, a balance between fixed and variable compensation and between short- and long-term incentives is designed to align the interests of EC members with those of other stakeholders. The objective is to ensure that their performance is sustainable without excessive risk taking.

The system is designed to support the achievement of financial targets and improvements in key operations, and to drive the leadership behaviors required for focused change.

To help achieve these goals, the Board has developed ABB's key principles of EC compensation, described below:

<b>Linked and balanced</b>	Compensation is linked to the Next Level strategy and performance through ambitious individual and Group objectives, robust performance monitoring and a sound balance between Group and individual performance.
<b>Competitive</b>	Annual base salaries of EC members are set between the market median and upper quartile in order to attract suitable talent.
<b>Performance driven</b>	Ambitious objectives are set in ABB's planning processes, and variable pay is aimed at the upper quartile level when these objectives are met.
<b>Comprehensive KPIs</b>	All performance metrics support the development of earnings per share and cash return on invested capital, and cover financial, operational, change and behavioral performance.
<b>Market tested</b>	Compensation mix and levels are tested annually against benchmarks that include selected ABB peers and appropriate markets in which ABB operates.

**Exhibit 5: Annual review of the business and performance cycle**



\*AR – annual results; QR – quarterly results

To effectively align strategy, performance and compensation, the target setting and review processes are directly linked to the financial and budget processes.

## Exhibit 6: Approval process for EC compensation

	CEO	CC	Board	Shareholders at AGM
Maximum aggregate compensation		■	■	■
CEO compensation		■	■	
Compensation of other EC members	■	■	■	

■ Proposal   
■ Recommendation   
■ Approval

Shareholders decide the maximum aggregate compensation for the EC, while the Board decides the compensation of individual EC members.

## 2.2 Compensation governance

### 2.2.1 Overview

#### Alignment of strategy, performance and compensation

The Board defines the ultimate direction of the business of ABB and regularly reviews progress on the strategy. Based on these reviews, the Board sets annual budgets and performance targets, and ensures that the company's compensation arrangements support implementation of the strategy and reflect performance (see Exhibit 5).

The Board and CC have direct oversight of compensation principles and EC compensation at ABB. The CC is responsible for developing the general compensation principles and practices of ABB and for recommending them to the full Board, which takes the final decisions (see Exhibit 6).

The CC recommends to the Board specific proposals on EC compensation that are consistent with ABB's compensation principles and practices.

### 2.2.2 Benchmarks

ABB uses benchmarks and third-party consultants to evaluate positions throughout the company, assess the competitiveness of EC compensation levels, and to analyze market trends with regard to EC compensation design and mix. In 2015, Hostettler & Company (HCM), an independent consultant specializing in performance management and compensation, provided advice to the CC in the area of compensation. HCM has no other mandate with ABB.

All EC and other senior positions in ABB have been evaluated using a consistent methodology of the Hay Group, whose job evaluation system is used by more than 10,000 companies around the world. This approach provides a meaningful, transparent and consistent basis for compar-

ing compensation levels at ABB with those of equivalent jobs at other companies that have been evaluated using the same criteria.

The Board primarily uses the General Pan-European Market data in Hay's annual Top Executive Compensation in Europe survey to set EC compensation, which is targeted to be above the median values for the market. Other references include Hay's data on the Swiss and European industry markets and on US peers (see Exhibit 7).

#### Exhibit 7: List of benchmarks and peer groups, and the rationale for their use

Reference	Composition	Rationale
<b>Main benchmark</b>		
<b>General Pan-European Market</b>	360 largest European companies of the FT Europe 500 listing	Continuity Stable data points
<b>References to stress-test main benchmark</b>		
<b>Global Industry Group</b>	Peer companies selected considering business, geographic presence and size	Peer comparison Specific enough to benchmark compensation design
<b>Swiss market</b>	SMI and SMIM companies that are included in Hay's General Pan-European Market data	Comparison with other Swiss companies
<b>US market</b>	US peers of similar size and industry	As information

## 2.2.3 Share ownership requirements

The Board aims to align EC members' interests with those of shareholders. To maintain focus on the long-term success of the company, EC members are required to build up a holding of ABB shares that is equivalent to a multiple of their base salary (see Exhibit 8).

### Exhibit 8: Share ownership requirements for EC members

Chief Executive Officer	5 x base salary
Other EC members	4 x base salary

Only shares owned by an EC member and the member's spouse are included in the share ownership calculation. Vested and unvested options are not considered for this purpose.

The CC reviews the status of EC share ownership on an annual basis. It also reviews the required shareholding amounts annually, based on salary and expected share price developments. As the level of the shareholding requirement is high relative to market practice, the Board has determined that members of the EC should generally aim to reach these multiples within five years of their appointment.

## 2.2.4 Key contractual provisions

### 2.2.4.1 Notice and severance provisions

Employment contracts for EC members contain notice periods of 12 months, during which they are entitled to compensation comprising their base salary, benefits and short-term variable compensation. Since January 1, 2013, contracts for new EC members no longer include a provision extending compensation for up to 12 additional months if their employment is terminated by ABB and they do not find alternative employment within the notice period that pays at least 70 per cent of their compensation. In accordance with Swiss law and ABB's Articles of Incorporation, the contracts for the other EC members were amended in 2015 to exclude this provision.

Non-compete agreements have been agreed with EC members for a period of 12 months after their employment. Compensation for such agreements, if any, may not exceed the EC member's last total annual compensation.

### 2.2.4.2 Malus and clawback

Any long-term incentive compensation paid to members of the EC is subject to malus and clawback rules if a plan participant has been involved in illegal activity. This means that the Board of Directors may decide not to pay any unpaid or unvested incentive compensation (malus), or may seek to recover incentive compensation that has been paid in the past (clawback).

### 2.2.4.3 Clauses on changes of control

In accordance with Swiss law, EC members do not receive golden parachutes or other special benefits in the event of a change of control.

### 2.2.4.4 Credits and loans

No credits and loans may be granted to a member of the EC.

## 2.3 Components of EC Compensation

The compensation of EC members consists of a base salary and benefits, a short-term variable component dependent on annual performance objectives, and a long-term variable component, also linked to performance (see Exhibit 9).

The Board considers individual performance, experience, potential and the prevailing market conditions and benchmarks when setting each member's compensation.

The components of EC compensation can vary in size. Exhibit 10 shows the relative proportions of the components under minimum, target and maximum scenarios.

### 2.3.1 Fixed compensation – Annual base salary and benefits

The base salary paid to EC members is fixed and reviewed annually. The compensation of EC members also includes benefits, including those related to pensions and social security. Tax equalization is provided for EC members resident outside Switzerland to the extent that they are not able to claim a tax credit in their country of residence for income taxes they paid in Switzerland.

### 2.3.2 Variable compensation

#### 2.3.2.1 Short-term variable compensation

As of 2015, short-term variable compensation for each EC member is based on a balance between the Group's results and the member's individual performance. It reflects the Board's aim to:

- align incentives more closely to the role of each EC member in implementing the Next Level strategy in his or her areas of responsibility;
- strengthen rewards for outstanding individual performance; and
- achieve a better balance in compensation between company and individual performance.

**Exhibit 9: Link of EC compensation components to performance**

	Fixed compensation	Variable compensation	
	Base salary and benefits	Short-term	Long-term
			Performance component 1 (P1) 50% Performance component 2 (P2) 50%
<b>Purpose</b>	Compensates EC members based on their responsibilities, experience and skillset	Rewards performance against specific KPIs	Encourages creation of long-term, sustainable value for the shareholders
<b>Performance measures affecting amount/ allocation</b>	When considering changes in base salary, the executive's performance during the preceding year against individual objectives is taken into account		ABB's performance (preceding three years); Individual performance (preceding year)
<b>Performance measures affecting payout</b>		Group and individual objectives in the relevant financial year	Net income threshold in the financial year prior to vesting Cumulative EPS target, defined as: 33% of EPS in Yr1 + 67% of EPS in Yr2 + 100% of EPS in Yr3
<b>Payment</b>	Cash and cash-based	Cash	Shares (70%) and cash (30%) Beneficiaries can elect to receive 100% in shares

The main components of EC compensation are all linked to performance.

**Exhibit 10: Compensation components under various scenarios**

	Minimum	Target	Maximum	
<b>Payout</b>				For full description, see section 2.3.1. Base salary and benefits are generally stable.
	0%	100%	150%	For full description, see section 2.3.2.1. There will be no payout of this component if performance is below threshold in all performance criteria. When performance exceeds targets, this component is capped at 150% of the targeted amount.
<b>Conditional grant</b>	87.5%	100%	112.5%	For full description, see section 2.3.2.2. The reference grant size of half of the LTIP (performance component 1) may be increased or decreased by 25% depending on ABB's performance in the preceding three years. Consequently, the total fair value at grant of ABB's LTIP may vary from 87.5% to 112.5% of the fair value of the unadjusted reference grant size. However, the ultimate payout on vesting depends on meeting the performance criteria of the plan.

**Exhibit 11: Short-term variable compensation objectives and weighting**

Group objectives	Explanation	Weighting	
		CEO	Other EC members
Group objectives	4–6 parameters (eg, orders received, revenues, operational EBITA, operating cash flow)	80%	65%
	Individual objectives (tailored to function and responsibilities)	20%	35%

Group objectives are aligned with the strategic targets of our Next Level strategy that have been communicated to shareholders and have a weighting of 80 percent for the CEO and 65 percent for the other EC members.

Individual objectives are aligned with each executive’s responsibilities. They include metrics that help the management to assess whether the results are achieved in a sustainable way, with the appropriate processes and changes required to deliver the intended long-term results. Individual objectives have a weighting of 20 percent for the CEO and 35 percent for other EC members (see Exhibit 11).

Group and individual objectives are specific and challenging. Fully achieving the objectives (“on target” in Exhibit 12) results in a payout equivalent to 150 percent of the base salary for the CEO and 100 percent of the base salary for other members.

Performance that is below these objectives results in a lower payout, or none at all if performance is below a certain threshold for each of the objectives. If the performance targets are exceeded, the payout will be proportional to the degree of performance achieved, but only up to the level at which it is capped (150 percent), as shown in Exhibit 12. Previously, the size of the payout for exceeding the objectives was at the Board’s discretion up to the cap.

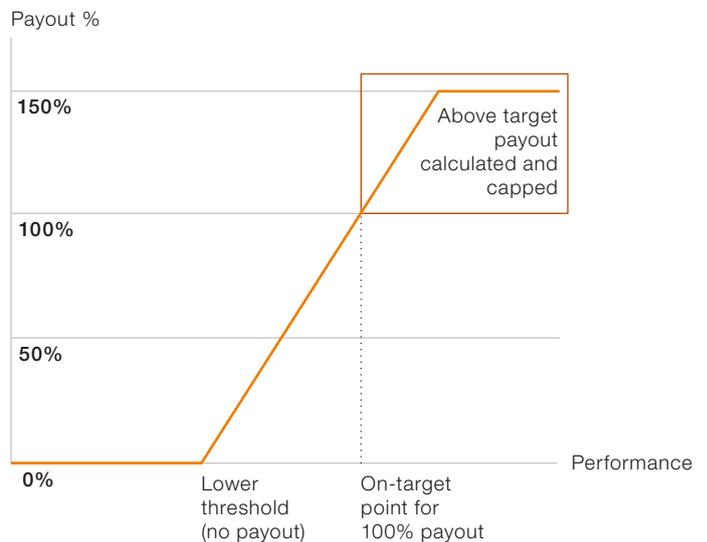
**2.3.2.2 Long-term variable compensation as of 2015**

Long-term variable compensation for EC members comprises annual conditional share grants under the Long Term Incentive Plan (LTIP), which is aimed at driving shareholder value creation in a sustainable manner. It rewards the achievement of predefined performance goals over a three-year vesting period.

The former “retention” and “performance” components of LTIP have evolved into two performance components:

- a P1 component which is tied to ABB’s achievement of a threshold net income in the financial year prior to the end of the vesting period, and
- a P2 component which is tied to the achieved weighted cumulative earnings-per-share (EPS) over the vesting period.

**Exhibit 12: Payout of short-term variable compensation**



*Payout of short-term variable compensation, if any, is proportional to the calculated performance up to the level at which it is capped.*

The P1 and P2 components are equally weighted in terms of the target fair value at grant, whereas in LTIP grants prior to 2015 the “retention” component has a heavier weighting compared to the “performance” component (approximately 60:40 weighting).

**Determination of conditional grant size in shares**

The numbers of shares conditionally granted in an LTIP launch is determined as follows:

- A reference value for the LTIP is first established as a multiple of the CEO and EC members’ annual base salary. In 2015, the multiples were 200 percent for the CEO and 107 percent for the other EC members. As the P1 and P2 components are equally weighted, the reference value of these components for the CEO and the other EC members for the 2015 LTIP were as follows:

	P1 component	P2 component	Total
CEO	100%	100%	200%
EC	53.5%	53.5%	107%

- The reference value of the P1 component for the CEO as an individual and the other EC members as a pool may be increased or decreased by the Board by up to 25 percent. The increase or decrease is based on the Board’s assessment of ABB’s performance over the three financial years preceding the grant, both in absolute terms and relative to a peer group comprising Alstom, Eaton, Emerson, GE, Honeywell, Legrand, Schneider and Siemens. The Board then allocates from this pool to the individual EC members

(other than the CEO) based on an assessment of their individual performance as recommended by the CEO.

- The conditional grant size in numbers of shares is then finally determined for each EC member by reference to the average closing prices of ABB shares over the 20 trading days following the Board’s decision to launch an LTIP grant.

#### Determination of payout percentages at vesting

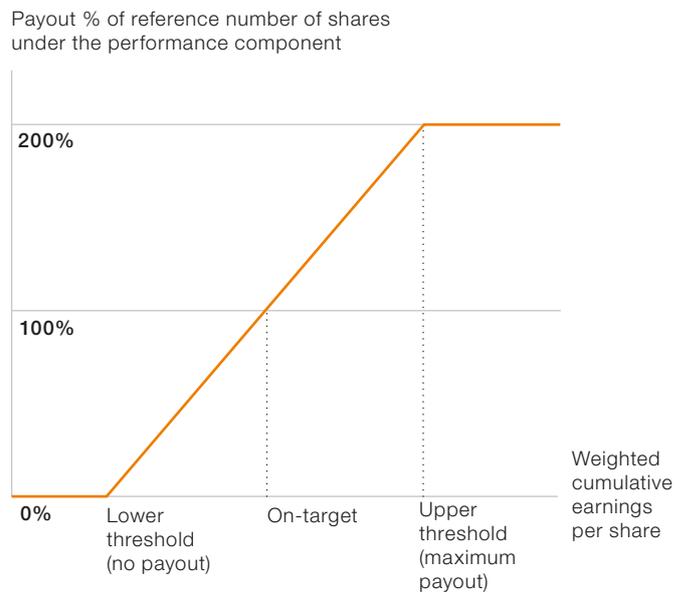
To vest at the end of the three-year vesting period, the following performance conditions must be met:

- For the P1 component, ABB has to achieve the threshold net income level set by the Board at the launch of the LTIP. The component will not vest if this threshold is not achieved and will vest at 100 percent if this threshold is equalled or exceeded.
- For the P2 component, the percentage of shares that may vest (the payout percentage) is based on ABB’s EPS performance against an EPS objective set by the Board at the launch of the LTIP. This EPS objective is based on an outside-in view, taking into account the growth expectations, risk profile, investment levels and profitability levels that are typical for the industry. This outside-in approach in setting EPS objectives for the LTIP assumes that investors expect a risk-adjusted return on their investment, which is based on market value (and not book value) and translates such expected returns over a three-year period into EPS targets. The weighted cumulative EPS result is calculated as 33 percent of the EPS in the first financial year plus 67 percent in the second financial year plus 100 percent in the third financial year. There is no payout if the lower threshold is not reached and payout is capped at 200 percent of the conditionally granted shares if performance exceeds the upper threshold. The payout percentages are shown in Exhibit 13.

The ABB share price and Monte Carlo modeling are used to value the P2 share grant at grant date. The model is a mathematical technique that calculates a range of outcomes and the probability that they will occur. It is an accepted simulation method under US generally accepted accounting principles (US GAAP – the accounting standard used by ABB).

To further strengthen the alignment of EC members’ interests with those of shareholders, both P1 and P2 components are settled in shares (70 percent) and cash (30 percent), although participants can elect to receive 100 percent in shares. This is a change from previous grants, in which the “performance” component was fully settled in cash.

**Exhibit 13: Alignment with shareholders by linking payout of P2 component to EPS development**



*The LTIP rewards participants for increasing EPS over a three-year period. The payout of the P2 component is based on ABB’s weighted cumulative EPS performance against predefined objectives.*

## 2.4 Level and development of EC compensation in 2015

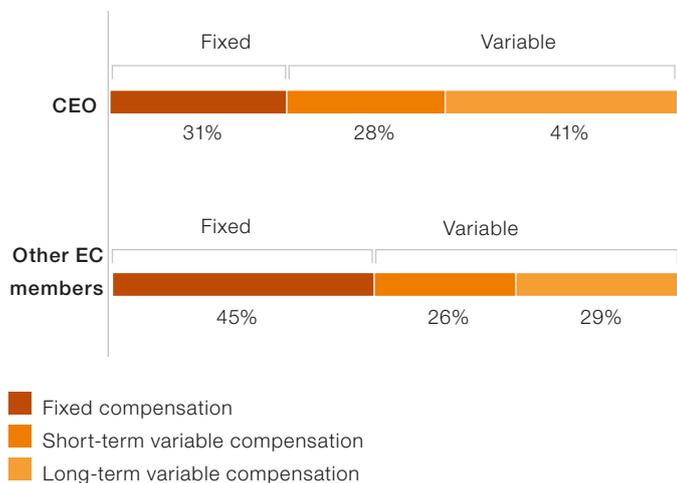
### 2.4.1 Overview

The distribution of EC compensation by component in 2015 is set out in Exhibits 14 and 15. As shown in Exhibit 14, there is an appropriate balance of components, with a significant emphasis on performance-related compensation through both the short-term and long-term variable components.

The ratio of fixed to variable components in any given year depends on the performance of the individuals and of the company against predefined ABB performance objectives. In 2015, variable compensation represented 69 percent of the CEO’s compensation and an average of 55 percent for the other EC members.

EC members received a total compensation of CHF 45.5 million in 2015 compared with CHF 38.7 million in 2014. This is principally due to the addition of one EC member and to the higher performance-based payout on short-term variable compensation. The other main factor was the higher grant reference value of the P2 component of the long-term incentive plan for the CEO in 2015, compared with the reduced value he was awarded for his first full year in office. EC membership was subsequently reduced in January 2016 to the same size as in 2014 as part of the organizational realignment under the second stage of the Next Level strategy.

**Exhibit 14: Split of fixed and variable compensation components 2015**



## 2.4.2 Base salary and benefits

The base salaries of EC members rose in aggregate by 7.6 percent, mainly representing the addition of one member to the EC on January 1, 2015 (see Exhibit 20 on page 57).

In 2015, the Board commissioned Towers Watson to survey pension conditions of top executives in a group of 50 companies, representative of the Hay Group's General Pan-European Market, which the Board had consistently used as benchmarks in setting the level of EC compensation. The survey showed that the retirement benefits of EC members were below the median of the group. This resulted in adjustments to pension benefits that will be made over time.

These are in line with the compensation strategy and will keep the EC members in the targeted range in terms of total compensation benchmarks. The increase in aggregate pension benefits for the EC in 2015 is partly due to certain contributions made in respect of 2014 and also due to the adjustment to the CEO's pension arrangements in the second half of 2015 following the pension review.

EC members also received other benefits, which may include payments related to social security, health insurance, children's education and other items.

## 2.4.3 Short-term variable compensation

Payment of the short-term variable component of compensation was conditional on the fulfillment of predefined Group-wide and individual performance objectives.

**Exhibit 15: Total compensation of EC members (in CHF million)**

	2015	2014
Base salaries	10.5	9.8
Pension benefits	3.5	2.6
Other benefits	5.3	4.3
<b>Total fixed compensation</b>	<b>19.3</b>	<b>16.7</b>
Short-term variable compensation	11.8	9.1
Long-term variable compensation	14.4	12.9
<b>Total variable compensation</b>	<b>26.2</b>	<b>22.0</b>
<b>Total compensation</b>	<b>45.5</b>	<b>38.7</b>

For an overview of compensation by individual and component in each of these years, see Exhibit 20 on page 57 and Exhibit 21 on page 58.

As highlighted in Exhibit 16, the company exceeded the Group-wide objectives for cost savings and customer satisfaction (as measured by the use of the Net Promoter Score). On the other targets (orders received, revenues, operational EBITA and operating cash flow), the Group's performance, while not achieving the set targets, was considerably above threshold. This resulted in an overall achievement of 101.3 percent.

For 2015, there is a 16 percentage point difference between the highest and lowest payout of the short-term variable compensation of EC members. This reflects the performance of each EC member against their individual objectives, which is in line with the changes made to the compensation system to render it more differentiating, balancing corporate and individual performance.

## 2.4.4 Long-term variable compensation

In 2015, the estimated value of the share-based grants under the LTIP was CHF 14.4 million compared with CHF 12.9 million in 2014. This difference was mainly due to the grant to the additional EC member and an increase of the CEO's allocation of conditionally granted shares under the P2 component of LTIP from 67 percent of base salary to 100 percent after completion of his first year in office.

To determine the size of the P1 component granted in 2015, the Board assessed ABB's 2012–2014 performance based on: revenue growth, cash return on invested capital, operational EBITDA margin, share price development, share price to earnings ratio, NPS development, integrity and safety performance. This resulted in an aggregate increase of 6 percent in the reference grant size of the P1 component for all EC participants. This was below the 22 percent increase in the retention component for the previous year's launch.

**Exhibit 16: Group-wide 2015 objectives and performance for short-term variable compensation**

Objective <sup>(1)</sup>	Weighting	Performance
Orders received	12.5%	■
Revenues	12.5%	■
Operational EBITA <sup>(2)</sup>	25%	■
Operating cash flow <sup>(3)</sup>	25%	■
Cost savings	15%	■
Net Promoter Score <sup>(4)</sup>	10%	■

- On or above target
- Above threshold and below target
- Below threshold

<sup>(1)</sup> The financial objectives exclude the impact of currency fluctuations, major acquisitions and divestments, and the impact of discontinued operations where appropriate.

<sup>(2)</sup> See definition in "Note 23 Operating segment and geographic data" to ABB's Consolidated Financial Statements.

<sup>(3)</sup> Operating cash flow is defined as net cash provided by operating activities, reversing the cash impact of interest, taxes, restructuring-related activities and one-time pension contributions.

<sup>(4)</sup> Net Promoter Score (NPS) is a metric based on dividing customers into three categories: Promoters, Passives, and Detractors. This is achieved by asking customers in a one-question survey whether they would recommend ABB to a colleague. In 2015, ABB had a target for countries and businesses to improve their NPS compared to the previous year.

**Vesting in 2015 of performance component of 2012 LTIP**

The payout for the performance component of the 2012 LTIP that vested in 2015 was 51 percent. The payout was based on the EPS achieved during the plan's three-year vesting period. EPS was adopted as the relevant measure for the performance component of LTIP launches beginning in 2012.

**2.4.5 Other compensation**

Members of the EC are eligible to participate in the Employee Share Acquisition Plan (ESAP), a savings plan based on stock options, which is open to employees around the world. Seven members of the EC participated in the 12<sup>th</sup> annual launch of the plan in 2015. EC members who participated will, upon vesting, each be entitled to acquire up to 530 ABB shares at CHF 18.78 per share, the market share price at the start of that launch.

For a more detailed description of ESAP, please refer to "Note 18 Share-based payment arrangements" to ABB's Consolidated Financial Statements contained in the Financial review of ABB Group section of this Annual Report.

**2.4.6 Compensation of former EC members**

Furthermore, in 2015, some former EC members received contractual compensation for the period after leaving the EC, as shown in footnote 5 of Exhibit 20 on page 57.

**3. Additional information**

This Compensation report has been prepared in accordance with applicable regulations, including the Swiss Code of Obligations, the Swiss Ordinance against Excessive Remuneration in Listed Companies Limited by Shares, and the rules of the stock markets where ABB's shares are listed in Switzerland, Sweden and the United States. The report also fully adheres to the Swiss Code of Best Practice of Corporate Governance.

**3.1 Additional compensation information**

In 2015, ABB did not pay any fees or compensation to the members of the Board or the EC for services rendered to ABB other than those disclosed above. Except as disclosed in section 7 of the Corporate governance report, ABB did not pay any additional fees or compensation in 2015 to persons closely linked to a member of the Board or a member of the EC for services rendered to ABB.

Except as disclosed in this Compensation report, ABB did not make any payments in 2015 to former members of the Board or the EC in connection with such roles.

**3.2 Holdings of ABB shares**

The members of the Board and EC owned less than 1 percent of ABB's total shares outstanding as of December 31, 2015.

Exhibit 25 on page 62 shows the number of ABB shares held by each Board member as of December 31, 2015 and 2014. Except as described in this Exhibit, no member of the Board and no person closely linked to a member of the Board held any shares of ABB or options in ABB shares.

As of December 31, 2015, members of the EC held ABB shares, the conditional rights to receive shares under the LTIP, options (either vested or unvested as indicated) under the Management Incentive Plan (MIP), and unvested shares in respect of other compensation arrangements, as shown in Exhibit 26 on page 63. Their holdings as of December 31, 2014, are shown in Exhibit 27 on page 64.

Members of the EC cannot participate in the MIP. Any MIP instruments held by EC members were awarded to them as part of the compensation they received in earlier roles they held at ABB.

For a more detailed description of MIP, please refer to "Note 18 Share-based payment arrangements" to ABB's Consolidated Financial Statements contained in the Financial review of ABB Group section of this Annual Report.

Furthermore, as of December 31, 2015, members of the EC held Warrant Appreciation Rights (WARs) and conditionally granted ABB shares under the performance components of the LTIP 2014 and 2013, which at the time of vesting will be settled in cash, as shown in Exhibit 28 on page 65. Their equivalent holdings as of December 31, 2014, are shown in Exhibit 29 on page 66.

Except as described in Exhibits 26-29, no member of the EC and no person closely linked to a member of the EC held any shares of ABB or options on ABB shares as of December 31, 2015 and 2014.

## 4. Votes on compensation at the 2016 AGM

### 4.1 Considerations in shareholder proposal

Exhibit 17 illustrates the considerations in the proposal for the maximum aggregate compensation for the EC for 2017, which will be submitted to shareholders for their approval at the 2016 AGM.

The maximum aggregate compensation amount submitted to shareholders for approval will almost always be higher than the actual payout, as it must cover the potential maximum value of each component of compensation.

**Exhibit 17: Overview of considerations in calculation of maximum aggregate EC compensation**

	2015			2016	2017
<b>Aggregate EC compensation in CHF (millions)</b>	46 Actual	43 Target	51 Maximum	52 Maximum (approved at 2015 AGM)	xx <sup>(1)</sup> Maximum (to be requested at 2016 AGM)
<b>Assumptions</b>					
Short-term variable compensation payout percentage <sup>(2)</sup>		100%	150%	150%	150%
Adjustment of LTIP performance component 1 (P1) <sup>(3)</sup>		0%	+25%	+25%	+25%
Number of EC members		12	12	12	xx <sup>(1)</sup>

<sup>(1)</sup> Numbers will be provided in the AGM invitation

<sup>(2)</sup> For full description, see section 2.3.2.1

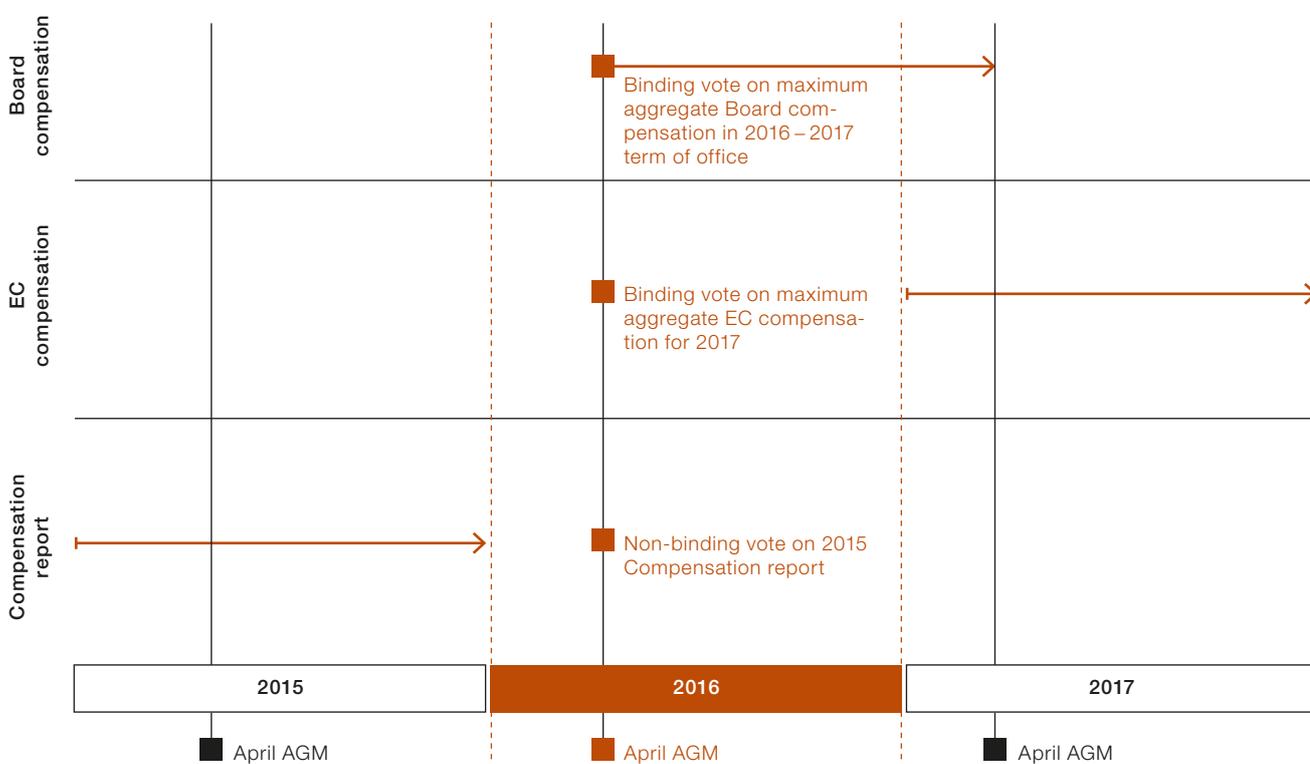
<sup>(3)</sup> For full description, see section 2.3.2.2

The Board's proposal for maximum aggregate EC compensation for 2017 will reflect normal salary increases and any changes in the size of the EC.

## 4.2 Votes at the 2016 AGM

As illustrated in Exhibit 18, the Board's proposals to shareholders at the 2016 AGM will relate to Board compensation for the 2016-2017 term of office and EC compensation for the calendar year 2017. There will also be a non-binding vote on the 2015 Compensation report.

**Exhibit 18: Shareholders will have three separate votes on compensation at the 2016 AGM**



→ Compensation period  
 ■ Date of vote

*At the 2016 AGM there will be separate binding votes on maximum aggregate Board and EC compensation, and a non-binding vote on the 2015 Compensation report.*

## 5. Compensation and share ownership tables

**Exhibit 19: Board compensation in 2015 and 2014 (audited)**

Name	Paid in 2015					Paid in 2014				
	November Board term 2015-2016		May Board term 2014-2015		Total compensation paid in 2015 <sup>(3)</sup>	November Board term 2014-2015		May Board term 2013-2014		Total compensation paid in 2014 <sup>(3)</sup>
	Settled in cash <sup>(1)</sup>	Settled in shares – number of shares received <sup>(2)</sup>	Settled in cash <sup>(1)</sup>	Settled in shares – number of shares received <sup>(2)</sup>		Settled in cash <sup>(1)</sup>	Settled in shares – number of shares received <sup>(2)</sup>	Settled in cash <sup>(1)</sup>	Settled in shares – number of shares received <sup>(2)</sup>	
CHF		CHF		CHF	CHF		CHF		CHF	
Peter Voser, Chairman 2015-2016 <sup>(4)</sup>	-	32,559	-	-	600,000	-	-	-	-	-
Hubertus von Grünberg, Chairman 2014-2015 <sup>(5)</sup>	-	-	-	18,686	600,000	-	20,976	-	19,563	1,200,000
Jacob Wallenberg, Vice-Chairman 2015-2016 <sup>(6)</sup>	112,500	4,911	82,500	3,040	390,000	82,500	3,003	75,000	2,547	315,000
Roger Agnelli <sup>(7)</sup>	82,500	3,333	82,500	2,816	330,000	82,500	2,779	75,000	2,359	315,000
Matti Alahuhta <sup>(8)</sup>	90,000	3,929	80,000	2,947	340,000	80,000	2,912	-	-	160,000
David Constable <sup>(9)</sup>	80,000	3,229	-	-	160,000	-	-	-	-	-
Louis R. Hughes <sup>(10)</sup>	100,000	4,365	100,000	3,455	400,000	100,000	3,417	100,000	3,172	400,000
Hans Ulrich Märki <sup>(11)</sup>	-	-	-	-	-	-	-	-	8,229	200,000
Michel de Rosen <sup>(12)</sup>	87,500	3,820	87,500	3,224	350,000	87,500	3,185	75,000	2,547	325,000
Michael Treschow <sup>(13)</sup>	-	-	95,000	3,336	190,000	95,000	3,458	75,000	2,547	340,000
Ying Yeh <sup>(14)</sup>	80,000	3,281	80,000	2,765	320,000	80,000	2,736	75,000	2,391	310,000
<b>Total</b>	<b>632,500</b>	<b>59,427</b>	<b>607,500</b>	<b>40,269</b>	<b>3,680,000</b>	<b>607,500</b>	<b>42,466</b>	<b>475,000</b>	<b>43,355</b>	<b>3,565,000</b>

<sup>(1)</sup> Represents gross amounts paid, prior to deductions for social security, withholding tax etc.

<sup>(2)</sup> Number of shares per Board member is calculated based on net amount due after deductions for social security, withholding tax etc.

<sup>(3)</sup> In addition to the Board remuneration stated in the above table, the Company paid in 2015 and 2014 CHF 473,942 and CHF 664,870, respectively, in related social security payments.

<sup>(4)</sup> Elected as new Board member and Chairman of the Board at the ABB Ltd 2015 AGM; Chairman of the Governance & Nomination Committee for the 2015-2016 board term; elected to receive 100 percent of his gross compensation in the form of ABB shares for the 2015-2016 board term.

<sup>(5)</sup> Chairman of ABB Ltd Board for the 2013-2014 and 2014-2015 board terms; Member of the Governance & Nomination Committee for the 2013-2014 and 2014-2015 board terms; did not stand for re-election at the ABB Ltd 2015 AGM; elected to receive 100 percent of his gross compensation in the form of ABB shares for the 2013-2014 and 2014-2015 board terms.

<sup>(6)</sup> Vice-Chairman of the ABB Ltd Board and member of the Governance & Nomination Committee for the 2015-2016 board term; Member of the Finance, Audit & Compliance Committee for the 2013-2014 and 2014-2015 board terms; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(7)</sup> Member of the Finance, Audit & Compliance Committee; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(8)</sup> Member of the Governance & Nomination Committee for the 2014-2015 and 2015-2016 board terms; Member of the Finance, Audit & Compliance Committee for the 2015-2016 board term; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(9)</sup> Elected as new Board member at the ABB Ltd 2015 AGM; Member of the Compensation Committee; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(10)</sup> Chairman of the Finance, Audit & Compliance Committee; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(11)</sup> Member of the Governance, Nomination & Compensation Committee until the ABB Ltd 2014 AGM when he did not stand for re-election; elected to receive 100 percent of his gross compensation in the form of ABB shares for the 2013-2014 board term.

<sup>(12)</sup> Chairman of the Compensation Committee; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(13)</sup> Chairman of the Governance & Nomination Committee and Member of the Compensation Committee until the ABB Ltd 2015 AGM; did not stand for re-election at the ABB Ltd 2015 AGM; elected to receive 50 percent of his gross compensation in the form of ABB shares.

<sup>(14)</sup> Member of the Compensation Committee; elected to receive 50 percent of her gross compensation in the form of ABB shares.

**Exhibit 20: EC compensation in 2015 (audited)**

Name	Base salary	Short-term variable compensation <sup>(1)</sup>	Pension benefits	Other benefits <sup>(2)</sup>	2015 Total cash-based compensation <sup>(3)</sup>	Estimated value of share-based grants under the LTIP in 2015 <sup>(4)</sup>	2015 Total (incl. conditional share-based grants) <sup>(5)</sup>
	CHF	CHF	CHF	CHF	CHF	CHF	CHF
Ulrich Spiesshofer <sup>(6)</sup>	1,600,004	2,544,000	408,448	780,735	5,333,187	3,765,554	9,098,741
Eric Elzvik	850,007	856,800	270,335	349,021	2,326,163	974,264	3,300,427
Jean-Christophe Deslarzes	866,669	995,280	257,319	377,786	2,497,054	1,122,174	3,619,228
Diane de Saint Victor	1,000,001	1,002,000	293,177	674,074	2,969,252	1,005,044	3,974,296
Frank Duggan <sup>(7)</sup>	664,632	708,890	336,122	591,990	2,301,634	1,012,539	3,314,173
Greg Scheu <sup>(8)</sup>	808,012	823,352	360,922	598,259	2,590,545	1,001,756	3,592,301
Pekka Tiitinen	720,844	720,650	234,266	218,550	1,894,310	935,163	2,829,473
Tarak Mehta	813,345	831,504	242,003	446,628	2,333,480	935,304	3,268,784
Veli-Matti Reinikkala	782,507	787,355	281,522	338,704	2,190,088	788,953	2,979,041
Bernhard Jucker	986,505	1,056,330	295,325	392,338	2,730,498	1,134,740	3,865,238
Claudio Facchin	720,844	783,725	243,266	336,543	2,084,378	935,163	3,019,541
Peter Terwiesch	700,001	692,300	238,037	227,994	1,858,332	802,333	2,660,665
<b>Total Executive</b>							
<b>Committee members</b>	<b>10,513,371</b>	<b>11,802,186</b>	<b>3,460,742</b>	<b>5,332,622</b>	<b>31,108,921</b>	<b>14,412,987</b>	<b>45,521,908</b>

<sup>(1)</sup> Represents accrued short-term variable compensation for the year 2015 for all EC members, which will be paid in 2016, after the publication of ABB's financial results. Short-term variable compensation is linked to predefined Group-wide and individual performance objectives defined in the ABB scorecard. Upon full achievement of these objectives, the short-term variable compensation of the CEO corresponds to 150 percent of his base salary, while for all other EC members it represents 100 percent of their respective base salary.

<sup>(2)</sup> Other benefits may include payments related to social security, health insurance, children's education, transportation, tax advice and certain other items.

<sup>(3)</sup> Prepared on an accruals basis.

<sup>(4)</sup> On the day of vesting (June 5, 2018), the value of the share-based awards granted under the LTIP may vary from the above amounts due to changes in ABB's share price and the outcome of the performance parameters. The LTIP is also subject to service conditions. The estimated values have been calculated using the market value of the ABB share on the day of grant and additionally, in the case of the performance component P2 of the LTIP, the Monte Carlo simulation model.

<sup>(5)</sup> In addition to the total compensation of current EC members, payments totalling CHF 8,169 were made in 2015 on behalf of certain former EC members for tax advice.

<sup>(6)</sup> The increase in pension benefits is the result of a review of the CEO's pension arrangements during the second half of 2015.

<sup>(7)</sup> Frank Duggan received 20 percent of his base salary in AED and 80 percent in EUR. The company purchased EUR with AED to meet this obligation. The variance in base salary between 2014 and 2015 primarily relates to exchange rate movements between EUR and AED.

<sup>(8)</sup> Greg Scheu received 100 percent of his base salary in USD. All USD amounts were converted into Swiss francs using a rate of CHF 0.9892 per USD. The pension benefits in 2015 are higher than 2014 as they represent contributions made in 2015 for both 2015 and 2014. Other benefits include CHF 269,000 of social security contributions in respect of 2014.

**Exhibit 21: EC compensation in 2014 (audited)**

Name	Base salary	Short-term variable compensation <sup>(1)</sup>	Pension benefits	Other benefits <sup>(2)</sup>	2014 Total cash-based compensation	Estimated value of share-based grants under the LTIP in 2014 <sup>(3)</sup>	2014 Total (incl. conditional share-based grants)
	CHF	CHF	CHF	CHF	CHF	CHF	CHF
Ulrich Spiesshofer <sup>(4)</sup>	1,600,004	2,059,200	265,325	633,857	4,558,386	3,020,437	7,578,823
Eric Elzvik	850,007	729,300	264,591	287,769	2,131,667	991,551	3,123,218
Jean-Christophe Deslarzes	850,007	729,300	251,106	280,473	2,110,886	991,551	3,102,437
Diane de Saint Victor	1,000,001	858,000	287,455	410,421	2,555,877	1,166,531	3,722,408
Frank Duggan <sup>(5)</sup>	748,145	641,908	328,518	607,503	2,326,074	894,155	3,220,229
Greg Scheu <sup>(6)</sup>	792,670	680,111	7,719	192,980	1,673,480	849,085	2,522,565
Pekka Tiitinen	700,001	600,600	228,045	192,747	1,721,393	816,592	2,537,985
Tarak Mehta	794,426	686,400	235,777	622,037	2,338,640	1,053,812	3,392,452
Veli-Matti Reinikkala	770,006	660,660	275,328	303,877	2,009,871	898,250	2,908,121
Bernhard Jucker	969,009	831,402	291,729	510,281	2,602,421	1,250,933	3,853,354
Claudio Facchin	700,001	600,600	236,951	263,397	1,800,949	937,166	2,738,115
<b>Total Executive Committee members</b>	<b>9,774,277</b>	<b>9,077,481</b>	<b>2,672,544</b>	<b>4,305,342</b>	<b>25,829,644</b>	<b>12,870,063</b>	<b>38,699,707</b>

<sup>(1)</sup> Represents accruals of the short-term variable compensation for the year 2014 for all EC members, which will be paid in 2015, after the publication of the financial results. Short-term variable compensation is linked to the objectives defined in the ABB Group's scorecard. Upon full achievement of these objectives, the short-term variable compensation of the CEO corresponds to 150 percent of his base salary, while for all other EC members it represents 100 percent of their respective base salary.

<sup>(2)</sup> Other benefits comprise payments related to social security, health insurance, children's education, transportation, tax advice and certain other items.

<sup>(3)</sup> At the day of vesting (August 12, 2017), the value of the share-based awards granted under the LTIP may vary from the above numbers due to changes in ABB's share price and the outcome of the performance (earnings per share) parameter. The LTIP is also subject to service conditions. The estimated values have been calculated using the market value of the ABB share on the day of grant and additionally, in the case of the performance component of the LTIP, the Monte Carlo simulation model.

<sup>(4)</sup> The above compensation figures for Ulrich Spiesshofer represent compensation in respect to his first full calendar year of service as CEO. His annual base salary remained unchanged at CHF 1,600,000.

<sup>(5)</sup> Frank Duggan received 20 percent of his base salary in AED and 80 percent in EUR at a fixed AED/EUR exchange rate for the period January to December 2014. All AED amounts were converted into Swiss francs at a rate of CHF 0.2694219 per AED.

<sup>(6)</sup> Greg Scheu received 100 percent of his base salary in USD. All USD amounts were converted into Swiss francs using a rate of CHF 0.9896 per USD.

**Exhibit 22: Compensation to former EC members in 2014 (audited)**

Name	Base salary	Short-term variable compensation <sup>(1)</sup>	Pension benefits	Other benefits <sup>(2)</sup>	2014 Total cash-based compensation
	CHF	CHF	CHF	CHF	CHF
Joe Hogan (CEO until September 15, 2013) <sup>(3)</sup>	502,503	753,750	74,194	1,126,823	2,457,270
Michel Demaré (CFO until January 31, 2013) <sup>(4)</sup>	-	-	-	186,950	186,950
Gary Steel (EC member until November 15, 2013) <sup>(4)</sup>	422,515	-	121,549	402,535	946,599
Brice Koch (EC member until November 30, 2013) <sup>(4)</sup>	33,785	35,250	20,547	179,815	269,397
Prith Banerjee (EC member until May 31, 2013) <sup>(5)</sup>	-	-	-	2,700	2,700
<b>Total</b>	<b>958,803</b>	<b>789,000</b>	<b>216,290</b>	<b>1,898,823</b>	<b>3,862,916</b>

<sup>(1)</sup> The short-term variable compensation was paid in 2014 at the time of departure from ABB.

<sup>(2)</sup> Other benefits comprise payments related to social security, health insurance, children's education, transportation, tax advice and certain other items.

<sup>(3)</sup> The compensation of Joe Hogan was for the period January 1 to March 31, 2014, during which he was acting as a Senior Adviser to the ABB Board.

<sup>(4)</sup> The compensation of Michel Demaré, Gary Steel and Brice Koch represents contractual obligations of ABB to those individuals in 2014, up to the time of their departure from ABB.

<sup>(5)</sup> Prith Banerjee received tax advice related to his period of employment with ABB in the amount of CHF 2,700.

**Exhibit 23: LTIP grants in 2015 (audited)**

Name	Reference number of shares under the performance component P1 of the 2015 launch of the LTIP <sup>(1)</sup>	Total estimated value of share-based grants under the performance component P1 of the 2015 launch of the LTIP <sup>(1), (2), (4)</sup>	Reference number of shares under the performance component P2 of the 2015 launch of the LTIP <sup>(1)</sup>	Total estimated value of share-based grants under the performance component P2 of the 2015 launch of the LTIP <sup>(1), (3), (4)</sup>	Total number of shares granted under the 2015 launch of the LTIP <sup>(1), (4)</sup>	Total estimated value of share-based grants under the LTIP in 2015 <sup>(2), (3)</sup>
		CHF		CHF		CHF
Ulrich Spiesshofer <sup>(5)</sup>	94,072	2,026,311	78,393	1,739,243	172,465	3,765,554
Eric Elzvik <sup>(5)</sup>	22,281	479,933	22,281	494,331	44,562	974,264
Jean-Christophe Deslarzes <sup>(5)</sup>	28,608	616,217	22,805	505,957	51,413	1,122,174
Diane de Saint Victor <sup>(5)</sup>	19,660	423,477	26,213	581,567	45,873	1,005,044
Frank Duggan	25,813	556,013	20,577	456,526	46,390	1,012,539
Greg Scheu	25,538	550,089	20,358	451,667	45,896	1,001,756
Pekka Tiitinen <sup>(5)</sup>	23,840	513,514	19,005	421,649	42,845	935,163
Tarak Mehta <sup>(5)</sup>	21,390	460,741	21,390	474,563	42,780	935,304
Veli-Matti Reinikkala	15,433	332,427	20,577	456,526	36,010	788,953
Bernhard Jucker <sup>(5)</sup>	25,951	558,985	25,951	575,755	51,902	1,134,740
Claudio Facchin	23,840	513,514	19,005	421,649	42,845	935,163
Peter Terwiesch	18,349	395,238	18,349	407,095	36,698	802,333
<b>Total Executive Committee members as of December 31, 2015</b>	<b>344,775</b>	<b>7,426,459</b>	<b>314,904</b>	<b>6,986,528</b>	<b>659,679</b>	<b>14,412,987</b>

<sup>(1)</sup> Vesting date June 5, 2018.

<sup>(2)</sup> The estimated value of the shares of the P1 component represents the market value of the ABB share on the grant date of the award multiplied by the respective number of reference shares.

<sup>(3)</sup> The shares of the performance component P2 are valued using the market value of the ABB share on the grant date of the award and the Monte Carlo simulation model.

<sup>(4)</sup> The LTIP foresees delivering 30 percent of the value of vested shares (both performance components P1 and P2), if any, in cash. However, upon vesting participants have the possibility to elect to receive 100 percent of the vested award in shares. The plan foresees a maximum payout of 200 percent of the number of reference shares granted under the P2 component, based on the weighted cumulative EPS performance against predefined objectives.

<sup>(5)</sup> In addition to the above awards, seven members of the EC participated in the 12<sup>th</sup> launch of the ESAP in 2015, which will allow them to save over a 12-month period and, in November 2016, use their savings to acquire ABB shares under the ESAP. Each EC member who participated in ESAP will be entitled to acquire up to 530 ABB shares at an exercise price of CHF 18.78 per share.

Exhibit 24: LTIP grants in 2014 (audited)

Name	Reference number of shares under the performance component of the 2014 launch of the LTIP <sup>(1), (4)</sup>	Total estimated value of share-based grants under the performance component of the LTIP in 2014 <sup>(2)</sup>	Number of retention shares granted under the 2014 launch of the LTIP <sup>(1), (3)</sup>	Total estimated value of share-based grants under the retention component of the LTIP in 2014 <sup>(2)</sup>	Total number of shares granted under the 2014 launch of the LTIP <sup>(1)</sup>	Total estimated value of share-based grants under the LTIP in 2014 <sup>(2)</sup>
		CHF		CHF		CHF
Ulrich Spiesshofer <sup>(5)</sup>	51,489	1,110,670	93,846	1,909,767	145,335	3,020,437
Eric Elzvik <sup>(5)</sup>	17,147	369,878	30,549	621,673	47,696	991,551
Jean-Christophe Deslarzes	17,147	369,878	30,549	621,673	47,696	991,551
Diane de Saint Victor <sup>(5)</sup>	20,173	435,152	35,940	731,379	56,113	1,166,531
Frank Duggan <sup>(5)</sup>	15,463	333,553	27,548	560,602	43,011	894,155
Greg Scheu	14,684	316,749	26,159	532,336	40,843	849,085
Pekka Tiitinen <sup>(5)</sup>	14,122	304,626	25,158	511,966	39,280	816,592
Tarak Mehta	16,139	348,135	34,677	705,677	50,816	1,053,812
Veli-Matti Reinikkala <sup>(5)</sup>	15,534	335,084	27,674	563,166	43,208	898,250
Bernhard Jucker <sup>(5)</sup>	19,548	421,670	40,750	829,263	60,298	1,250,933
Claudio Facchin	14,122	304,626	31,083	632,540	45,205	937,166
<b>Total Executive Committee members as of December 31, 2014</b>	<b>215,568</b>	<b>4,650,021</b>	<b>403,933</b>	<b>8,220,042</b>	<b>619,501</b>	<b>12,870,063</b>

<sup>(1)</sup> Vesting date August 12, 2017.

<sup>(2)</sup> The shares of the performance component are valued using the market value of the ABB share on the grant date and the Monte Carlo simulation model. The estimated value applied to the shares of the retention component represents the market value of the ABB share on the grant date of the award.

<sup>(3)</sup> The LTIP foresees delivering 30 percent of the value of the vested retention shares in cash. However, participants have the possibility to elect upon vesting to receive 100 percent of the vested award in shares.

<sup>(4)</sup> The vested performance component under the plan, if any, will be fully settled in cash. The plan foresees a maximum payout of 200 percent of the number of reference shares, based on the weighted cumulative EPS performance against predefined objectives.

<sup>(5)</sup> In addition to the above awards, seven members of the EC, participated in the 11th launch of ESAP which will allow them to save over a 12-month period and, in November 2015, use their savings to acquire ABB shares under the ESAP. All EC members who participated in ESAP are each entitled to acquire up to 480 ABB shares at an exercise price of CHF 20.97 per share.

**Exhibit 25: Board ownership of ABB shares (audited)**

Name	Total number of shares held	
	December 31, 2015	December 31, 2014
Peter Voser <sup>(1), (2)</sup>	45,559	N/A
Hubertus von Grünberg <sup>(3)</sup>	N/A	253,264
Jacob Wallenberg <sup>(4)</sup>	193,659	185,708
Roger Agnelli	176,820	170,671
Matti Alahuhta	24,788	17,912
David Constable <sup>(1)</sup>	3,229	N/A
Louis R. Hughes	80,562	72,742
Michel de Rosen	146,646	139,602
Michael Treschow <sup>(3)</sup>	N/A	108,787
Ying Yeh	25,016	18,970
<b>Total</b>	<b>696,279</b>	<b>967,656</b>

<sup>(1)</sup> Peter Voser and David Constable were elected to the Board at the ABB Ltd AGM in 2015.

<sup>(2)</sup> Includes 2,000 shares held by spouse.

<sup>(3)</sup> Hubertus von Grünberg and Michael Treschow left the Board at the end of the 2014-2015 term of office.

<sup>(4)</sup> Share amounts provided in the section do not include the shares beneficially owned by Investor AB, of which Mr. Wallenberg is Chairman.

Exhibit 26: EC ownership of ABB shares and options as of December 31, 2015 (audited)

Name	Vested at December 31, 2015		Unvested at December 31, 2015			
	Total number of shares held	Number of vested options held under the MIP <sup>(1)</sup>	Retention shares deliverable under the 2013 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2014 retention component of the LTIP <sup>(2)</sup>	Reference number of shares deliverable under the 2015 performance components (P1 and P2) of the LTIP <sup>(2)</sup>	Replacement share grant for foregone benefits from former employer <sup>(3)</sup>
			(vesting 2016)	(vesting 2017)	(vesting 2018)	(vesting 2016 and 2018)
Ulrich Spiesshofer	289,048	-	78,395	93,846	172,465	-
Eric Elzvik	23,768	710,125	27,071	30,549	44,562	-
Jean-Christophe Deslarzes	-	-	27,071	30,549	51,413	144,802
Diane de Saint Victor	475,446	-	31,848	35,940	45,873	-
Frank Duggan	132,896	-	25,632	27,548	46,390	-
Greg Scheu <sup>(4)</sup>	83,901	221,375	24,830	26,159	45,896	-
Pekka Tiitinen	21,000	221,375	22,294	25,158	42,845	-
Tarak Mehta	115,977	-	25,632	34,677	42,780	-
Veli-Matti Reinikkala	202,175	-	9,810	27,674	36,010	-
Bernhard Jucker	267,848	-	37,033	40,750	51,902	-
Claudio Facchin	41,501	-	22,294	31,083	42,845	-
Peter Terwiesch	30,393	250,000	15,919	16,457	36,698	-
<b>Total Executive Committee members as of December 31, 2015</b>	<b>1,683,953</b>	<b>1,402,875</b>	<b>347,829</b>	<b>420,390</b>	<b>659,679</b>	<b>144,802</b>

<sup>(1)</sup> Options may be sold or exercised/converted into shares at the ratio of 5 options for 1 share.

<sup>(2)</sup> Upon vesting, the LTIP foresees delivering 30 percent of the value of the vested shares under the retention component (LTIP 2013 and 2014) and performance components (P1 and P2 of LTIP 2015) in cash. However, participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(3)</sup> The Replacement share grant foresees delivering 30 percent of the value of the vested shares in cash. However, the participant has the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(4)</sup> Total number of shares held includes 32 shares held by children.

Exhibit 27: EC ownership of ABB shares and options as of December 31, 2014 (audited)

Name	Total number of shares held	Vested at	Unvested at December 31, 2014					
		December 31, 2014	Number of unvested options held under the MIP <sup>(1)</sup>	Retention shares deliverable under the 2012 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2013 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2014 retention component of the LTIP <sup>(2)</sup>	Replacement share grant for foregone benefits from former employer <sup>(3)</sup>	Special retention share grant <sup>(3)</sup>
		Number of vested options held under the MIP <sup>(1)</sup>	(vesting 2015)	(vesting 2015)	(vesting 2016)	(vesting 2017)	(vesting 2016 and 2018)	(vesting 2015)
Ulrich Spiesshofer	241,943	-	-	67,293	78,395	93,846	-	-
Eric Elzvik	23,768	422,625	287,500	-	27,071	30,549	-	-
Jean-Christophe Deslarzes	-	-	-	-	27,071	30,549	144,802	-
Diane de Saint Victor	286,773	-	-	38,673	31,848	35,940	-	150,000
Frank Duggan	97,607	212,500	-	35,289	25,632	27,548	-	-
Greg Scheu <sup>(4)</sup>	63,137	221,375	-	29,664	24,830	26,159	-	-
Pekka Tiitinen	8,000	422,625	-	12,041	22,294	25,158	-	-
Tarak Mehta	91,275	-	-	35,289	25,632	34,677	-	-
Veli-Matti Reinikkala	176,119	-	-	37,223	9,810	27,674	-	-
Bernhard Jucker	235,702	-	-	45,924	37,033	40,750	-	-
Claudio Facchin	9,903	-	-	17,598	22,294	31,083	-	-
<b>Total Executive Committee members as of December 31, 2014</b>	<b>1,234,227</b>	<b>1,279,125</b>	<b>287,500</b>	<b>318,994</b>	<b>331,910</b>	<b>403,933</b>	<b>144,802</b>	<b>150,000</b>

<sup>(1)</sup> Options may be sold or exercised/converted into shares at the ratio of 5 options for 1 share.

<sup>(2)</sup> The LTIP foresees delivering 30 percent of the value of the vested retention shares in cash. However, participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(3)</sup> The Replacement share grant and the Special retention share grant foresee delivering 30 percent of the value of the vested shares in cash. However, under both awards participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(4)</sup> Total number of shares held includes 32 shares held by children.

**Exhibit 28: EC ownership of WARs and conditionally granted ABB shares (all cash-settled) as of December 31, 2015 (audited)**

Name	Vested at December 31, 2015	Unvested at December 31, 2015	
	Number of fully vested WARs held under the MIP	Reference number of shares under the performance component of the 2013 launch of the LTIP (vesting 2016)	Reference number of shares under the performance component of the 2014 launch of the LTIP (vesting 2017)
Ulrich Spiesshofer	-	50,024	51,489
Eric Elzvik	-	16,659	17,147
Jean-Christophe Deslarzes	-	16,659	17,147
Diane de Saint Victor	-	19,599	20,173
Frank Duggan	-	15,023	15,463
Greg Scheu	-	14,553	14,684
Pekka Tiitinen	-	13,720	14,122
Tarak Mehta	-	15,023	16,139
Veli-Matti Reinikkala	-	15,091	15,534
Bernhard Jucker	-	18,992	19,548
Claudio Facchin	287,500	13,720	14,122
Peter Terwiesch	-	10,007	10,292
<b>Total Executive Committee members as of December 31, 2015</b>	<b>287,500</b>	<b>219,070</b>	<b>225,860</b>

**Exhibit 29: EC ownership of WARs and conditionally granted ABB shares (all cash-settled) as of December 31, 2014 (audited)**

Name	Vested at December 31, 2014	Unvested at December 31, 2014		
	Number of fully vested WARs held under the MIP	Reference number of shares under the performance component of the 2012 launch of the LTIP (vesting 2015)	Reference number of shares under the performance component of the 2013 launch of the LTIP (vesting 2016)	Reference number of shares under the performance component of the 2014 launch of the LTIP (vesting 2017)
Ulrich Spiesshofer	-	22,588	50,024	51,489
Eric Elzvik	201,250	-	16,659	17,147
Jean-Christophe Deslarzes	-	-	16,659	17,147
Diane de Saint Victor	-	20,652	19,599	20,173
Frank Duggan	-	18,845	15,023	15,463
Greg Scheu	-	17,425	14,553	14,684
Pekka Tiitinen	-	6,950	13,720	14,122
Tarak Mehta	-	18,845	15,023	16,139
Veli-Matti Reinikkala	-	19,878	15,091	15,534
Bernhard Jucker	-	24,524	18,992	19,548
Claudio Facchin	387,500	10,665	13,720	14,122
<b>Total Executive Committee members as of December 31, 2014</b>	<b>588,750</b>	<b>160,372</b>	<b>209,063</b>	<b>215,568</b>

# Report of the Statutory Auditor on the Compensation report

## To the General Meeting of ABB Ltd, Zurich

We have audited the accompanying Compensation report of ABB Ltd for the year ended December 31, 2015. The audit was limited to the information according to articles 14–16 of the Ordinance against Excessive Compensation in Stock Exchange Listed Companies (Ordinance) contained in the exhibits labeled “audited” on pages 56 to 66 and page 45 of the Compensation report.

## Responsibility of the Board of Directors

The Board of Directors is responsible for the preparation and overall fair presentation of the Compensation report in accordance with Swiss law and the Ordinance. The Board of Directors is also responsible for designing the compensation system and defining individual compensation packages.

## Auditor's responsibility

Our responsibility is to express an opinion on the accompanying Compensation report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Compensation report complies with Swiss law and articles 14–16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the Compensation report with regard to compensation, loans and credits in accordance with articles 14–16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the Compensation report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of compensation, as well as assessing the overall presentation of the Compensation report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Opinion

In our opinion, the Compensation report for the year ended December 31, 2015 of ABB Ltd complies with Swiss law and articles 14–16 of the Ordinance.

## Ernst & Young AG

**Leslie Clifford**  
Licensed audit expert  
(Auditor in charge)

**Robin Errico**  
Licensed audit expert

Zurich, Switzerland  
February 25, 2016



Songlin – Research & Development, Shanghai, China

“I have to understand the mechanical and electrical details but also keep the design, structure and whole vision of the robot in mind. I think my job is highly technical yet creative. I see myself as both an engineer and a kind of artist.”

# Financial review of ABB Group

## Contents

---

## 70 Operating and financial review and prospects

70	About ABB	86	Acquisitions and divestments
70	History of the ABB Group	86	Exchange rates
70	Organizational structure	87	Transactions with affiliates and associates
71	Business divisions	87	Orders
78	Capital expenditures	88	Performance measures
78	Supplies and raw materials	88	Analysis of results of operations
78	Management overview	93	Divisional analysis
81	Application of critical accounting policies	101	Restructuring and other cost savings initiatives
85	New accounting pronouncements	101	Liquidity and capital resources
85	Research and development	103	Financial position

---

## 108 Consolidated Financial Statements of ABB Group

158	Report of management on internal control over financial reporting
159	Report of the Statutory Auditor on the Consolidated Financial Statements
160	Report of the Independent Auditor on internal control over financial reporting

# Operating and financial review and prospects

## About ABB

We are a global leader in power and automation technologies that improve the performance and lower the environmental impact of our customers in the utility, industry and transportation & infrastructure sectors. We provide a broad range of products, systems, solutions and services that are designed to boost productivity, increase power reliability and enhance energy efficiency. We operate in around 100 countries and employ about 135,000 people.

## 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 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. ABB Ltd shares are currently listed on the SIX Swiss Exchange, 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 are headquartered in Zurich, Switzerland.

We manage our business based on a divisional structure, which until January 1, 2016, comprised five divisions: Discrete Automation and Motion, Low Voltage Products, Process Automation, Power Products, and Power Systems. For a breakdown of our consolidated revenues (i) by operating division and (ii) derived from each geographic region in which we operate, see "Analysis of Results of Operations—Revenues".

Effective January 1, 2016, ABB operates in a streamlined set-up of four divisions: Power Grids, Electrification Products, Discrete Automation and Motion, and Process Automation. The new Power Grids division focuses on the changing needs of utility customers with ABB's complete power & automation offering for transmission and distribution delivered from a single source—"power and automation for the grid". ABB's leading offering to industry and transport & infrastructure—"power and automation for the site"—is provided by three divisions. The new Electrification Products division combines ABB's leading low- and medium-voltage businesses. The Discrete Automation and Motion and Process Automation divisions are further aligned, addressing customer needs and operational efficiency. As a result, we believe our new divisional structure of four divisions is geared to better serve market demands. See "Business Divisions—Industry Background" for additional information related to the realignment of certain business divisions.

Except where the context otherwise requires or where otherwise indicated, the information below is presented to reflect our business prior to this realignment to be consistent with the basis used in preparing our Consolidated Financial Statements.

We operate in approximately 100 countries across three regions: Europe, the Americas, and Asia, Middle East and Africa (AMEA). A breakdown of our employees by geographic region is as follows:

	December 31,		
	2015	2014	2013
Europe	61,600	63,000	65,000
The Americas	30,900	32,200	34,400
Asia, Middle East and Africa	43,300	45,200	48,300
<b>Total</b>	<b>135,800</b>	<b>140,400</b>	<b>147,700</b>

The proportion of our employees that are represented by labor unions or are the subject of collective bargaining agreements varies based on the labor practices of each country in which we operate.

# Business divisions

## Industry background

As a global leader in power and automation, we serve utilities, industry and transport & infrastructure customers through our business divisions. These markets and our divisions are discussed in more detail below. Revenue figures presented in this Business Divisions section are before interdivisional eliminations.

### Utilities Market

ABB focuses on the changing needs of utility customers with its complete power & automation offering for transmission and distribution. The ongoing shift in the electricity value chain such as the growth in renewable power generation created opportunities for companies that are able to deliver intelligent solutions to the challenges customers face with regard to increased grid complexity and stability. Renewables are also making stand-alone grids possible for remote, off-grid communities. Currently, these must be equipped with back-up (diesel) generators to cope with intermittent supply, but innovations in power storage technology promise to dramatically expand the application of these micro-grids, which are another key focus for ABB.

Our primary focus is 'power & automation for the grid' with niche automation solutions for utilities in power generation. With the significant shift in the electricity value chain, integration of renewables, micro-grids and solutions to control the flow are key growth drivers for the future. The grid of tomorrow will increase in complexity as there will be numerous feed-in points. Our power & automation solutions help utilities, which generally are public or government-owned entities and tend to be more consolidated in nature, address these challenges.

Utilities remained cautious in 2015 but continued to make selective investments in infrastructure-critical power transmission projects. For example, ABB won an important order to connect the Norwegian and German power grids. The NordLink project will be Europe's largest high voltage direct current (HVDC) power grid interconnection to enable the transmission of 1,400 megawatts (MW) of renewable energy. In China, ABB was awarded orders totaling \$300 million to boost power capacity and grid reliability by enabling two new long-distance 800 kilovolt (kV) ultrahigh voltage direct current (UHVDC) transmission links transporting 8,000 megawatts each. Furthermore, ABB won an order worth over \$160 million from Eskom, South Africa's national electricity provider, to supply control systems, software and instrumentation for the 4,800 MW Kusile clean coal-fired power station which is more efficient than conventional coal-fired power plants as it lowers emissions and reduces fuel costs.

### Industry Market

On the industry side, we serve factories all around the world from discrete to process industries. Energy efficiency and productivity are the hallmarks of ABB's offerings in this customer segment. Industry customers are diverse in nature and may be publicly traded or privately held companies. Our energy efficient products, systems and services reduce consumption and therefore electricity cost and carbon emissions,

while our automation systems increase productivity, quality and efficiency, and keep workplaces safe. Since industrial customers have increasingly been focusing on enhancing energy efficiency and asset productivity, our offering is a key value proposition for them.

Demand from industrial customers in 2015 varied by sector and region. However, low oil prices resulted in a continued constraint in discretionary spending by oil and gas customers. The need for cutting edge solutions to increase efficiency and to use renewable power generation to lower the environmental impact continued to be important demand drivers. In this context, ABB won a \$90-million order for a high-voltage cable system to supply power from the Norwegian power grid to the Johan Sverdrup offshore oil field. Supplying electric power from shore for offshore oil and gas production avoids the need for offshore resources and to burn diesel or gas out at sea to power the equipment, and is much safer and more energy efficient. In addition, demand for robotics solutions in general industry is growing as there is an increased need for automated processes and productivity. YuMi®, ABB's collaborative robot, helps meet this need.

### Transport & Infrastructure Market

Alongside ABB's offering for utilities and industry, the company provides power & automation solutions for transport & infrastructure customers. As transport customers focus on energy efficiency and reduced operating costs, our combined offer of power & automation solutions are key. Another key growth driver for this customer segment is the move to increased electric transportation as well as urbanization and growth in datacenters. Our expertise in power & automation has given us the edge when it comes to providing clean and reliable power solutions for transport networks and infrastructure.

Demand from the transport & infrastructure market in 2015 was mixed, with continuing strong demand from the rail industry. For example, ABB continued its collaboration with Stadler Rail with orders totaling \$115 million to deliver its newest traction equipment for reliable and energy-efficient trains in the United States and Europe. Furthermore, ABB delivered substations for the Swiss Federal Railways (SBB) to boost power supply and help accommodate rising traffic volumes in Switzerland. ABB's marine solutions to boost efficiency, reliability and flexibility were delivered to Estonia-based Tallink Group for their new liquefied natural gas (LNG) powered fast ferries.

## Discrete Automation and Motion Division

### Overview

The Discrete Automation and Motion division offers a wide range of products and services including variable-speed drives, motion control solutions, motors, generators, power electronics systems, rectifiers, power quality and power protection products, mechanical power transmission of rotating equipment, traction converters, solar inverters, wind turbine converters, electric vehicle charging infrastructure, programmable logic controllers (PLCs), and industrial robots. These products help customers to improve productivity, quality, and energy efficiency, and generate energy. Key applications include energy conversion, data processing,

actuation, automation, standardized manufacturing cells for applications such as machine tending, welding, cutting, painting, finishing, picking, packing and palletizing, and engineered systems for the automotive industry. The majority of these applications are for industrial applications including discrete manufacturing, process automation and hybrid or batch manufacturing, with others provided for infrastructure and buildings, transportation, and utilities. The division also provides a full range of life-cycle services, from product and system maintenance to application design, including energy efficiency appraisals, preventive maintenance and remote monitoring services.

Revenues are generated both from direct sales to end users as well as from indirect sales through distributors, machine builders and OEMs (original equipment manufacturers), system integrators, and panel builders.

The Discrete Automation and Motion division had approximately 29,700 employees as of December 31, 2015, and generated \$9.1 billion of revenues in 2015.

### Products and Services

The Discrete Automation and Motion division provides low-voltage and medium-voltage drive products and systems for industrial, commercial and residential applications. Drives provide speed, torque and motion control for equipment such as fans, pumps, compressors, conveyors, centrifuges, mixers, hoists, cranes, extruders, printing and textile machines. They are used in industries such as building automation, marine, power, transportation, food and beverage, metals, mining, and oil and gas.

The division also produces a range of power conversion products. These include static excitation and synchronizing systems that provide stability for power stations, uninterruptible power supply modular systems, as well as high power rectifiers that convert alternating current (AC) power to direct current (DC) power for very high-amperage applications such as furnaces in aluminum smelters. The division also manufactures solar inverters, wind turbine converters and converters for power protection. Rail traction converters, DC wayside power solutions and a range of solutions for the charging of electric vehicles are also part of the division's portfolio.

Discrete Automation and Motion supplies a comprehensive range of electrical motors and generators, including high-efficiency motors that conform to leading environmental and Minimum Energy Performance Standards (MEPS). Efficiency is an important selection criterion for customers, because electric motors account for nearly two-thirds of the electricity consumed by industrial plants. The Discrete Automation and Motion division manufactures synchronous motors for the most demanding applications and a full range of low- and high-voltage induction motors, for both IEC (International Electrotechnical Commission) and NEMA (National Electrical Manufacturers Association) standards.

The Discrete Automation and Motion division offers robots, controllers and software systems and services for the automotive manufacturers and their sub-suppliers as well as for general manufacturing industries, to improve product quality, productivity and consistency in manufacturing processes. Robots are also used in activities or environments which may be hazardous to employee health and safety, such as repetitive lifting, dusty, hot or cold rooms, or painting booths. In the automotive industry, the robot 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 and beverage, chemicals and pharmaceuticals, computers, consumer electronics and communications (3C) industries to solar and wood industries. Typical general industry applications include welding, material handling, painting, picking, packing, palletizing and small parts assembly automation.

The division also offers services that complement its products, including design and project management, engineering, installation, training and life-cycle care, energy efficiency appraisals and preventive maintenance.

### Customers

The Discrete Automation and Motion division serves a wide range of customers. Customers include machinery manufacturers, process industries such as pulp and paper, oil and gas, and metals and mining companies, hybrid and batch manufacturers such as food and beverage companies, rail equipment manufacturers, discrete manufacturing companies such as '3C' (computer, communication and consumer electronic), utilities and renewable energy suppliers, particularly in the wind and solar sectors, as well as customers in the automotive industry and electric vehicle charging networks.

### 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.

### Competition

The Discrete Automation and Motion division's principal competitors vary by product line but include Fanuc Robotics, Kuka Robot Group, Rockwell Automation, Schneider, Siemens, Yaskawa, SMA and WEG Industries.

### Capital Expenditures

The Discrete Automation and Motion division's capital expenditures for property, plant and equipment totaled \$145 million in 2015, compared to \$192 million and \$214 million in 2014 and in 2013, respectively. Principal investments in 2015 were primarily related to equipment replacement and upgrades. Geographically, in 2015, Europe represented 48 percent of the capital expenditures, followed by the Americas (33 percent) and AMEA (19 percent).

## Low Voltage Products Division

### Overview

The Low Voltage Products division helps customers to improve productivity, use energy efficiently and increase safety. The division offers a wide range of products and systems, with related services, that provide protection, control and measurement for electrical installations, enclosures, switchboards, electronics and electromechanical devices for industrial machines and plants. The main applications are in industry,

building, infrastructure, rail and sustainable transportation, renewable energies and e-mobility applications.

The Low Voltage Products division had approximately 29,100 employees as of December 31, 2015, and generated \$6.5 billion of revenues in 2015.

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

### Products and Services

The Low Voltage Products division offering covers a wide range of products and services including low-voltage switchgears, breakers, switches, control products, DIN-rail components, automation and distribution enclosures, wiring accessories and installation material for many kinds of applications.

The division offers solutions for restoring service rapidly in case of a fault and providing optimum protection of the electrical installation and people using such installations. The product offering ranges from miniature circuit breakers to high-capacity molded-case and air circuit breakers, and includes safety switches used for power distribution in factories and buildings, fuse gear systems for short circuit and overload protection as well as cabling and connection components.

The Low Voltage Products division also offers terminal blocks and printed circuit board connectors used by panel builders and OEMs to produce standard distribution and control panels as well as specialized applications in industries such as traction, energy, maritime, explosive atmospheres and electronics. In addition, the division offers a range of contactors, soft starters, starters, proximity sensors, safety products for industrial protection, limit switches and manual motor starters, along with electronic relays and overload relays.

The division provides smart home and intelligent building control systems, also known as KNX protocol, a complete system for all energy-reducing building application areas such as lighting and shutters, heating, ventilation, cooling and security. In addition, the division's IEC and NEMA compliant switchgear technology integrates intelligent motor and feeder control solutions to enhance protection, digital control, condition monitoring and plant-wide data access by process control systems, electrical control systems and other plant computers.

The Low Voltage Products division has also developed a range of products for new markets, such as those used by electric vehicles (e-mobility) and in photovoltaic, solar and wind applications. These include circuit breakers, energy meters, switch-disconnectors, residual current-operated circuit breakers, interface relays and other products designed for outdoor installation.

The division also supplies a wide range of electrical components including conduits, boxes, covers, fittings, connectors, fasteners, wiring ducts, terminals, cable trays, struts, grounding, insulation, switchgear, metal framing, earthing & lightning protection and industrial lighting products for various types of application.

### Customers

The Low Voltage Products division serves a wide range of customers, including residential and commercial building contractors, process industries, rail equipment manufacturers,

manufacturing companies, utilities and renewable energy suppliers, particularly in the wind and solar sectors.

### 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.

### Competition

The Low Voltage Products division's principal competitors vary by product line but include Eaton Corporation, Legrand, Mitsubishi, Schneider, Siemens, Leviton, Rittal and Chint Electrical.

### Capital Expenditures

The Low Voltage Products division's capital expenditures for property, plant and equipment totaled \$166 million in 2015, compared to \$184 million and \$204 million in 2014 and 2013, respectively. Investments in 2015 primarily related to equipment replacement and upgrades in recently acquired businesses. Geographically, in 2015, Europe represented 57 percent of the capital expenditures, followed by the Americas (29 percent) and AMEA (14 percent).

## Process Automation Division

### Overview

The Process Automation division is a leading provider of fully-engineered solutions, products and services for process control, safety, instrumentation, plant electrification and energy management for the key process industry sectors of chemical, oil and gas, marine, mining, minerals, metals, cement, and pulp and paper. Each industry has certain unique business drivers, yet all share common requirements for operational productivity, safety, energy efficiency, minimized risk and environmental compliance. The Process Automation division's core competencies are the applications of automation and electrification technologies to address these generic requirements and are tailored to the characteristics of each of its key industries. Additionally, this business has a number of industry-specific services and anchor products (e.g. gearless mill drives, mine hoists, Azipods, turbochargers) that differentiate the business from its competitors. These products make ABB more relevant to its customers in these industries and represent significant components of a larger automation and electrification scope. The division is organized around industry systems, product businesses and life cycle services. The division had approximately 21,900 employees as of December 31, 2015, and generated revenues of \$6.4 billion in 2015.

The Process Automation division offering is made available as separately sold products or as part of a total electrification, instrumentation and/or automation system. The division's technologies are sold both through direct sales forces and third-party channels.

## Products and Services

The Process Automation division offers standalone products, engineered systems and services for process control and measurement, safety, plant electrification, information management, asset management and industry-specific applications for a variety of industries, primarily pulp and paper, metals, minerals and mining, chemical, oil and gas, marine, pharmaceuticals and the power industry. Some of the Discrete Automation and Motion, Power Systems, Power Products and Low Voltage Products divisions' products are integrated into the process control and electrification systems offered by the Process Automation division.

Our automation systems are used in applications such as continuous and batch control, asset optimization, energy management and safety. They are the hubs that link instrumentation, measurement devices and systems for control and supervision of industrial processes 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.

A key element of this division's product offering is its System 800xA process automation platform. This product 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 approximately the past 25 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, 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 also offers a full line of instrumentation and analytical products to analyze, measure and record industrial and power processes.

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, cement and mining 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 and 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 industry, 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 and automation 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 a complete range of lifecycle services across all of our customer segments to help customers optimize their assets. Demand for our process automation services is increasing as our customers seek to increase productivity by improving the performance of existing equipment.

## Customers

The Process Automation division's end customers are primarily companies in the oil and gas, minerals and mining, metals, pulp and paper, chemicals and pharmaceuticals, and the marine industries. Customers for this division are looking for complete instrumentation, automation and electrification solutions which demonstrate value mainly in the areas of lower capital costs, increased plant availability, lower lifecycle costs and reduced project costs.

## Sales and Marketing

The Process Automation division uses a direct sales force 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. Competitors include Emerson, Honeywell, Metso Automation, Rockwell Automation, Schneider, Siemens, Voith, and Yokogawa Electric Corporation.

## Capital Expenditures

The Process Automation division's capital expenditures for property, plant and equipment totaled \$52 million in 2015, compared to \$49 million and \$68 million in 2014 and 2013, respectively. Principal investments in 2015 were in the measurement products and turbocharging businesses. Geographically, in 2015, Europe represented 60 percent of the capital expenditures, followed by the Americas (21 percent) and AMEA (19 percent).

## Power Products Division

### Overview

The Power Products division primarily serves electric, gas and water utilities as well as industrial and commercial customers, with a wide portfolio of products and services across a wide voltage range to facilitate power generation, transmission and distribution. Direct sales account for a significant part of the division's total revenues, and external channel partners, such as wholesalers, distributors and OEMs, account for the rest.

Key technologies include high- and medium-voltage switchgear, circuit breakers for a range of current ratings and voltage levels, power, distribution, traction and other special transformers, as well as products to help control and protect electrical networks. The division had approximately 35,100 employees as of December 31, 2015, and generated \$9.6 billion of revenues in 2015.

## Products and Services

The Power Products division manufactures products that can be placed in three broad categories: high-voltage products, medium-voltage products and transformers. The division sells directly to end customers and also through channels such as distributors, wholesalers, installers and OEMs. Some of the division's products are also integrated into the turnkey offerings of systems divisions such as Power Systems and Process Automation or sold through engineering, procurement and construction (EPC) firms.

The High Voltage Products business supplies equipment, ranging from 50 to 1,200 kilovolts, mainly to power transmission utilities and also serves industrial customers. This equipment primarily enables the transmission grid to operate more reliably and efficiently with minimum environmental impact. As part of its portfolio, this business designs and manufactures a range of air-, gas-insulated and hybrid switchgear, generator circuit breakers, capacitors, high-voltage circuit breakers, surge arresters, instrument transformers, cable accessories and a variety of high-voltage components. This is supported by a range of service solutions to support the products throughout their life cycle.

The Medium Voltage Products business offers products and services that largely serve the power distribution sector, often providing the link between high-voltage transmission systems and low-voltage users. Medium-voltage products help utility and industrial customers to improve power quality and control, reduce outage time and enhance operational reliability and efficiency. This business reaches customers directly and through channels such as distributors and OEMs. Its comprehensive offering includes medium-voltage equipment (1 to 50 kilovolts), indoor and outdoor circuit breakers, reclosers, fuses, contactors, relays, instrument transformers, sensors, motor control centers, ring main units for primary and secondary distribution, as well as a range of air- and gas-insulated switchgear. It also produces indoor and outdoor modular systems and other solutions to facilitate efficient and reliable power distribution.

The Transformers business designs and manufactures power transformers (72.5 to 1,200 kilovolts) for utility and industrial customers that help to step up or step down voltage levels and include special applications such as HVDC converter transformers or phase shifters. This business also supplies transformer components and insulation material, such as bushings and tap changers. It also manufactures a wide range of distribution transformers (up to 72.5 kilovolts) for use in the power distribution sector, industrial facilities and commercial buildings. These transformers are designed to step down electrical voltage bringing it to consumption levels. They can be oil- or dry-type and, although oil-type transformers are more commonly used, demand for dry-type transformers is growing because they minimize fire hazards and are well-suited for applications such as office buildings, wind turbines, offshore drilling platforms, marine vessels and large industrial

plants. Another part of the offering includes traction transformers for use in electric locomotives, special application transformers, as well as a wide range of service and retrofit solutions for utility and industry customers.

## Customers

The Power Products division serves electric utilities, owners and operators of power generating plants and power transmission and distribution networks. It also serves industries across the spectrum. Customers include electric, gas, water and other utilities, as well as industrial and commercial customers.

## Sales and Marketing

The Power Products division sells its products individually and as part of wider solutions through our systems divisions. Direct sales account for a significant part of the division's business and the rest are sold through external channel partners, such as wholesalers, distributors, system integrators, EPCs and OEMs. As the Power Products and Power Systems divisions share many of the same customers and technologies and are influenced by similar market drivers, they also have a common front-end sales organization to maximize market synergies and coverage across countries, regions, and sectors for the entire power portfolio.

## Competition

On a global basis, the main competitors for the Power Products division are Siemens, General Electric and Schneider. The division also faces global competition in some product categories from competitors in emerging markets. It also competes in specific geographies with companies such as Eaton Corporation, Hyundai, Hyosung, Crompton Greaves, Larsen & Toubro and Bharat Heavy Electricals.

## Capital Expenditures

The Power Products division's capital expenditures for property, plant and equipment totaled \$164 million in 2015, compared to \$220 million and \$252 million in 2014 and 2013, respectively. Principal investments in 2015 related to upgrades and expansion of existing facilities in Sweden, China, United States, Germany and Czech Republic. Geographically, in 2015, Europe represented 53 percent of the division's capital expenditures, followed by the Americas (24 percent) and AMEA (23 percent).

# Power Systems Division

## Overview

The Power Systems division serves public and private utilities, as well as industrial and commercial customers with solutions for power and water plants, grid integration and automation as well as a complete range of systems and services for the generation, transmission and distribution of electricity. Turnkey solutions include power plant electrification and automation, bulk power transmission, substations and network management. The division had approximately 18,100 employees as of December 31, 2015, and generated \$6.3 billion of revenues in 2015.

## Products and Services

The Power Systems division delivers solutions through four businesses: Power Generation, Grid Systems, Substations and Network Management. The scope of work in a typical turnkey contract includes design, system engineering, supply, installation, commissioning and testing of the system. As part of the business model, the Power Systems division integrates products from both the Power Products division and external suppliers, adding value through design, engineering and project management to deliver turnkey solutions.

The Power Generation business is a leading provider of automation solutions for all types of power generation plants, including coal, gas, combined-cycle, waste-to-energy and a range of renewables including hydro, solar, wind and biomass. With an offering that includes electrical balance of plant as well as instrumentation and control systems, ABB technologies help optimize performance, improve reliability, enhance efficiency and minimize environmental impact throughout the plant life cycle. The business also serves the water industry, including applications such as pumping stations and desalination plants.

As part of the Grid Systems business, ABB provides a comprehensive offering of AC and DC transmission systems, which help customers to reduce transmission losses, maximize efficiency and improve grid reliability. ABB pioneered HVDC technology nearly 60 years ago. HVDC technology is designed to reliably and efficiently transmit electrical power over long distances via overhead lines and underground or submarine cables with minimum losses. HVDC is also widely used for grid interconnections. HVDC Light®, a more compact form of ABB's classic HVDC technology, is ideal for linking offshore installations, such as wind farms or oil and gas platforms, to mainland grids and for interconnections, often via subsea links. The environmental benefits of HVDC Light®, include neutral electromagnetic fields, oil-free cables and compact converter stations.

ABB also offers a comprehensive range of land and submarine cables through its Grid Systems business, as well as accessories and services for a range of applications from medium- to high-voltage AC and DC systems. The portfolio includes high-performance XLPE (cross-linked polyethylene) insulated cables for high efficiency transmission systems at voltages up to 525 kilovolts. When it comes to transmission grid solutions, ABB manufactures its own power semiconductors, which are a key enabler for HVDC, flexible alternating current transmission systems (FACTS) and other technologies, serving a range of sectors including transportation and wind.

Substations are key installations in the power grid that facilitate the efficient transmission and distribution of electricity with minimal environmental impact. They perform the vital function of monitoring and controlling power flows, feeding power from generating stations into the grid and providing the link between transmission and distribution networks as well as end consumers. ABB has successfully delivered air- and gas-insulated substations in all kinds of environments, from deserts and mountains to offshore rigs and crowded city centers. ABB's substation offering spans a range of voltage levels up to 1,100 kilovolts, serving utility, industry and commercial customers as well as sectors such as railways, urban transportation and renewables.

FACTS technologies are also part of the Substations business offering. FACTS solutions help improve power quality and can significantly increase the capacity of existing AC

transmission systems, by as much as 50 percent, while maintaining and improving system reliability. FACTS technologies also boost transmission efficiency, relieve bottlenecks and can be used for the safe integration of intermittent power sources, such as wind and solar, into the grid. By enhancing the capacity of existing transmission infrastructure, FACTS solutions can alleviate the need for capital investment, reducing the time, cost and environmental impact associated with the construction of new generating facilities and transmission lines. By improving efficiency, FACTS technologies help to deliver more power to consumers, reducing the need for more electricity generation, and improving power supply and quality. ABB is a global leader in the growing field of FACTS, and has delivered more than 800 such installations across the world.

ABB's Network Management business offers solutions to help manage power networks. The offering covers network management and utility communications solutions to monitor, control, operate and protect power systems. These solutions are designed to ensure the reliability of electricity supplies and enable real-time management of power plants, transmission grids, distribution networks and energy trading markets. The portfolio includes control and protection systems for power generation, transmission and distribution, supervisory control and data acquisition (SCADA) systems, as well as software solutions for central electricity markets and mixed utilities (electricity, district heating, gas and water). It also encompasses the substation automation offering, compliant with IEC 61850, the open communication standard, which provides a common framework for substation control and protection and facilitates interoperability across devices and systems. The Network Management portfolio also covers wireless and fixed communication systems for power, water and gas utilities. It includes 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.

Network management systems are key smart-grid enablers by providing automated power systems to incorporate and manage centralized and distributed power generation, intermittent sources of renewable energy, real-time pricing and load-management data. Relevant acquisitions have made ABB a global leader in enterprise software and services for essential industries such as energy, mining, public infrastructure and transportation. These solutions help to bridge the gap between information technologies (IT) and operational technologies (OT), enabling clients to make faster, better-informed decisions in both daily operations and long-term planning strategies. Some of the world's largest private and public enterprises rely on such solutions to minimize risk, enhance operational and financial performance and execute the right strategies for the future.

The Power Systems division also has a global footprint and installed base that helps drive the service business. The offering includes a range of services aimed at optimizing operations and reducing maintenance requirements across the value chain. These services range from support agreements and retrofits to spare parts, asset health, management, data analytics and training. The division also undertakes consulting activities such as energy efficiency studies for power plants and grids, analyses and design of new transmission and distribution systems as well as asset optimization based

on technical, regulatory, economic and environmental considerations.

## Customers

The Power Systems division's principal customers include public and private power generation utilities and companies, transmission and distribution utilities, owners and operators as well as industrial and commercial customers. Other customers include gas and water utilities including multi-utilities, which are involved in the transmission or distribution of more than one commodity.

## Sales and Marketing

The Power Systems division promotes its offering primarily through a direct sales force of specialized sales engineering teams. Some sales are also handled through third-party channels, such as EPC firms, OEMs and system integrators. As the Power Products and Power Systems divisions share many of the same customers and technologies, and are influenced by similar market drivers, they also have a common front-end sales organization that helps maximize market synergies across countries and regions.

## Competition

On a global basis, the Power Systems division faces competition mainly from Siemens and General Electric. Emerson, Prysmian and Nexans are additional competitors in parts of the business. The division also sees emerging competitors in specific regions. The breadth of its portfolio, technology and innovation, a global footprint and a vast installed base, enable the division to maintain its leading position in the power sector.

## Capital Expenditures

The Power Systems division's capital expenditures for property, plant and equipment totaled \$75 million in 2015, compared to \$92 million and \$101 million in 2014 and 2013, respectively. Principal investments in 2015 were related to capacity expansion as well as the replacement of existing equipment, particularly in Sweden. Geographically, in 2015, Europe represented 87 percent of the capital expenditures, followed by AMEA (9 percent) and the Americas (4 percent).

## Corporate and Other

Corporate and Other includes headquarters, central research and development, our real estate activities, Group Treasury Operations and other minor business activities.

Corporate headquarters and stewardship activities include the operations of our corporate headquarters in Zurich, Switzerland, as well as corporate-related activities in various countries. These activities cover staff functions with group-wide responsibilities, such as accounting and financial reporting, corporate finance and taxes, planning and controlling, internal audit, legal and integrity, compliance, risk management and insurance, corporate communications, information systems, investor relations and human resources.

Corporate research and development primarily covers our research activities, as our development activities are organized under the five business divisions. We have two global research laboratories, one focused on power technologies and the other focused on automation technologies, which

both work on technologies relevant to the future of our five business divisions. Each laboratory works on new and emerging technologies and collaborates with universities and other external partners to support our divisions in advancing relevant technologies and in developing cross-divisional technology platforms. We have corporate research centers in seven countries (China, Germany, India, Poland, Sweden, Switzerland and the United States).

Corporate and Other had approximately 1,900 employees at December 31, 2015.

## Division realignment

On January 1, 2016, ABB commenced operating in a streamlined set-up of four divisions: Power Grids, Electrification Products, Discrete Automation and Motion, and Process Automation. The new Power Grids division focuses on the changing needs of utility customers with ABB's complete power & automation offering for transmission and distribution delivered from a single source—"power & automation for the grid". ABB's leading offering to industry and transport & infrastructure—"power & automation for the site"—is provided by three divisions. The new Electrification Products division combines ABB's leading low- and medium-voltage businesses. The Discrete Automation and Motion and Process Automation divisions are being further aligned to better address customer needs and increase operational efficiency.

The new Power Grids division is a leading supplier of power & automation solutions to customers and comprises ABB's AC grid, DC grid and grid automation activities, as well as the company's transformer and high-voltage product businesses. On a pro forma basis, the Power Grids division had revenues in 2015 of approximately \$11.6 billion and employed approximately 37,200 employees at January 1, 2016.

The Electrification Products division includes ABB's medium-voltage products business as well as the breakers & switches, control products, building products, low-voltage systems and Thomas & Betts activities. This combination opens new growth opportunities by taking one of the industry's most complete ranges of low- and medium-voltage products, solutions and services to a broader customer base through multiple common sales channels. On a pro forma basis, the Electrification Products division had revenues in 2015 of approximately \$9.5 billion and employed approximately 41,600 employees at January 1, 2016.

Under our new structure, all of ABB's control solutions are integrated into the realigned Process Automation division and delivered across ABB's various end markets through focused front-end customer interfaces. To achieve this, we transferred the DCS business for power generation from the previous Power Systems division. On a pro forma basis, the Process Automation division had revenues in 2015 of approximately \$7.2 billion and employed approximately 24,800 employees at January 1, 2016.

There were no significant changes in the Discrete Automation and Motion division.

Except where the context otherwise requires or where otherwise indicated, the information below is presented to reflect our business prior to this realignment to be consistent with the basis used in preparing our Consolidated Financial Statements.

# Capital expenditures

Total capital expenditures for property, plant and equipment and intangible assets (excluding intangibles acquired through business combinations) amounted to \$876 million, \$1,026 million and \$1,106 million in 2015, 2014 and 2013, respectively. In 2015, 2014 and 2013, capital expenditures were 24 percent, 21 percent and 16 percent lower, respectively, than depreciation and amortization (excluding acquisition-related amortization, capital expenditures were 3 percent, 11 percent and 19 percent higher, respectively, than depreciation and amortization).

Capital expenditures in 2015 remained at a significant level in mature markets, reflecting the geographic distribution of our existing production facilities. Capital expenditures in Europe and North America in 2015 were driven primarily by upgrades and maintenance of existing production facilities, mainly in the United States, Sweden, Switzerland and Germany. Capital expenditures in emerging markets were highest in China, Poland, India and Brazil. Capital expenditures in emerging markets were made primarily to increase production capacity by investment in new or expanded facilities. The share of emerging markets capital expenditures as a percentage of total capital expenditures in 2015, 2014 and 2013 was 31 percent, 29 percent and 33 percent, respectively.

At December 31, 2015, construction in progress for property, plant and equipment was \$559 million, mainly in Sweden, the United States, China, Switzerland and Germany. At December 31, 2014, construction in progress for property, plant and equipment was \$653 million, mainly in Sweden, the United States, Switzerland, Saudi Arabia and China, while at December 31, 2013, construction in progress for property, plant and equipment was \$645 million, mainly in Sweden, the United States, Switzerland, Germany and Brazil.

Our capital expenditures relate primarily to property, plant and equipment. For 2016, we estimate the expenditures for property, plant and equipment will be higher than our annual total for depreciation and amortization (excluding acquisition-related amortization).

## Supplies and raw materials

We purchase a variety of raw materials and products which contain raw materials for use in our production and project execution processes. The primary materials used in our products, by weight, are copper, aluminum, carbon steel, 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 our businesses and key countries. Our supply chain management network consists of a number of teams, each focusing on different product categories. These category teams, on global, divisional and/or regional level, take advantage of opportunities to leverage the scale of ABB and to optimize the efficiency of our supply networks, in a sustainable manner.

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

- pool and leverage procurement of materials and services,
- provide transparency of ABB's global spending through a comprehensive performance and reporting system linked to all of our enterprise resource planning (ERP) systems,
- strengthen ABB's supply chain network by implementing an effective product category management structure and extensive competency-based training, and
- monitor and develop our supply base to ensure sustainability, both in terms of materials and processes used.

We buy many categories of products which contain steel, copper, aluminum, crude oil and other commodities. Continuing global economic growth in many emerging economies, coupled with the volatility in foreign currency exchange rates, has led to significant fluctuations in these raw material costs over the last few years. While we expect global commodity prices to remain highly volatile, we expect to offset some market volatility through the use of long-term contracts and global sourcing.

We seek to mitigate the majority of our exposure to commodity price risk by entering into hedges. For example, we manage copper and aluminum price risk using principally swap contracts based on prices for these commodities quoted on leading exchanges. ABB's hedging policy is designed to safeguard margins by minimizing price volatility and providing a stable cost base during order execution. 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 (through price escalation clauses).

Overall, during 2015 supply chain management personnel in our businesses, and in the countries in which we operate, along with the global category teams, continued to focus on value chain optimization efforts in all areas, while maintaining and improving quality and delivery performance.

In August 2012, the United States Securities and Exchange Commission (SEC) issued its final rules regarding "Conflict Minerals", as required by section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. We initiated conflict minerals processes in 2013 and have continuously improved and tailored the processes to our value chain. We continue to work with our suppliers and customers, to enable us to comply with the rules and disclosure obligations. Further information on ABB's Conflict Minerals policy and supplier requirements can be found under "Material Compliance" at [new.abb.com/about/supplying](http://new.abb.com/about/supplying)

## Management overview

As a global leader in power and automation, we serve utility, industry and transport & infrastructure customers in a combined market worth more than \$600 billion per year. In all three customer segments, our combined offering of power and automation provides a unique value proposition for customers as we provide solutions for secure, energy-efficient generation, transmission and distribution of electricity, and for increasing productivity in industrial, commercial and utility operations. As we look at our customers' value chain, there is a clear trend towards more electricity being transmitted by wire, and increased feed-in points.

This leads to a convergence of power and automation, which then needs to be automated and controlled.

In September 2014, we launched the Next Level strategy which laid the foundation to take ABB to the Next Level aimed at accelerating sustainable value creation. The strategy is built on the three focus areas of profitable growth, relentless execution and business-led collaboration.

## Next Level – Stage 1

In Stage 1 of the Next Level strategy we drove toward profitable growth by shifting our center of gravity through strengthening our competitiveness, driving organic growth and lowering our risk profile. We continued to drive profitable growth through our framework of penetration, innovation and expansion (PIE) in targeted geographic and industry segments. Some of our key successes in 2015 can be seen in the section Next Level - Stage 2 below.

To complement our drive for organic growth we also launched five new partnerships in 2015 in different markets such as data centers (with Ericsson), electrical vehicle charging (with Microsoft), grid integration in Japan (with Hitachi), microgrids (with Samsung) and building automation and software for smart homes (with Bosch & Cisco).

In Stage 1, we drove relentless execution by continuing to deliver on our ongoing cost savings program. Significant progress was also made on the previously announced Power Systems 'step-change' program. We returned the division to profitability and it reached the target operational EBITA range of 7-11 percent in the fourth quarter of 2015. We are driving our transformation through our 1,000-day programs, to ensure a successful implementation and making our operations more efficient. In order to increase operational performance, a new compensation model was rolled out which better incentivizes management performance by building on company as well as individual key performance indicators (KPIs). As of January 2016 more than 70,000 employees are on this new model.

Our third focus area is business-led collaboration which aims at increasing operational efficiency by improving processes and organizational structures. We have simplified the organization and set clear roles and responsibilities throughout the group.

Our Next Level Stage 1 actions laid a solid foundation for our future development amid a significantly tougher market environment in 2015 compared to 2014. Global GDP growth assumptions were downgraded, oil prices continued to decrease and China's growth moderated. The market for our full product and service offering, which totals more than \$600 billion a year, is now expected to grow 2.5-4.5 percent a year in the period from 2015 to 2020.

## Next Level – Stage 2

Stage 2 of the Next Level strategy was announced in September 2015 and is comprised of a significant set of actions to accelerate the shift of our center of gravity toward higher organic growth, greater competitiveness and lower risk while accelerating existing improvement projects.

## Profitable growth

Profitable growth continues to be a key focus area to accelerate sustainable value creation and is driven through the framework of penetration, innovation and expansion (PIE).

We continued to drive for growth in 2015 through increased market penetration in targeted geographic and industry segments. For example, we have a pioneering track record in supporting the development of India's power infrastructure. ABB projects in India include the North-East Agra power link, the world's first multi-terminal UHVDC transmission system, as well as a smart grid solution for the entire Karnataka state power network. In addition to the first link in the country, we have been involved in five major HVDC projects in India. Furthermore, we have actively contributed to the development of India's ultrahigh voltage (765kV) network and the local manufacturing of related equipment. Most recently we developed 1200 kV power equipment including transformers and a switchgear for the pilot installation in Bina, India, which is deploying the highest AC voltage level in the world. We are also supporting the rapid urbanization in India through a range of initiatives including solar plants, microgrids and metro rail projects in fast growing cities like Delhi, Bangalore and Jaipur.

Innovation continued to be a focus for growth and we introduced several ground-breaking offerings in 2015, including the launch of our collaborative robot, YuMi®, the 525 kV HVDC cable, the Azipod® D electric propulsion system and the eco-efficient gas insulated switchgear. YuMi® is the world's first dual-arm robot to be able to work collaboratively on the same tasks as humans while ensuring the safety of those around it. With the introduction of YuMi®, we are pushing the boundaries of robotic automation by fundamentally expanding the types of industrial processes which can be automated with robots. In addition, we commissioned the world's first high- and medium-voltage switchgear installation for the Swiss utility, EWZ, with a new eco-efficient gas that reduces the global warming potential by almost 100 percent by offering an alternative gas mixture to the conventional sulfur hexafluoride.

We also continue to focus on the opportunities brought by the Industrial Internet, the so-called "Internet of Things, Services and People" (IoTSP). Today, more than 50 percent of our products are software-related. By enabling installations to communicate via the internet, the IoTSP provides connections across company locations and even between companies. As a company with offerings across the power and automation spectrum, we are ideally-positioned to enable the IoTSP and to help customers reach the next level of productivity, efficiency and flexibility. We received an order in 2015 together with the Dutch weather forecasting specialist, Meteo Group, to provide 140 Maersk container vessels with advisory software to optimize routes helping them to drive vessel efficiency and avoid conditions that could be harmful to the ship.

Technology innovation remains a cornerstone of our competitive position and a key driver of profitable growth. We plan to continue investments into research and development of approximately 4 percent of revenues, which in 2015 amounted to \$1.4 billion.

Expansion into new high-growth markets is another driver of profitable growth. We, along with Microsoft Corp., have announced the worldwide availability of a new electric vehicle (EV) fast-charging services platform. Combining our leading

EV charging stations with Microsoft's Azure cloud-based services will ensure stability, global scalability and advanced management features for our customers. The collaboration will also take advantage of machine learning and predictive analytic capabilities to drive future innovations. With regard to micro-grids, which are another high-growth market, we won a significant order in 2015 from Socabelec to install a micro-grid solution to boost renewable energy use by a remote community in Kenya. Our stabilization system will be integrated into the existing power network and will interface with existing diesel power station controls. This will maximize renewable energy penetration and utilize any excess wind energy generated.

Complementing the ongoing focus on driving organic growth, we plan to focus on value-creating acquisitions that support the shift in center of gravity and partnerships to accelerate growth in attractive segments.

In line with the shift in our center of gravity, we have realigned our organizational structure effective January 1, 2016, to better address customer needs and deliver operational efficiency. Our new streamlined structure is comprised of four operating divisions: Power Grids, Electrification Products, Discrete Automation and Motion and Process Automation.

The new Power Grids division is focused on meeting the power and automation technology challenges of power grid utilities, such as the integration of renewable energies, growing power network complexity, grid automation, and the development of smart grids and micro-grids. Delivering a broad transmission and distribution offering from a single integrated source supports our organic growth ambitions by providing better customer service while enabling cost and productivity improvements to achieve the targeted operational EBITA margins. The Power Grids division is a leading worldwide supplier of power and automation solutions to power grid customers and comprises our AC grid, DC grid and grid automation activities, as well as our transformer and high-voltage product businesses.

The new Electrification Products division includes our medium-voltage products business as well as the breakers & switches, control products, building products, low-voltage systems and Thomas & Betts activities. This combination opens new growth opportunities by taking one of the industry's most complete ranges of low- and medium-voltage products, solutions and services to a broader customer base through multiple common sales channels.

All of our control solutions are integrated into the Process Automation division and delivered across our various end markets through focused front end customer interfaces including the transfer of the distributed control system (DCS) business for power generation from the Power Systems division.

There are no significant changes in the Discrete Automation and Motion division.

### **Relentless execution**

In Stage 2 of the Next Level strategy, we aim to close the gap in our operating performance compared with our best-in-class peers. The goal is to further transform our company toward a leading operating model with business processes more focused on customer needs, and an enhanced performance management system, including compensation tied more closely to performance, as well as the development of a world class people and true performance culture.

Our ongoing cost savings program to reduce costs equivalent to 3-5 percent of cost of sales each year, achieved in 2015 approximately \$1.2 billion in cost savings or approximately 5 percent of cost of sales.

We continued to drive our focused 1,000-day programs of driving white collar productivity—becoming lean for growth—and working capital management—to provide cash for growth.

Our white collar productivity program is aimed at making us leaner, faster and more customer-focused. Business functions, support functions and organizational complexity are in the scope of this program. Productivity improvements include the rapid expansion of regional shared services and the streamlining of global operations and head office functions, with business units moving closer to key markets. We aim to achieve cost savings at a run rate of \$1 billion a year by the end of 2017 and the program is on track to deliver approximately \$400 million of cost savings in 2016.

The working capital program is on track to free up at least \$2 billion in cash by the end of 2017. Improved collections from customers as well as stronger inventory management resulted in a solid working capital reduction in 2015. Further measures are being taken to drive improvements through the entire value chain, from product design through manufacturing and logistics as well as reducing unbilled receivables in large projects.

### **Business-led collaboration**

We continue to drive our transformation, which is aimed at improving customer focus and increasing agility to support the achievement of our 2015-2020 targets. Our streamlined organization, with a realigned divisional structure, commenced in January 2016. In order to drive sales productivity and collaboration across the group, Salesforce.com was rolled out further as a common sales platform and is now operational in 30 countries. The Group Account Management team has a focused customer approach and initial pilots show proof of success.

## **Updated 2015-2020 financial targets**

In September 2015, we aligned our 2015-2020 revenue growth target with reduced macroeconomic expectations while keeping our ambition relative to the market. The average annual revenue growth rate target, on a comparable basis, over the period from 2015 to 2020, is now 3-6 percent (previously 4-7 percent). The driving factors for this change include the expected continuation of lower oil prices, signs of slowing industrial production growth and forecasted emerging market growth below the levels previously projected in 2014. All other targets which took effect on January 1, 2015, remain unchanged: We expect to grow operational earnings per share at a 10-15 percent compound annual growth rate and deliver attractive rates of cash return on invested capital in the mid-teens over the period from 2015 to 2020. Over the same period, we plan to steadily increase our profitability, measured by Operational EBITA, within a range of 11-16 percent while targeting an average free cash flow conversion rate above 90 percent.

## Targeted capital allocation

We maintain our capital allocation priorities, focusing on i) funding organic growth, research and development and capital expenditure at attractive rates of cash return on invested capital (CROI), ii) paying a steadily rising sustainable dividend over time, iii) investing in value-creating acquisitions and iv) returning additional cash to shareholders.

In 2015, we returned \$3.2 billion to shareholders in the form of dividend payments and share repurchases, in line with the Next Level strategy to accelerate sustainable value creation. This included \$1.7 billion in dividends in the form of tax-efficient distributions out of ABB Ltd's capital contribution reserves and by way of a nominal value reduction. We are continuing our previously announced two-year \$4-billion share buyback program which is scheduled to be completed in September 2016. As of the end of 2015, we had repurchased approximately 106 million shares for a total of approximately \$2.2 billion.

## Outlook

Macroeconomic and geopolitical developments continue to signal a mixed outlook, with continued uncertainty. Some macroeconomic signals in the United States remain positive and growth in China is expected to continue, although at a slower pace than in 2015. The market remains impacted by modest growth in Europe and geopolitical tensions in various parts of the world. Current oil prices and foreign exchange translation effects are expected to continue to influence our results.

The long-term demand outlook in our three major customer sectors—utilities, industry and transport & infrastructure—remains positive. Key drivers are the big shift in the electricity value chain, industrial productivity improvements through the IoTSP and Industry 4.0, as well as rapid urbanization and the need for energy efficiency in transport & infrastructure.

We believe we are well positioned to tap these opportunities for long-term profitable growth with our strong market presence, broad geographic and business scope, technology leadership and financial strength.

# Application of critical accounting policies

## General

We prepare our Consolidated Financial Statements in accordance with U.S. GAAP and present these in U.S. dollars unless otherwise stated.

The preparation of our financial statements requires us to make assumptions and estimates 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: gross profit margins on long-term

construction-type contracts; costs of product guarantees and warranties; provisions for bad debts; recoverability of inventories, investments, fixed assets, goodwill and other intangible assets; the fair values of assets and liabilities assumed in business combinations; income tax expenses and provisions related to uncertain tax positions; pensions and other postretirement benefit assumptions; and legal and other contingencies. Where appropriate, 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.

## Revenue recognition

We generally recognize revenues for the sale of goods when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectability is reasonably assured. With regard to the sale of products, delivery is not considered to have occurred, and therefore no revenues are recognized, until the customer has taken title to the products and assumed the risks and rewards of ownership of the products specified in the purchase order or sales agreement. Generally, the transfer of title and risks and rewards of ownership are governed by the contractually-defined shipping terms. We use various International Commercial shipping terms (as promulgated by the International Chamber of Commerce) such as Ex Works (EXW), Free Carrier (FCA) and Delivered Duty Paid (DDP). Subsequent to delivery of the products, we generally have no further contractual performance obligations that would preclude revenue recognition.

Revenues under long-term construction-type contracts are generally recognized using the percentage-of-completion method of accounting. We use the cost-to-cost method to measure progress towards completion on contracts. Under this method, progress of contracts is measured by actual costs incurred in relation to management's best estimate of total estimated costs, which are reviewed and updated routinely for contracts in progress. The cumulative effect of any change in estimate is recorded in the period in which the change in estimate is determined.

The percentage-of-completion method of accounting involves the use of assumptions and projections, principally relating to future material, labor and project-related overhead costs. As a consequence, there is a risk that total contract

costs will exceed those we originally estimated and the margin will decrease or the long-term construction-type contract may become unprofitable. 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 us to incur additional costs 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' or subcontractors' failure to perform, 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 construction-type contracts for which reasonably dependable estimates cannot be made or for which inherent hazards make estimates difficult, are accounted for under the completed-contract method. 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.

For non construction-type contracts that contain customer acceptance provisions, revenue is deferred until customer acceptance occurs or we have demonstrated the customer-specified objective criteria have been met or the contractual acceptance period has lapsed.

Revenues from service transactions are recognized as services are performed. For long-term service contracts, revenues are recognized on a straight-line basis over the term of the contract or, if the performance pattern is other than straight-line, as the services are provided. Service revenues reflect revenues earned from our activities in providing services to customers primarily subsequent to the sale and delivery of a product or complete system. Such revenues consist of maintenance-type contracts, field service activities that include personnel and accompanying spare parts, and installation and commissioning of products as a stand-alone service or as part of a service contract.

Revenues for software license fees are recognized when persuasive evidence of a non-cancelable license agreement exists, delivery has occurred, the license fee is fixed or determinable, and collection is probable. In software arrangements that include rights to multiple software products and/or services, the total arrangement fee is allocated using the residual method, under which revenue is allocated to the undelivered elements based on vendor-specific objective evidence (VSOE)

of fair value of such undelivered elements and the residual amounts of revenue are allocated to the delivered elements. Elements included in multiple element arrangements may consist of software licenses, maintenance (which includes customer support services and unspecified upgrades), hosting, and consulting services. VSOE is based on the price generally charged when an element is sold separately or, in the case of an element not yet sold separately, the price established by authorized management, if it is probable that the price, once established, will not change once the element is sold separately. If VSOE does not exist for an undelivered element, the total arrangement fee will be recognized as revenue over the life of the contract or upon delivery of the undelivered element.

We offer multiple element arrangements to meet our customers' needs. These arrangements may involve the delivery of multiple products and/or performance of services (such as installation and training) and the delivery and/or performance may occur at different points in time or over different periods of time. Deliverables of such multiple element arrangements are evaluated to determine the unit of accounting and if certain criteria are met, we allocate revenues to each unit of accounting based on its relative selling price. A hierarchy of selling prices is used to determine the selling price of each specific deliverable that includes VSOE (if available), third-party evidence (if VSOE is not available), or estimated selling price if neither of the first two is available. The estimated selling price reflects our best estimate of what the selling prices of elements would be if the elements were sold on a stand-alone basis. Revenue is allocated between the elements of an arrangement consideration at the inception of the arrangement. Such arrangements generally include industry-specific performance and termination provisions, such as in the event of substantial delays or non-delivery.

Revenues are reported net of customer rebates and similar incentives. Taxes assessed by a governmental authority that are directly imposed on revenue-producing transactions between us and our customers, such as sales, use, value-added and some excise taxes, are excluded from revenues.

These revenue recognition methods require the collectability 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 actual defaults will vary in number and amount from those originally estimated. As such, the amount of revenues recognized might exceed or fall below the amount 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, economic or political 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 "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, tax (other than income tax) 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 provisions 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 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. We generally make individual assessments on contracts with risks resulting from order-specific conditions or guarantees and assessments on an overall, statistical basis for similar products sold in larger quantities. 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 legal obligations to perform environmental clean-up activities related to land and buildings as a result of the normal operations of our business. 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 obligations when it is probable that a liability for the clean-up activity has been incurred and a reasonable estimate of its fair value can be made. In some cases, we may be able to recover a portion of the costs expected to be incurred to settle these matters. An asset is recorded when it is probable that we will collect such amounts. Provisions for environmental obligations are not discounted to their present value when the timing of payments cannot be reasonably estimated.

## Pension and other postretirement benefits

As more fully described in “Note 17 Employee benefits” to our Consolidated Financial Statements, we have a number of defined benefit pension and other postretirement plans and recognize an asset for a plan’s overfunded status or a liability for a plan’s underfunded status in our Consolidated Balance Sheets. We measure such a plan’s assets and obligations that determine its funded status as of the end of the year.

Significant differences between assumptions and actual experience, or significant changes in assumptions, may materially affect the pension obligations. The effects of actual results differing from assumptions and the changing of

assumptions are included in net actuarial loss within “Accumulated other comprehensive loss”.

We recognize actuarial gains and losses gradually over time. Any cumulative unrecognized actuarial gain or loss that exceeds 10 percent of the greater of the present value of the projected benefit obligation (PBO) and the fair value of plan assets is recognized in earnings over the expected average remaining working lives of the employees participating in the plan, or the expected average remaining lifetime of the inactive plan participants if the plan is comprised of all or almost all inactive participants. Otherwise, the actuarial gain or loss is not recognized in the Consolidated Income Statements.

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 rates 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 PBO and in pension costs. Conversely, an increase in the discount rates results in a decrease in the PBO and in pension costs. The mortality assumptions are reviewed annually by management. Decreases in mortality rates result in an increase in the PBO and in pension costs. Conversely, an increase in mortality rates results in a decrease in the PBO 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 defined benefit pension plans by \$383 million, while a 0.25-percentage point increase in the discount rate would have decreased the PBO related to our defined benefit pension plans by \$360 million.

The expected return on plan assets is reviewed regularly and considered for adjustment annually based upon the target 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. Holding all other assumptions constant, an increase or decrease of 0.25 percentage points in the expected long-term rate of asset return would have decreased or increased, respectively, the net periodic benefit cost in 2015 by \$26 million.

The funded status, which can increase or decrease based on the performance of the financial markets or changes in our assumptions, does not represent a mandatory short-term cash obligation. Instead, the funded status of a defined benefit pension plan is the difference between the PBO and the fair value of the plan assets. At December 31, 2015, our defined benefit pension plans were \$1,481 million underfunded compared to an underfunding of \$1,890 million at December 31, 2014. Our other postretirement plans were underfunded by \$178 million and \$245 million at December 31, 2015 and 2014, 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 7.68 percent per annum for 2016, gradually declining to 5 percent per annum by 2028 and to remain at that level thereafter.

## Income taxes

In preparing our Consolidated Financial Statements, we are required to estimate income taxes in each of the jurisdictions in which we operate. Tax expense from continuing operations is reconciled from the weighted-average global tax rate (rather than from the Swiss domestic statutory tax rate) as the parent company of the ABB Group, ABB Ltd, is domiciled in Switzerland. Income which has been generated in jurisdictions outside of Switzerland (hereafter “foreign jurisdictions”) and has already been subject to corporate income tax in those foreign jurisdictions is, to a large extent, tax exempt in Switzerland. Therefore, generally no or only limited Swiss income tax has to be provided for on the repatriated earnings of foreign subsidiaries. There is no requirement in Switzerland for a parent company of a group to file a tax return of the group determining domestic and foreign pre-tax income and as our consolidated income from continuing operations is predominantly earned outside of Switzerland, corporate income tax in foreign jurisdictions largely determines our global weighted-average tax rate.

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 tax assets and liabilities 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.

Certain countries levy withholding taxes, dividend distribution taxes or additional corporate income taxes (hereafter “withholding taxes”) on dividend distributions. Such taxes cannot always be fully reclaimed by the shareholder, although they have to be declared and withheld by the subsidiary. Switzerland has concluded double taxation treaties with many countries in which we operate. These treaties either eliminate or reduce such withholding taxes on dividend distributions. It is our policy to distribute retained earnings of subsidiaries, insofar as such earnings are not permanently reinvested or no other reasons exist that would prevent the subsidiary from distributing them. No deferred tax liability is set up, if retained earnings are considered as permanently reinvested, and used for financing current operations as well as business growth through working capital and capital expenditure in those countries.

We operate in numerous tax jurisdictions and, as a result, are regularly subject to audit by tax authorities. We provide for tax contingencies whenever it is deemed more likely than not that a tax asset has been impaired or a tax liability has been

incurred for events such as tax claims or changes in tax laws. Contingency provisions are recorded based on the technical merits of our filing position, considering the applicable tax laws and OECD guidelines and are based on our evaluations of the facts and circumstances as of the end of each reporting period. Changes in the facts and circumstances could result in a material change to the tax accruals. 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.

An estimated loss from a tax contingency must be accrued as a charge to income if it is more likely than not that a tax asset has been impaired or a tax liability has been incurred and the amount of the loss can be reasonably estimated. We apply a two-step approach to recognize and measure uncertainty in income taxes. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50 percent likely of being realized upon ultimate settlement. 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, or more frequently if events or circumstances indicate the carrying value may not be recoverable. We use either a qualitative or quantitative assessment method for each reporting unit. The qualitative assessment involves determining, based on an evaluation of qualitative factors, whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, based on this qualitative assessment, it is determined to be more likely than not that the reporting unit’s fair value is less than its carrying value, the two-step quantitative impairment test is performed. If we elect not to perform the qualitative assessment for a reporting unit, then we perform the two-step impairment test.

Our reporting units are the same as our business divisions for Discrete Automation and Motion, Low Voltage Products, Power Products and Power Systems. For the Process Automation division, we determined the reporting units to be one level below the division, as the different products produced or services provided by this division do not share sufficiently similar economic characteristics to permit testing of goodwill on a total division level.

When performing the qualitative assessment, we first determine, for a reporting unit, factors which would affect the fair value of the reporting unit including: (i) macroeconomic conditions related to the business, (ii) industry and market trends, and (iii) the overall future financial performance and future opportunities in the markets in which the business operates. We then consider how these factors would impact the most recent quantitative analysis of the reporting unit’s fair value. Key assumptions in determining the value of the reporting unit include the projected level of business operations, the weighted-average cost of capital, the income tax rate and the terminal growth rate.

If, after performing the qualitative assessment, we conclude that events or circumstances have occurred which would indicate that it is more likely than not that the fair value of the reporting unit is less than its carrying value, or if we have elected not to perform a qualitative assessment, the two-step quantitative impairment test is performed. In the first step, we calculate the fair value of the reporting unit (using an income approach whereby the fair value is calculated based on the present value of future cash flows applying a discount rate that represents our weighted-average cost of capital) and compare it to the reporting unit's carrying value. Where 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. However, if the carrying value of the net assets assigned to the reporting unit is equal to or exceeds the reporting unit's fair value, we would perform the second step of the impairment test. In the second step, we would 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 were to exceed its implied fair value, then we would record an impairment loss equal to the difference. Any goodwill impairment losses would be recorded as a separate line item in the income statement in continuing operations, unless related to a discontinued operation, in which case the losses would be recorded in "Income (loss) from discontinued operations, net of tax".

In 2015, we performed a qualitative assessment and determined that it was not more likely than not that the fair value for each of our reporting units was below the carrying value. As a result, we concluded that it was not necessary to perform the two-step quantitative impairment test.

In 2014, we performed the two-step quantitative impairment test for all of our reporting units to reflect new assumptions and forecasts resulting from our newly-developed strategic plan for the period 2015 to 2020. The quantitative test concluded that the estimated fair values for each of our reporting units exceeded their respective carrying values by at least 60 percent and as no reporting unit had a zero or negative carrying value, we concluded that none of the reporting units was "at risk" of failing the goodwill impairment test. Consequently, the second step of the impairment test was not performed.

The projected future cash flows used in the 2014 fair value calculation were based on approved business plans for the reporting units which covered a period of six years plus a calculated terminal value. The projected future cash flows required significant judgments and estimates involving variables such as future sales volumes, sales prices, awards of large orders, production and other operating costs, capital expenditures, net working capital requirements and other economic factors. The after-tax weighted average cost of capital of 9 percent, was based on variables such as the risk free rate derived from the yield of 10-year U.S. treasury bonds, as well as an ABB-specific risk premium. The terminal value growth rate was assumed to be 1 percent. The mid-term tax rate used in the test was 27 percent. We based our fair value estimates on assumptions we believed to be reasonable, but which were inherently uncertain. Consequently, actual future results may differ from those estimates.

We assessed the reasonableness of the fair value calculations of our reporting units by reconciling the sum of the fair

values for all our reporting units to our total market capitalization. The assumptions used in the fair value calculation were challenged each year (through the use of sensitivity analysis) to determine the impact on the fair value of the reporting units. Our sensitivity analysis in 2014 showed that, holding all other assumptions constant, a 1-percentage point increase in the discount rate would have reduced the calculated fair value by approximately 11.6 percent, while a 1-percentage point decrease in the terminal value growth rate would have reduced the calculated fair value by approximately 7.3 percent.

Intangible assets are reviewed for recoverability upon the occurrence of certain triggering events (such as a decision to divest a business or projected losses of an entity) or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We record impairment charges in "Other income (expense), net", in our Consolidated Income Statements, unless they relate to a discontinued operation, in which case the charges are 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 focuses on developing and commercializing the technologies of our businesses that are of strategic importance to our future growth. In 2015, 2014 and 2013, we invested \$1,406 million, \$1,499 million and \$1,470 million, respectively, or approximately 4.0 percent, 3.8 percent and 3.5 percent, respectively, of our annual consolidated revenues on research and development activities. We also had expenditures of \$271 million, \$310 million and \$274 million, respectively, or approximately 0.8 percent, 0.8 percent and 0.7 percent, respectively, of our annual consolidated revenues in 2015, 2014 and 2013, 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 platforms for

technology applications in our automation and power businesses in our research and development laboratories, 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: (i) to monitor and develop emerging technologies and create an innovative, sustainable technology base for ABB, (ii) to develop technology platforms that enable efficient product design for our power and automation customers, and (iii) to create the next generation of power and automation products and systems that we believe will be the drivers of profitable growth.

Universities are 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 numerous university collaborations in the United States, Europe and Asia, including long-term, strategic relationships with the Carnegie Mellon University, Massachusetts Institute of Technology, North Carolina State University, ETH Zurich, EPFL Lausanne, University of Zurich, Chalmers Technical University Gothenburg, Royal Institute of Technology (KTH) Stockholm, Cambridge University, Imperial College London and Huazhong University of Science and Technology (HUST). 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.

# Acquisitions and divestments

## Acquisitions

During 2015, 2014 and 2013, ABB paid \$37 million, \$58 million and \$897 million to purchase three, six and seven businesses, respectively. The amounts exclude changes in cost- and equity-accounted companies.

There were no significant acquisitions in 2015, 2014 or 2013; the largest acquisition during this three-year period was Power-One Inc. (Power-One), acquired in July 2013.

## Divestments

During 2014, ABB divested several businesses which were primarily its Full Service business, the Meyer Steel Structures business of Thomas & Betts, the heating, ventilation and air conditioning (HVAC) business of Thomas & Betts and the Power Solutions business of Power-One. Total cash proceeds from all business divestments during 2014 amounted to \$1,090 million, net of transaction costs and cash disposed.

There were no significant divestments in 2015 and 2013.

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

## 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: (i) our profitability, (ii) the comparability of our results between periods, and (iii) the reported 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 relevant monthly average currency exchange rate.

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. As foreign exchange rates impact 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 stockholders' equity.

While we operate globally and report our financial results in USD, exchange rate movements between the USD and both the EUR and the CHF are of particular importance to us due

to (i) the location of our significant operations and (ii) our corporate headquarters being in Switzerland.

The exchange rates between the USD and the EUR and the USD and the CHF at December 31, 2015, 2014 and 2013, were as follows:

Exchange rates into \$	2015	2014	2013
EUR 1.00	1.09	1.22	1.38
CHF 1.00	1.01	1.01	1.12

The average exchange rates between the USD and the EUR and the USD and the CHF for the years ended December 31, 2015, 2014 and 2013, were as follows:

Exchange rates into \$	2015	2014	2013
EUR 1.00	1.11	1.33	1.33
CHF 1.00	1.04	1.09	1.08

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 2015, approximately 79 percent of our consolidated revenues were reported in currencies other than the USD. The following percentages of consolidated revenues were reported in the following currencies:

- Euro, approximately 19 percent,
- Chinese renminbi, approximately 12 percent, and
- Swedish krona, approximately 5 percent.

In 2015, approximately 78 percent of our cost of sales and selling, general and administrative expenses were reported in currencies other than the USD. The following percentages of consolidated cost of sales and selling, general and administrative expenses were reported in the following currencies:

- Euro, approximately 20 percent, and
- Chinese renminbi, approximately 11 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 are located. 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.

The discussion of our results of operations below provides certain information with respect to orders, revenues, income from operations 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, provide a more complete understanding of factors and trends affecting the business. As 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.

## Transactions with affiliates and associates

In the normal course of our business, we purchase products from, sell products to and engage in other transactions with entities in which we hold an equity interest. The amounts involved in these transactions are not material to ABB Ltd. Also, in the normal course of our business, we engage in transactions with businesses that we have divested. We believe that the terms of the transactions we conduct with these companies are negotiated on an arm’s length basis.

## Orders

Our policy is to book and report an order when a binding contractual agreement has been concluded with a 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 17 percent of the value of total orders we recorded in 2015 were “large orders”, which we define as orders from third parties involving a value of at least \$15 million for products or services. Approximately 54 percent of the total value of large orders in 2015 were recorded by our Power Systems division and approximately 23 percent in our Process Automation division. The other divisions accounted for the remainder of the total large orders recorded during 2015. The remaining portion of total orders recorded in 2015 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. 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. Consequently, 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.

## Performance measures

Effective January 1, 2015, we evaluate the performance of our divisions based on orders received, revenues and Operational EBITA.

Operational EBITA represents income from operations excluding amortization expense on intangibles arising upon acquisitions (acquisition-related amortization), restructuring and restructuring-related expenses, gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items, as well as foreign exchange (FX)/commodity timing differences in income from operations consisting of: (i) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

See “Note 23 Operating segment and geographic data” to our Consolidated Financial Statements for a reconciliation of the total consolidated Operational EBITA to income from continuing operations before taxes.

# Analysis of results of operations

Our consolidated results from operations were as follows:

<b>Income statement data</b>			
(\$ in millions, except per share data in \$)	<b>2015</b>	<b>2014</b>	<b>2013</b>
Orders	36,429	41,515	38,896
Order backlog at December 31,	24,121	24,900	26,046
Revenues	35,481	39,830	41,848
Cost of sales	(25,347)	(28,615)	(29,856)
<b>Gross profit</b>	<b>10,134</b>	<b>11,215</b>	<b>11,992</b>
Selling, general and administrative expenses	(5,574)	(6,067)	(6,094)
Non-order related research and development expenses	(1,406)	(1,499)	(1,470)
Other income (expense), net	(105)	529	(41)
<b>Income from operations</b>	<b>3,049</b>	<b>4,178</b>	<b>4,387</b>
Net interest and other finance expense	(209)	(282)	(321)
Provision for taxes	(788)	(1,202)	(1,122)
<b>Income from continuing operations, net of tax</b>	<b>2,052</b>	<b>2,694</b>	<b>2,944</b>
Income (loss) from discontinued operations, net of tax	3	24	(37)
<b>Net income</b>	<b>2,055</b>	<b>2,718</b>	<b>2,907</b>
Net income attributable to noncontrolling interests	(122)	(124)	(120)
<b>Net income attributable to ABB</b>	<b>1,933</b>	<b>2,594</b>	<b>2,787</b>
<b>Amounts attributable to ABB shareholders:</b>			
Income from continuing operations, net of tax	1,930	2,570	2,824
Net income	1,933	2,594	2,787
<b>Basic earnings per share attributable to ABB shareholders:</b>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Net income	0.87	1.13	1.21
<b>Diluted earnings per share attributable to ABB shareholders:</b>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Net income	0.87	1.13	1.21

A more detailed discussion of the orders, revenues, Operational EBITA and income from operations for our divisions follows in the sections of “Divisional analysis” below entitled “Discrete Automation and Motion”, “Low Voltage Products”, “Process Automation”, “Power Products”, “Power Systems” and “Corporate and Other”. Orders and revenues of our divisions include interdivisional transactions which are eliminated in the “Corporate and Other” line in the tables below.

## Orders

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Discrete Automation and Motion	9,222	10,559	9,771	(13)%	8%
Low Voltage Products	6,581	7,550	7,696	(13)%	(2)%
Process Automation	6,464	8,577	8,000	(25)%	7%
Power Products	10,033	10,764	10,459	(7)%	3%
Power Systems	6,800	6,871	5,949	(1)%	15%
<b>Operating divisions</b>	<b>39,100</b>	<b>44,321</b>	<b>41,875</b>	<b>(12)%</b>	<b>6%</b>
Corporate and Other <sup>(1)</sup>	(2,671)	(2,806)	(2,979)	n.a.	n.a.
<b>Total</b>	<b>36,429</b>	<b>41,515</b>	<b>38,896</b>	<b>(12)%</b>	<b>7%</b>

<sup>(1)</sup> Includes interdivisional eliminations

In 2015, total orders declined 12 percent (2 percent in local currencies) and decreased in all divisions. The decline in reported orders was driven both by lower base orders and lower large orders. The order development reflected ongoing macro uncertainties and challenges in many markets as well as negative impacts from foreign exchange rate movements.

In 2015, orders in the Discrete Automation and Motion division declined 13 percent (5 percent in local currencies) on lower orders in all businesses, except Robotics where orders increased in local currencies. Orders decreased 13 percent in the Low Voltage Products division (3 percent in local currencies) and were impacted by lower orders in most businesses and by the divestments in 2014 of the HVAC and Steel Structures businesses. Orders in the Process Automation division declined 25 percent (14 percent in local currencies) mainly due to lower capital and operating expenditures in the oil and gas sectors compared to the previous year and due to the impact of the divestment of the Full Service business at the end of 2014. Orders declined 7 percent (increased 2 percent in local currencies) in the Power Products division on selective investments in large transmission projects. In the Power Systems division, orders declined 1 percent (increased 13 percent in local currencies). The increase in local currencies was driven primarily by the receipt of several large orders in the Grid Systems and Power Generation businesses.

During 2015, base orders declined 14 percent (5 percent in local currencies) reflecting the global economic conditions which remained mixed across our key markets. Large orders decreased 5 percent (increased 10 percent in local currencies) but were higher in local currencies than the strong large order intake in 2014. Large orders increased in the Power Products and Power Systems divisions where several large projects were awarded in 2015.

In 2014, total order volume increased 7 percent (9 percent in local currencies) and increased across all divisions except Low Voltage Products. Orders increased primarily due to higher large orders while base orders also increased. In the automation divisions, orders were supported by customer investments to improve operational efficiency and an increase in the demand for services. In the power divisions, the key demand drivers such as capacity expansion in emerging markets, upgrading of aging infrastructure in mature markets and the integration of renewable energy supplies into power grids, remained intact.

In 2014, orders in the Discrete Automation and Motion division grew 8 percent (10 percent in local currencies) on higher orders in all businesses and supported by the impact of

including Power-One for the full year in 2014. Orders decreased 2 percent in the Low Voltage Products division (flat in local currencies) as the impacts of divesting the HVAC and Steel Structures businesses offset the order increases which were realized in most of the division's other businesses. Orders in the Process Automation division increased 7 percent (10 percent in local currencies) on significantly higher large orders in the marine sector compared to the previous year. Orders increased 3 percent (5 percent in local currencies) in the Power Products division, supported by the industry sector and continued selective investments in large transmission projects. In the Power Systems division, orders grew 15 percent (20 percent in local currencies), driven primarily by the receipt of several large orders.

During 2014, base orders grew 2 percent (4 percent in local currencies) reflecting the global economic conditions which showed positive trends but remained mixed in certain markets. Following a weak large order intake in 2013, large orders increased 45 percent (50 percent in local currencies) in 2014. Successful sales efforts resulted in orders from the 2013 tender backlog successfully turning into orders in 2014. This allowed large orders to grow significantly, particularly in the Process Automation and Power Systems divisions.

We determine the geographic distribution of our orders based on the location of the ultimate destination of the products' end use, if known, or the location of the customer. The geographic distribution of our consolidated orders was as follows:

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Europe	12,568	14,319	13,393	(12)%	7%
The Americas	10,505	11,966	11,373	(12)%	5%
Asia, Middle East and Africa	13,356	15,230	14,130	(12)%	8%
<b>Total</b>	<b>36,429</b>	<b>41,515</b>	<b>38,896</b>	<b>(12)%</b>	<b>7%</b>

Orders in 2015 declined in all regions on lower orders in all divisions. Orders in Europe decreased 12 percent (increased 5 percent in local currencies). Orders in Europe were higher in local currencies due to the receipt of large orders for HVDC interconnections. In local currencies, orders were lower in the United Kingdom, Sweden, Finland, Switzerland, France, Spain and Russia, offset by higher orders in Germany, Norway, Italy, Turkey and the Netherlands. Orders declined 12 percent (6 percent in local currencies) in the Americas on lower base and large orders. In local currencies, orders decreased in the United States, Canada and Brazil but were higher in Mexico, Chile and Argentina. In AMEA, orders decreased 12 percent (7 percent in local currencies) on lower base and large orders. In local currencies, orders declined in China, Saudi Arabia, South Korea, Australia and Japan while orders were higher in India, the United Arab Emirates, South Africa and Qatar.

Orders in 2014 grew in all regions on higher orders in both power and automation. Orders in Europe increased 7 percent (9 percent in local currencies) driven by increases in large orders. Orders were higher in the United Kingdom, Sweden, Finland, France, Switzerland, Spain and the Netherlands, offsetting lower orders in Germany, Italy and Norway. Orders increased 5 percent (9 percent in local currencies) in the Americas on higher base and large orders in the United States, Canada, Brazil and Argentina. In AMEA, orders grew 8 percent

(10 percent in local currencies) on higher orders in China, South Korea, India, Japan and Saudi Arabia while orders were lower in Australia, the United Arab Emirates and South Africa.

## Order backlog

(\$ in millions)	December 31,			% Change	
	2015	2014	2013	2015	2014
Discrete Automation and Motion	4,232	4,385	4,351	(3)%	1%
Low Voltage Products	857	891	1,057	(4)%	(16)%
Process Automation	5,203	5,661	5,772	(8)%	(2)%
Power Products	7,717	7,791	7,946	(1)%	(2)%
Power Systems	8,218	8,246	9,435	—	(13)%
<b>Operating divisions</b>	<b>26,227</b>	<b>26,974</b>	<b>28,561</b>	<b>(3)%</b>	<b>(6)%</b>
Corporate and Other <sup>(1)</sup>	(2,106)	(2,074)	(2,515)	n.a.	n.a.
<b>Total</b>	<b>24,121</b>	<b>24,900</b>	<b>26,046</b>	<b>(3)%</b>	<b>(4)%</b>

<sup>(1)</sup> Includes interdivisional eliminations

In 2015, consolidated order backlog decreased 3 percent (increased 5 percent in local currencies). Order backlog in all divisions reflected the effects of changes in foreign currency rates as the U.S. dollar strengthened against all major currencies during 2015. In local currencies, order backlog increased in all divisions. In the Discrete Automation and Motion division, the increase was driven by the Robotics and Power Conversion businesses. The increase in the Low Voltage Products division was driven by increases in the Breakers and Switches and Low Voltage Systems businesses. In the Process Automation division, orders were lower but order backlog increased due to the receipt of higher larger orders near the end of 2015. In the Power Products division, order backlog increased across all businesses while in the Power Systems division, the increase resulted primarily from higher large orders received during the year.

In 2014, consolidated order backlog decreased 4 percent (increased 5 percent in local currencies). Order backlog in all divisions reflected the effects of significant foreign currency changes as the U.S. dollar strengthened during 2014 against substantially all currencies. In the Discrete Automation and Motion, Process Automation and Power Products divisions, order backlog increased in local currencies as a result of growth in global industrial demand. Order backlog in the Process Automation division also increased due to large orders received in the marine and oil and gas sectors. Order backlog in the Low Voltage Products division decreased in local currencies due to divestments during 2014. Order backlog in the Power Systems division decreased 4 percent in local currencies as the impacts of higher large orders during 2014 were more than offset by the impacts of the run off of the order backlog in the businesses affected by the Power Systems repositioning announced in 2012 and the exit from the solar EPC business announced in 2014.

## Revenues

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Discrete Automation and Motion	9,127	10,142	9,915	(10)%	2%
Low Voltage Products	6,547	7,532	7,729	(13)%	(3)%
Process Automation	6,374	7,948	8,497	(20)%	(6)%
Power Products	9,550	10,333	11,032	(8)%	(6)%
Power Systems	6,342	7,020	8,375	(10)%	(16)%
<b>Operating divisions</b>	<b>37,940</b>	<b>42,975</b>	<b>45,548</b>	<b>(12)%</b>	<b>(6)%</b>
Corporate and Other <sup>(1)</sup>	(2,459)	(3,145)	(3,700)	n.a.	n.a.
<b>Total</b>	<b>35,481</b>	<b>39,830</b>	<b>41,848</b>	<b>(11)%</b>	<b>(5)%</b>

<sup>(1)</sup> Includes interdivisional eliminations

Revenues in 2015 decreased 11 percent (1 percent in local currencies) and declined in all divisions. The decrease was due primarily to the impacts of the lower orders and lower opening order backlog in the Power Systems, Power Products and Process Automation divisions compared to the beginning of 2014. In addition, the decrease was also due to the impacts of divestments made in 2014 and negative impacts from foreign exchange rate movements.

On a divisional basis, revenues declined 10 percent (2 percent in local currencies) in the Discrete Automation and Motion division on lower order intake in the short-cycle businesses such as low voltage motors and drives offset partly by local currency revenue increases in Robotics and Power Conversion. In the Low Voltage Products division, revenues decreased 13 percent (3 percent in local currencies) and were lower in most businesses. Revenues in the Low Voltage Products division were primarily impacted by the divestments which occurred in 2014, which reduced revenues by 3 percent. Revenues in the Process Automation division decreased 20 percent (9 percent in local currencies) and were lower in local currencies in most businesses. Revenues were impacted primarily by decreases in the systems businesses such as Marine and Ports, and Oil and Gas but also by the divestment of the Full Service business at the end of 2014. Revenues in the Power Products division decreased 8 percent (increased 2 percent in local currencies). In local currencies revenues grew, driven by service revenues. In the Power Systems division, revenues decreased 10 percent (increased 2 percent in local currencies); the local currency increase was driven by steady execution of the order backlog.

Revenues in 2014 decreased 5 percent (2 percent in local currencies) due primarily to the impacts of the lower opening order backlog in the Power Systems and Process Automation divisions compared to the beginning of 2013 and the impacts of business divestments.

On a divisional basis, revenues grew 2 percent (4 percent in local currencies) in the Discrete Automation and Motion division, supported by growth in the Robotics business and also due to the impact of including Power-One for the full year in 2014. In the Low Voltage Products division, revenues decreased 3 percent (flat in local currencies) as steady to higher revenues in most businesses were offset by decreases in revenues resulting from divestments. Revenues in the Process Automation division decreased 6 percent (4 percent in local currencies) due to the effects of the lower opening order backlog, primarily in the systems businesses and were also impacted by the exit from a large service contract in the fourth quarter of 2013.

Revenues in the Power Products division decreased 6 percent (4 percent in local currencies) mainly reflecting the low opening order backlog. In the Power Systems division, revenues decreased 16 percent (13 percent in local currencies) due to the lower opening order backlog in all businesses.

We determine the geographic distribution of our revenues based on the location of the ultimate destination of the products' end use, if known, or the location of the customer. The geographic distribution of our consolidated revenues was as follows:

(\$ in millions)				% Change	
	2015	2014	2013	2015	2014
Europe	11,602	13,745	14,450	(16)%	(5)%
The Americas	10,554	11,490	12,133	(8)%	(5)%
Asia, Middle East and Africa	13,325	14,595	15,265	(9)%	(4)%
<b>Total</b>	<b>35,481</b>	<b>39,830</b>	<b>41,848</b>	<b>(11)%</b>	<b>(5)%</b>

In 2015, revenues declined in all regions. In Europe, revenues decreased 16 percent (increased 1 percent in local currencies). In local currencies, revenues declined in Norway, France, Switzerland, Spain and Russia, were flat in Italy, while revenues increased in Germany, the United Kingdom, Sweden and Finland. Revenues from the Americas declined 8 percent (2 percent in local currencies). In local currencies, revenues decreased in the United States, Canada and Brazil but were higher in Mexico, Chile and Peru. In AMEA, revenues decreased 9 percent (2 percent in local currencies). In local currencies, revenues declined in China, South Korea, Australia and Singapore while revenues increased in Saudi Arabia, India, the United Arab Emirates, Japan and South Africa.

In 2014, revenues declined in all regions. In Europe, revenues decreased 5 percent (3 percent in local currencies) as revenue increases in Norway, the United Kingdom, France, Switzerland and Spain were more than offset by revenue declines in Germany, Italy, Sweden, Finland and the Netherlands. Revenues from the Americas declined 5 percent (2 percent in local currencies). Revenues were steady in the United States and included the impacts of including Power-One for a full year in 2014 while revenues declined in Canada and Brazil. Revenues from AMEA decreased 4 percent (2 percent in local currencies) as revenues were flat in China while decreases were realized in India, South Korea, Australia, Saudi Arabia and South Africa. Revenues increased in the United Arab Emirates.

## Cost of sales

Cost of sales consists primarily of labor, raw materials and component costs but also includes indirect production costs, expenses for warranties, contract and project charges, as well as order-related development expenses incurred in connection with projects for which corresponding revenues have been recognized.

In 2015, cost of sales decreased 11 percent (2 percent in local currencies) to \$25,347 million. As a percentage of revenues, cost of sales decreased from 71.8 percent in 2014 to 71.4 percent in 2015. Cost of sales as a percentage of revenues decreased as benefits from higher cost savings and benefits from ongoing measures taken in the Power Systems

division's 'step change' program more than offset the impact from price erosion in the market.

In 2014, cost of sales decreased 4 percent (1 percent in local currencies) to \$28,615 million. As a percentage of revenues, cost of sales increased from 71.3 percent in 2013 to 71.8 percent in 2014. Cost of sales as a percentage of revenues decreased in most divisions as benefits from cost savings more than offset the impacts from price pressures in certain markets. However, the consolidated cost of sales as a percentage of revenues was higher due to high project-related costs in the Power Systems division and the dilutive impact on margins from the Power-One acquisition in the Discrete Automation and Motion division.

## Selling, general and administrative expenses

The components of selling, general and administrative expenses were as follows:

(\$ in millions)	2015	2014	2013
Selling expenses	3,729	4,054	4,071
<i>Selling expenses as a percentage of orders received</i>	10.2%	9.8%	10.5%
General and administrative expenses	1,845	2,013	2,023
<i>General and administrative expenses as a percentage of revenues</i>	5.2%	5.1%	4.8%
<b>Total selling, general and administrative expenses</b>	<b>5,574</b>	<b>6,067</b>	<b>6,094</b>
<i>Total selling, general and administrative expenses as a percentage of revenues</i>	15.7%	15.2%	14.6%
<i>Total selling, general and administrative expenses as a percentage of the average of orders received and revenues</i>	15.5%	14.9%	15.1%

In 2015, general and administrative expenses decreased 8 percent (increased 4 percent in local currencies) compared to 2014. As a percentage of revenues, general and administrative expenses increased from 5.1 percent to 5.2 percent. General and administrative expenses were impacted by approximately \$121 million from costs for the White Collar Productivity program announced during the year.

In 2014, general and administrative expenses remained stable compared to 2013 (increased 2 percent in local currencies). As a percentage of revenues, general and administrative expenses increased from 4.8 percent to 5.1 percent mainly due to the impact of lower revenues.

In 2015, selling expenses have decreased 8 percent (increased 3 percent in local currencies) compared to 2014. Selling expenses as a percentage of orders have increased from 9.8 percent to 10.2 percent. Selling expenses were impacted by approximately \$89 million from costs for the White Collar Productivity program.

In 2014, selling expenses remained stable compared to 2013 (increased 2 percent in local currencies). Selling expenses as a percentage of orders received decreased from 10.5 percent to 9.8 percent mainly due to the impact of higher orders received.

In 2015, selling, general and administrative expenses decreased 8 percent (increased 3 percent in local currencies) compared to 2014 and as a percentage of the average orders and revenues, selling, general and administrative expenses increased from 14.9 percent to 15.5 percent on both lower revenues and orders and higher costs.

In 2014, selling, general and administrative expenses remained stable compared to 2013 (increased 2 percent in local currencies) and as a percentage of the average of orders and revenues, selling, general and administrative expenses decreased from 15.1 percent to 14.9 percent as the impact of lower revenues was more than offset by the impact of higher orders.

## Non-order related research and development expenses

In 2015, non-order related research and development expenses decreased 6 percent (increased 6 percent in local currencies) compared to 2014. In 2014, non-order related research and development expenses increased 2 percent (4 percent in local currencies) compared to 2013.

Non-order related research and development expenses as a percentage of revenues also increased in 2015 by 0.2 percent to 4.0 percent, after increasing to 3.8 percent in 2014 from 3.5 percent in 2013.

## Other income (expense), net

(\$ in millions)	2015	2014	2013
Restructuring and restructuring-related expenses <sup>(1)</sup>	(67)	(37)	(45)
Net gain from sale of property, plant and equipment	26	17	18
Asset impairments	(33)	(34)	(29)
Net gain (loss) from sale of businesses	(20)	543	(16)
Income from equity-accounted companies and other income (expense)	(11)	40	31
<b>Total</b>	<b>(105)</b>	<b>529</b>	<b>(41)</b>

<sup>(1)</sup> Excluding asset impairments

“Other income (expense), net” primarily includes certain restructuring and restructuring-related expenses, gains and losses from sale of businesses and sale of property, plant and equipment, recognized asset impairments, as well as our share of income or loss from equity-accounted companies.

In 2015, “Other income (expense), net” was an expense of \$105 million. In 2014, “Other income (expense), net” was an income of \$529 million, compared with an expense of \$41 million in 2013, mostly due to the impact of the net gains recorded in 2014 from the sale of HVAC, Power Solutions, Steel Structures and Full Service businesses.

## Income from operations

(\$ in millions)	2015	2014	2013	% Change <sup>(1)</sup>	
				2015	2014
Discrete Automation and Motion	991	1,422	1,458	(30)%	(2)%
Low Voltage Products	909	1,475	1,092	(38)%	35%
Process Automation	593	1,003	990	(41)%	1%
Power Products	1,051	1,204	1,331	(13)%	(10)%
Power Systems	110	(360)	171	n.a.	n.a.
<b>Operating divisions</b>	<b>3,654</b>	<b>4,744</b>	<b>5,042</b>	<b>(23)%</b>	<b>(6)%</b>
Corporate and Other	(610)	(569)	(650)	n.a.	n.a.
Intersegment elimination	5	3	(5)	n.a.	n.a.
<b>Total</b>	<b>3,049</b>	<b>4,178</b>	<b>4,387</b>	<b>(27)%</b>	<b>(5)%</b>

<sup>(1)</sup> Certain percentages are stated as n.a. as the computed change would not be meaningful.

In 2015 and 2014, changes in income from operations were a result of the factors discussed above and in the divisional analysis below.

## 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 transaction costs associated with long-term debt and committed credit facilities, commitment fees on credit facilities, foreign exchange gains and losses on financial items and gains and losses on marketable securities.

(\$ in millions)	2015	2014	2013
Interest and dividend income	77	80	69
Interest and other finance expense	(286)	(362)	(390)
<b>Net interest and other finance expense</b>	<b>(209)</b>	<b>(282)</b>	<b>(321)</b>

In 2015, “Interest and other finance expense” decreased compared to 2014, mainly due to a reduction in foreign exchange losses and lower interest expense on debt. Interest expense on debt was lower due to lower effective interest rates and lower foreign currency exchange rates. In addition, interest charges for uncertain tax positions were lower in 2015 compared to 2014.

In 2014, “Interest and other finance expense” decreased compared to 2013, mainly resulting from the maturity of a bond in June 2013 and the reduction in interest expense resulting from an additional interest rate swap entered into during 2014. See “Note 12 Debt” to our Consolidated Financial Statements.

## Provision for taxes

(\$ in millions)	2015	2014	2013
Income from continuing operations before taxes	2,840	3,896	4,066
Provision for taxes	(788)	(1,202)	(1,122)
Effective tax rate for the year	27.7%	30.9%	27.6%

In 2015, the effective tax rate of 27.7% included a net increase in valuation allowance of deferred taxes of \$57 million, as we determined it was not more likely than not that such deferred tax assets would be realized. In addition, we recorded a benefit of \$50 million relating to tax credits arising from research and development activities and a charge of \$74 million relating to the interpretation of tax law and double tax treaty agreements by competent tax authorities.

In 2014, the effective tax rate of 30.9% included the effects of taxes on net gains on sale of businesses. Included in the provision for taxes of \$1,202 million were taxes of \$279 million relating to \$543 million of gains on sale of businesses. These divestment transactions increased the effective tax rate as gains were realized primarily in higher-tax jurisdictions and the goodwill allocated to the divested businesses was not deductible for tax purposes. Excluding the effects of these divestment transactions, the effective tax rate for 2014 would have been 27.5%.

The provision for taxes in 2014 included a net increase of valuation allowance on deferred taxes of \$52 million, as we determined it was not more likely than not that such deferred tax assets would be realized. This amount included an expense of \$31 million related to certain of our operations in South America.

The provision for taxes in 2013 included a net increase in valuation allowance on deferred taxes of \$31 million, as we determined it was not more likely than not that such deferred tax assets would be realized. This amount included an expense of \$104 million related to certain of our operations in Central Europe and South America. It also included a benefit of \$42 million related to certain of our operations in Central Europe.

The provision for taxes in 2014 and 2013, also included tax credits, arising in foreign jurisdictions, for which the technical merits did not allow a benefit to be taken.

## Income from continuing operations, net of tax

As a result of the factors discussed above, income from continuing operations, net of tax, decreased \$642 million to \$2,052 million in 2015 compared to 2014, and decreased \$250 million to \$2,694 million in 2014 compared to 2013.

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

The loss (net of tax) from discontinued operations for 2013 related primarily to provisions for certain environmental obligations. The income from discontinued operations, net of tax, for 2015 and 2014, was not significant.

## Net income attributable to ABB

As a result of the factors discussed above, net income attributable to ABB decreased \$661 million to \$1,933 million in 2015 compared to 2014, and decreased \$193 million to \$2,594 million in 2014 compared to 2013.

## Earnings per share attributable to ABB shareholders

(in \$)	2015	2014	2013
<i>Income from continuing operations, net of tax:</i>			
Basic	0.87	1.12	1.23
Diluted	0.87	1.12	1.23
<i>Net income attributable to ABB:</i>			
Basic	0.87	1.13	1.21
Diluted	0.87	1.13	1.21

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income 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 and outstanding options and shares granted subject to certain conditions under our share-based payment arrangements. See "Note 20 Earnings per share" to our Consolidated Financial Statements.

## Divisional analysis

### Discrete Automation and Motion

The financial results of our Discrete Automation and Motion division were as follows:

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Orders	9,222	10,559	9,771	(13)%	8%
Order backlog at December 31,	4,232	4,385	4,351	(3)%	1%
Revenues	9,127	10,142	9,915	(10)%	2%
Income from operations	991	1,422	1,458	(30)%	(2)%
Operational EBITA	1,271	1,589	1,622	(20)%	(2)%

### Orders

Orders in 2015 decreased 13 percent (5 percent in local currencies) due to weaker markets in most of our businesses. The declining oil price and slower growth in China affected the order intake negatively, especially in the Motors and Generators and the Drives and Controls businesses. Orders in the Robotics business increased in local currencies, supported by strong demand for services. Orders in the Power Conversion business were lower and were impacted by lower large orders from the rail segment.

Orders in 2014 increased 8 percent (10 percent in local currencies) as orders were higher in all businesses. Order increases in the Power Conversion business were driven by strong rail orders and the inclusion of Power-One for a full

year in 2014 compared to 5 months in 2013. Orders grew in the Robotics business as demand increased from general industry while large order demand from the automotive sector was lower. Orders in the Drives and Controls and the Motors and Generators businesses increased due to higher service orders as well as the receipt of large marine orders in 2014.

The geographic distribution of orders for our Discrete Automation and Motion division was as follows:

(in %)	2015	2014	2013
Europe	34	39	38
The Americas	35	32	32
Asia, Middle East and Africa	31	29	30
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the geographical distribution of our orders changed primarily due to the impact of the large rail orders from Europe in 2014. In addition, orders from the Americas and Asia, Middle East and Africa benefitted from strong orders in the Robotics business.

In 2014, the geographical split of orders was consistent with 2013. Larger rail orders in the Power Conversion business from Sweden and Switzerland compensated for other market weakness in Europe. The Americas maintained their share of global orders as orders received in the United States increased due to the inclusion of the solar business of Power-One for a full year while the rest of the Americas was steady. The share of orders from Asia, Middle East and Africa was supported by growth in China partially offsetting the impacts of order declines in India.

#### Order backlog

Order backlog in 2015 decreased 3 percent (increased 3 percent in local currencies) compared to 2014. In local currencies, order backlog increased as lower order backlog in the Motors and Generators business was offset by increases in the backlog for the Robotics and Power Conversion businesses.

Order backlog in 2014 increased 1 percent (9 percent in local currencies) assisted by the receipt of large rail orders in Sweden and Switzerland which will primarily be delivered after 2015.

#### Revenues

In 2015, revenues were 10 percent lower (2 percent in local currencies). Revenues were weaker as growth in the Robotics and Power Conversion businesses, supported by strong order backlog, was offset by weaker revenues resulting from the lower order intake in the short-cycle businesses such as low voltage motors and drives.

In 2014, revenues grew 2 percent (4 percent in local currencies) due to the impact of including Power-One for a full year in 2014 and growth in the Robotics business. Revenues were also supported by a 9 percent increase in service revenues (12 percent in local currencies). Revenues in the Drives and Controls, and Motors and Generators businesses declined due to a weak opening order backlog for mid- and large-sized medium voltage drives and high voltage motors.

The geographic distribution of revenues for our Discrete Automation and Motion division was as follows:

(in %)	2015	2014	2013
Europe	35	37	40
The Americas	35	33	32
Asia, Middle East and Africa	30	30	28
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the share of revenue from Europe was lower than in 2014 due to the weak markets for motors and drives. The share of revenues from the Americas increased due to growth in the Robotics business. The share of revenues from Asia, Middle East and Africa remained flat as higher revenues in the Robotics business offset the decline in the Drives and Controls business.

In 2014, the share of revenues from Europe declined due to lower revenues in the Drives and Controls, and Motors and Generators businesses. The Americas' share of revenues increased and was supported by the inclusion of Power-One for a full year in 2014. Revenues in Asia, Middle East and Africa were supported by high automotive revenues in Robotics in China.

#### Income from operations

In 2015, income from operations decreased 30 percent compared to 2014 due to lower revenues and lower capacity utilization. Steady income in the Robotics business could not compensate for the profit deterioration realized in other businesses. The Drives and Controls business was negatively affected by the weaker business climate in China while the Motors and Generators business suffered from the low oil price and weak demand leading to lower factory utilization. Income from operations in the Power Conversion business was flat despite continued strong price erosion in the solar market. The division's income from operations was also negatively affected by the impact of the higher restructuring charges incurred in connection with capacity adjustments and the company-wide White Collar Productivity program. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 7 percent.

In 2014, income from operations was lower than 2013, despite higher revenues, due to price pressures affecting gross margin and higher depreciation costs. Lower revenues in the Drives and Controls, and Motors and Generators businesses also led to reduced income from operations. Robotics had a higher contribution to income from operations due to increased revenues and improved gross margins while margins were lower in the Power Conversion business due to the dilutive effects of Power-One. The impact on income from operations from changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, was not significant.

## Operational EBITA

The reconciliation of income from operations to Operational EBITA for the Discrete Automation and Motion division was as follows:

(\$ in millions)	2015	2014	2013
<b>Income from operations</b>	<b>991</b>	<b>1,422</b>	<b>1,458</b>
Acquisition-related amortization	128	138	124
Restructuring and restructuring-related expenses <sup>(1)</sup>	125	25	19
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	26	—	33
FX/commodity timing differences in income from operations	1	4	(12)
<b>Operational EBITA</b>	<b>1,271</b>	<b>1,589</b>	<b>1,622</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

In 2015, Operational EBITA decreased 20 percent (13 percent excluding the impacts from changes in foreign currencies) compared to 2014, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

In 2014, Operational EBITA declined 2 percent (1 percent excluding the impacts from changes in foreign currencies) compared to 2013, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

## Low Voltage Products

The financial results of our Low Voltage Products division were as follows:

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Orders	6,581	7,550	7,696	(13)%	(2)%
Order backlog at December 31,	857	891	1,057	(4)%	(16)%
Revenues	6,547	7,532	7,729	(13)%	(3)%
Income from operations	909	1,475	1,092	(38)%	35%
Operational EBITA	1,096	1,241	1,265	(12)%	(2)%

### Orders

In 2015, orders decreased 13 percent (3 percent in local currencies). The impact of the divestments of the HVAC and Steel Structures businesses in 2014 reduced orders by 4 percent. Local currency order growth in the Breakers and Switches business was offset by decreases in orders in the Enclosures and DIN-Rail Products and the Low Voltage Systems businesses while orders in local currencies were steady in the Control Products business. In the products businesses, higher orders in Europe were offset by lower order volumes in China.

In 2014, orders decreased 2 percent (flat in local currencies) as order growth in most businesses was offset by the impact of the divestments of HVAC and Steel Structures. Order growth was highest in the Wiring Accessories business and orders also grew in the Breakers and Switches, Enclosures and DIN-Rail Products, and Control Products businesses while orders in the Low Voltage Systems business were steady. Product

businesses grew despite a challenging macroeconomic environment in Europe, lower investments in the construction market in China and political instability in certain Eastern European countries.

The geographic distribution of orders for our Low Voltage Products division was as follows:

(in %)	2015	2014	2013
Europe	39	39	39
The Americas	29	30	32
Asia, Middle East and Africa	32	31	29
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the share of orders in the Americas decreased primarily due to the divestments in 2014 of the HVAC and Steel Structures businesses, which mostly impacted orders in the United States and Canada. The share of orders from Europe remained steady while Asia, Middle East and Africa slightly increased its geographic share, as the decline in volumes in China was partly offset by strong orders in Japan and India.

In 2014, the share of orders from the Americas decreased primarily due to the impact of the divestments in the year, which were mainly based in the United States and Canada. The share of orders in Asia, Middle East and Africa increased, partially driven by systems orders in China.

### Order backlog

In 2015, order backlog decreased by 4 percent (increased by 6 percent in local currencies), driven by increases in the Breakers and Switches and Low Voltage Systems businesses.

In 2014, order backlog decreased 16 percent (9 percent in local currencies), driven mainly by the impacts of business divestments in the year.

### Revenues

In 2015, revenues decreased by 13 percent (3 percent in local currencies) as the local currency increases in the Breakers and Switches, Control Products and Wiring Accessories businesses were offset by the impacts on revenues from the businesses divested in 2014. Local currency revenues were also lower in the Enclosures and DIN-Rail Products and Low Voltage Systems businesses.

In 2014, revenues decreased 3 percent (flat in local currencies) as steady to higher revenues in most businesses were offset by the impacts of divested businesses. Revenues grew slightly in the Breakers and Switches and Low Voltage Systems businesses while revenues were flat in the Enclosures and DIN-Rail Products and Control Products businesses.

The geographic distribution of revenues for our Low Voltage Products division was as follows:

(in %)	2015	2014	2013
Europe	38	40	39
The Americas	29	30	33
Asia, Middle East and Africa	33	30	28
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the share of revenues in the Americas decreased primarily due to the divestments in 2014. The share of revenues from Asia, Middle East and Africa increased, as weakness in the Low Voltage Systems business in Saudi Arabia and the United Arab Emirates was more than offset by higher

revenues in the other businesses. Europe's geographic share of revenues decreased as weaknesses in the Low Voltage Systems and Enclosures and DIN-Rail Products businesses were only partially offset by the other products businesses.

In 2014, the share of revenues from the Americas decreased primarily due to the impact of divestments in the year. The share of revenues from Asia, Middle East and Africa increased slightly, partially attributable to increased systems revenues in China and Saudi Arabia respectively.

### Income from operations

In 2015, income from operations decreased 38 percent, primarily due to the impact in 2014 from gains recorded on the divestments of the HVAC and Steel Structures businesses. In addition, higher restructuring charges were incurred in connection with the company-wide White Collar Productivity program. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 6 percent.

In 2014, income from operations increased 35 percent, primarily due to gains from the sales of businesses divested in the year. In 2014, income from operations was also negatively impacted by a change in product mix. The impact on income from operations from changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, was not significant.

### Operational EBITA

The reconciliation of income from operations to Operational EBITA for the Low Voltage Products division was as follows:

(\$ in millions)	2015	2014	2013
<b>Income from operations</b>	<b>909</b>	<b>1,475</b>	<b>1,092</b>
Acquisition-related amortization	100	113	120
Restructuring and restructuring-related expenses <sup>(1)</sup>	101	45	31
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	3	(407)	16
FX/commodity timing differences in income from operations	(17)	15	6
<b>Operational EBITA</b>	<b>1,096</b>	<b>1,241</b>	<b>1,265</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

In 2015, Operational EBITA decreased 12 percent (1 percent excluding the impacts from changes in foreign currencies) compared to 2014, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

In 2014, Operational EBITA decreased 2 percent (was flat excluding the impacts from changes in foreign currencies) compared to 2013, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

## Process Automation

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

(\$ in millions)	2015	2014	2013	% Change	
				2015	2014
Orders	6,464	8,577	8,000	(25)%	7%
Order backlog at December 31,	5,203	5,661	5,772	(8)%	(2)%
Revenues	6,374	7,948	8,497	(20)%	(6)%
Income from operations	593	1,003	990	(41)%	1%
Operational EBITA	755	958	1,022	(21)%	(6)%

### Orders

Orders in 2015 declined 25 percent (14 percent in local currencies), mainly due to the impacts of a reduction in capital and operating expenditures in the oil and gas sector resulting from continued low oil prices. The marine sector, also negatively impacted by low oil prices, had lower demand, especially from the offshore drilling vessels segment. The mining sector remained at a low level as customers in this segment either continued to delay or postpone investments due to low commodity prices. Orders were also 3 percent lower due to the impact of the divestment of the Full Service business at the end of 2014.

Orders in 2014 increased 7 percent (10 percent in local currencies), mainly due to high demand from the marine sector, especially for LNG vessels. Orders in the oil and gas businesses also increased while orders in the mining businesses remained at low levels as most mining customers delayed or postponed capital investments. Orders in the metals businesses also remained at low levels due to overcapacity issues affecting our customers. Other customers such as steel companies are focusing their spending on operating expenses and not on capital investment due to profitability pressures affecting their industry. The paper industry in North America, South America and parts of Asia, however, has improved and has started to increase its level of capital investment.

The geographic distribution of orders for our Process Automation division was as follows:

(in %)	2015	2014	2013
Europe	38	33	37
The Americas	23	22	23
Asia, Middle East and Africa	39	45	40
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, orders declined in all regions. The share of orders from Asia, Middle East and Africa declined due to large orders received from the marine sector in 2014 described below. In addition, the region was impacted by weak domestic demand in China. Orders in the Americas declined but by a lower percentage than the division as a whole. Declines included the impacts of lower mining investments in South America, as well as slowing demand in the United States from the upstream oil and gas sector. As most major industrial economies in Europe were either steady or contracting only slightly, the geographic share of orders from Europe increased.

In 2014, the share of orders from Asia, Middle East and Africa increased primarily due to the impacts of large orders received in South Korea from the LNG marine sector and strong order growth in China as well as the impact of the

award of a gas treatment plant contract in Tunisia. The share of orders from the Americas remained steady. Growth in Brazil was offset by the effects of lower mining investments in Chile while North America grew slightly. Orders decreased in Europe which resulted in a reduction in the share of orders from Europe compared to 2013. Marine orders in Finland were offset by lower order intake in Germany and Southern Europe.

### Order backlog

Order backlog at December 31, 2015, was 8 percent lower (2 percent higher in local currencies) than at December 31, 2014. Order backlog in most businesses was lower due to the impacts of lower orders during the year. The increase in order backlog in local currencies was due to the receipt of higher large orders near the end of 2015.

Order backlog at December 31, 2014, was 2 percent lower compared to December 31, 2013. In local currencies, order backlog was 9 percent higher, reflecting the higher order intake during the year, especially large orders.

### Revenues

In 2015, revenues decreased 20 percent (9 percent in local currencies). Revenues in the Oil and Gas business declined, reflecting the lower opening order backlog as well as reduced opportunities from slower customer order tendering, especially in the service business. The Marine and Ports business also recorded lower revenues, reflecting lower activity in the offshore oil and gas industry and large project delays. The Process Industries business, which includes mining and metals, also declined. Revenues in the Measurement and Analytics business declined, largely due to lower demand in the upstream oil and gas segment. In local currencies, Turbocharging was flat while the Control Technologies business had higher revenues. Revenues were 4 percent lower due to the impacts of the divestment of the Full Service business at the end of 2014.

In 2014, revenues were down 6 percent (4 percent in local currencies), reflecting the impacts of lower order intake in the previous year. Revenue decreases were more significant in the systems businesses, especially in mining systems, due to the weak opening order backlog while revenues in the oil and gas businesses increased. Product revenues were flat. Revenues in the Measurement Products business grew slightly but were offset by a decline in revenues in the Control Technologies business. Product revenues in the Turbocharging business increased slightly compared to the low levels last year. Revenues were also impacted by the exit in 2013 from a large service contract.

The geographic distribution of revenues for our Process Automation division was as follows:

(in %)	2015	2014	2013
Europe	33	35	36
The Americas	24	23	24
Asia, Middle East and Africa	43	42	40
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the regional revenue distribution remained steady. The share of revenues from Europe declined, reflecting lower oil and gas and marine activities in Norway and the divestment of the Full Service business in 2014, which mainly impacted Europe. The larger proportional revenue decrease in Europe

resulted in a redistribution of the share to both Asia, Middle East and Africa and the Americas.

The regional distribution of revenues in 2014 did not change significantly compared to 2013. Revenue share declines were realized in Europe and the Americas, while Asia, Middle East and Africa increased. In Europe, revenues declined as a result of an exit in 2013 from a large service contract in Finland and lower revenues in Sweden. In the Americas, lower opening order backlog in the mining business led to lower revenues in Chile and Peru, which more than offset growth in the United States. The revenue share from Asia, Middle East and Africa increased mainly from Algeria and the United Arab Emirates.

### Income from operations

In 2015, income from operations declined 41 percent compared to 2014. Income from operations in 2014 included the gain on the disposal of the Full Service business. In addition, income from operations was impacted by the revenue decreases described above. The income from operations in 2015 also included higher restructuring charges due to the implementation of the company-wide White Collar Productivity program. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 7 percent.

In 2014, income from operations increased compared to 2013, mainly due to the gain on sale of the Full Service business partially offset by the impact of lower revenues. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 5 percent.

### Operational EBITA

The reconciliation of income from operations to Operational EBITA for the Process Automation division was as follows:

(\$ in millions)	2015	2014	2013
<b>Income from operations</b>	<b>593</b>	<b>1,003</b>	<b>990</b>
Acquisition-related amortization	12	17	13
Restructuring and restructuring-related expenses <sup>(1)</sup>	112	43	31
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	11	(113)	(6)
FX/commodity timing differences in income from operations	27	8	(6)
<b>Operational EBITA</b>	<b>755</b>	<b>958</b>	<b>1,022</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

In 2015, Operational EBITA decreased 21 percent (13 percent excluding the impacts from changes in foreign currencies) compared to 2014, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

In 2014, Operational EBITA decreased 6 percent (4 percent excluding the impacts from changes in foreign currencies) compared to 2013, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

## Power Products

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

(\$ in millions)				% Change	
	2015	2014	2013	2015	2014
Orders	10,033	10,764	10,459	(7)%	3%
Order backlog at December 31,	7,717	7,791	7,946	(1)%	(2)%
Revenues	9,550	10,333	11,032	(8)%	(6)%
Income from operations	1,051	1,204	1,331	(13)%	(10)%
Operational EBITA	1,178	1,319	1,435	(11)%	(8)%

### Orders

In 2015, orders decreased 7 percent (increased 2 percent in local currencies). The local currency increase in orders was supported by the continued selective investments in large transmission projects in the United States and China.

In 2014, orders increased 3 percent (5 percent in local currencies), supported by the industry sector and continued selective investments in large transmission projects.

The geographic distribution of orders for our Power Products division was as follows:

(in %)	2015	2014	2013
Europe	28	28	31
The Americas	30	29	28
Asia, Middle East and Africa	42	43	41
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the share of orders from the Americas increased, mainly driven by large transmission projects in the United States. Despite growth in India and China, the share of orders from Asia, Middle East and Africa declined as demand was lower in Saudi Arabia and Australia. Europe's share of orders was steady, reflecting positive market developments in 2015.

In 2014, the share of orders from the Americas increased, mainly driven by the transmission sector. The continued development of power infrastructure investments led to a higher share of orders in Asia, Middle East and Africa, with India showing growth and China remaining stable. Europe's share of orders declined, reflecting the difficult market conditions throughout the year.

### Order backlog

In 2015, order backlog decreased 1 percent (increased 7 percent in local currencies). The local currency increase resulted from higher orders during the year.

In 2014, order backlog decreased 2 percent (increased 6 percent in local currencies) compared to 2013. In local currencies, the order backlog increased in all businesses resulting from higher orders during the year.

### Revenues

In 2015, revenues decreased 8 percent (increased 2 percent in local currencies). The local currency increase mainly reflects the successful execution of the strong opening order backlog. Service revenues also continued to grow and represented a higher share of the total division revenues compared to 2014.

In 2014, revenues in the Power Products division decreased 6 percent (4 percent in local currencies), mainly reflecting the impact of the lower opening order backlog. Service revenues

continued to grow and represented a higher share of the total division revenues compared to 2013.

The geographic distribution of revenues for our Power Products division was as follows:

(in %)	2015	2014	2013
Europe	27	32	32
The Americas	30	27	27
Asia, Middle East and Africa	43	41	41
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In 2015, the share of revenues in the Americas was higher as a result of the continued steady execution in North America. The increase in the share of revenues from Asia, Middle East and Africa was primarily driven by revenue increases in Saudi Arabia and India. The decrease in the share of revenues from Europe was a result of lower revenues in Sweden and Switzerland.

In 2014, the shares of revenues remained constant for all regions. Europe remained unchanged, reflecting the economic environment. The share of revenues from the Americas was also constant, even as revenues in certain key markets decreased slightly compared to 2013. Asia, Middle East and Africa was supported by revenue increases in India.

### Income from operations

In 2015, income from operations was 13 percent lower compared to 2014. Income from operations was lower due to higher restructuring charges associated with the implementation of the company-wide White Collar Productivity program as well as the ramp-up costs associated with aligning our strategic production footprint towards key markets such as Saudi Arabia and India. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 5 percent.

In 2014, income from operations was lower compared to 2013 primarily reflecting lower revenues, higher charges relating to FX/commodity timing differences and higher selling expenses resulting from investments made in the sales function. Changes in foreign currencies, including the impacts from FX/commodity timing differences summarized in the table below, negatively impacted income from operations by 4 percent.

### Operational EBITA

The reconciliation of income from operations to Operational EBITA for the Power Products division was as follows:

(\$ in millions)	2015	2014	2013
<b>Income from operations</b>	<b>1,051</b>	<b>1,204</b>	<b>1,331</b>
Acquisition-related amortization	10	17	21
Restructuring and restructuring-related expenses <sup>(1)</sup>	105	51	66
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	4	16	19
FX/commodity timing differences in income from operations	8	31	(2)
<b>Operational EBITA</b>	<b>1,178</b>	<b>1,319</b>	<b>1,435</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

In 2015, Operational EBITA decreased 11 percent (3 percent excluding the impacts from changes in foreign currencies) compared to 2014, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

In 2014, Operational EBITA decreased 8 percent (7 percent excluding the impacts from changes in foreign currencies) compared to 2013, primarily due to the reasons described under "Income from operations", excluding the explanations related to the reconciling items in the table above.

## Power Systems

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

(\$ in millions)	2015	2014	2013	% Change <sup>(1)</sup>	
				2015	2014
Orders	6,800	6,871	5,949	(1)%	15%
Order backlog at December 31,	8,218	8,246	9,435	—	(13)%
Revenues	6,342	7,020	8,375	(10)%	(16)%
Income (loss) from operations	110	(360)	171	n.a.	n.a.
Operational EBITA	274	(96)	326	n.a.	n.a.

<sup>(1)</sup> Certain percentages are stated as n.a. as the computed change would not be meaningful.

### Orders

In 2015, orders decreased 1 percent (increased 13 percent in local currencies) compared with 2014. The growth in local currencies reflected a higher level of large orders. Large orders in Grid Systems included an HVDC order awarded to connect the Norwegian and German power grids and a \$450 million HVDC order for an interconnection between Norway and the United Kingdom, while our Power Generation business won a power plant automation order in South Africa worth more than \$160 million. In local currencies, base orders were lower, mainly due to the challenging macro-economic conditions. The markets remain competitive with continued pricing pressure.

In 2014, orders increased 15 percent (20 percent in local currencies) compared with 2013, mainly due to a higher level of large orders in the Grid Systems business following the \$800 million award in the United Kingdom for a HVDC subsea power connection in northern Scotland and a \$400 million HVDC project in Canada to provide the first electricity link between the island of Newfoundland and the North American power grid. In addition, large orders in 2014 included a \$110 million substation order in Saudi Arabia which will support grid interconnection and boost electricity transmission capacity. Initiatives to drive base order growth, combined with early signs of stabilization in the utility sector, contributed to modest growth in base orders. The overall market remains highly competitive, especially in certain higher-growth regions such as the Middle East. The Power Systems division continues to be selective, focusing on higher-margin projects and those with higher pull-through of other ABB products.

The geographic distribution of orders for our Power Systems division was as follows:

(in %)	2015	2014	2013
Europe	47	42	36
The Americas	19	25	25
Asia, Middle East and Africa	34	33	39
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

In the Power Systems division, the change in the geographic share of orders reflects changes in the geographical location of large orders. In 2015, Europe benefited from a higher level of large orders, reflecting large orders for HVDC interconnections. The share of orders from Asia, Middle East and Africa increased to 34 percent, supported by large orders. Orders in the Americas were significantly lower, partly due to the significant large HVDC order received in Canada in 2014 as described above.

In 2014, the share of orders from Europe increased due to the award of the HVDC project in the United Kingdom. The share of orders in the Americas remained stable with growth in both large and base orders. Orders from Asia, Middle East and Africa decreased, mainly due to the timing of large order awards, resulting in a reduction of order share relative to the other regions.

### Order backlog

Order backlog at December 31, 2015, was flat (increased 8 percent in local currencies) compared with December 31, 2014. The increase in order backlog reflects the impact of the high levels of large orders, which typically have execution times stretching over several years.

Order backlog at December 31, 2014, decreased 13 percent (4 percent in local currencies) compared with December 31, 2013. Although order backlog was supported by the large orders received in 2014, order backlog decreased in 2014 as the division continued to run off the remaining orders in businesses affected by the repositioning of the Power Systems division announced in 2012 and the businesses affected by the exiting of the solar EPC business announced in 2014.

### Revenues

Revenues in 2015 decreased 10 percent (increased 2 percent in local currencies) compared to 2014; the increase in local currencies was mainly driven by steady execution of the order backlog. Revenues increased in the Grid Systems business, supported by the execution of offshore wind projects, and were also higher in the Network Management business. This more than offset a lower level of revenues in the Substations and Power Generation businesses. Revenues were also impacted by our exit from the solar EPC business in 2014.

Revenues in 2014 decreased 16 percent (13 percent in local currencies) compared to 2013, mainly due to the effects of a weaker order intake in 2013 and the resulting lower opening order backlog at the beginning of 2014. Revenues decreased in all businesses compared to 2013. In addition, revenues in 2014 were negatively impacted by execution delays in certain projects.

The geographic distribution of revenues for our Power Systems division was as follows:

(in %)	2015	2014	2013
Europe	40	38	36
The Americas	24	24	23
Asia, Middle East and Africa	36	38	41
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

The regional distribution of revenues reflects the geographical end-user markets of the projects executed during the year, and consequently varies over time. In 2015, revenues increased in Europe following the execution of large projects within the Grid Systems business. The share of revenues from the Americas was steady, while revenues in Asia, Middle East and Africa were relatively lower.

In 2014, revenues decreased in all regions compared to 2013. The largest revenue decrease was recorded in Asia, Middle East and Africa, the division's largest region in terms of revenues in 2014, and partly related to lower revenues in Iraq and Saudi Arabia compared to 2013, following a lower opening order backlog.

### Income (loss) from operations

In 2015, income from operations increased to \$110 million from a loss of \$360 million in 2014, mainly due to benefits from the ongoing measures taken in the 'step change' program and continued cost reduction initiatives. Restructuring-related expenses in 2015 of \$96 million were higher than in 2014 and included charges for the new company-wide White Collar Productivity program and ongoing costs for the previously-announced initiatives to align the cost structure of certain operations to reflect changing market conditions. Continued cost savings, primarily related to supply chain management and operational excellence, helped mitigate higher research and development spending as well as the negative effects from price pressures. Acquisition-related amortization also decreased in 2015 compared to 2014. In addition, changes in the amount of FX/commodity timing differences in income from operations increased the division's income from operations by \$125 million compared to 2014.

In 2014, the Power Systems division recorded a loss from operations of \$360 million compared to an income from operations of \$171 million in 2013, due primarily to lower revenues and project-related charges, mainly for offshore wind projects and solar EPC contracts. Income (loss) from operations also included a \$115 million negative impact related to FX/commodity timing differences compared with a \$40 million positive impact in 2013. Restructuring-related expenses in 2014 of \$63 million were lower than the \$101 million in 2013, and included charges to adjust the size and cost structure of certain operations in response to lower order backlog and an increased focus on white collar productivity. Cost savings from supply chain management and operational excellence activities helped mitigate higher research and development spending, and the impact of low margin projects executed from the order backlog.

### Operational EBITA

The reconciliation of income (loss) from operations to Operational EBITA for the Power Systems division was as follows:

(\$ in millions)	2015	2014	2013
<b>Income (loss) from operations</b>	<b>110</b>	<b>(360)</b>	<b>171</b>
Acquisition-related amortization	43	74	90
Restructuring and restructuring-related expenses <sup>(1)</sup>	96	63	101
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	35	12	4
FX/commodity timing differences in income from operations	(10)	115	(40)
<b>Operational EBITA</b>	<b>274</b>	<b>(96)</b>	<b>326</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

In 2015, Operational EBITA increased by \$370 million. This was primarily driven by the reasons described under "Income (loss) from operations", excluding the explanations related to the reconciling items in the table above.

In 2014, Operational EBITA decreased compared to 2013, primarily due to the reasons described under "Income (loss) from operations", excluding the explanations related to the reconciling items in the table above.

### Corporate and Other

Income (loss) from operations for Corporate and Other was as follows:

(\$ in millions)	2015	2014	2013
Corporate headquarters and stewardship	(365)	(369)	(372)
Corporate research and development	(144)	(174)	(187)
Corporate real estate	50	44	49
White Collar Productivity program costs	(130)	—	—
Other	(21)	(70)	(140)
<b>Total Corporate and Other</b>	<b>(610)</b>	<b>(569)</b>	<b>(650)</b>

In 2015, 2014 and 2013, Corporate headquarters and stewardship costs were maintained at the same level.

In 2015, Corporate research and development costs totaled \$144 million, lower than in 2014. In 2014, Corporate research and development costs totaled \$174 million, lower than in 2013.

Corporate real estate primarily includes the income from property rentals and gains from the sale of real estate properties. In 2015, 2014 and 2013, income from operations in Corporate real estate includes gains of \$26 million, \$17 million and \$23 million, respectively, from the sales of real estate property in various countries.

In 2015, we recorded a total of \$130 million in "Corporate and Other" for both restructuring and related expenses as well as program implementation costs for our White Collar Productivity program. For further information on our White

Collar Productivity program see “Restructuring and other cost savings initiatives” below.

“Other” consists of operational costs of our Global Treasury Operations, operating income or loss in non-core businesses and certain other charges such as costs and penalties associated with legal cases, environmental expenses and impairment charges related to investments. In 2015, “Other” declined primarily due to a reduction of insurance-related provisions for self-insured risks. In 2014, “Other” included primarily lower charges in connection with legal compliance cases and lower environmental expenses compared to 2013. In 2013, “Other” included primarily certain legal compliance cases, certain environmental expenses, acquisition-related expenses, the loss on sale of a non-core business and the impairment of certain investments.

## Restructuring and other cost savings initiatives

### White collar productivity program

In September 2015, we announced a two-year program aimed at making ABB leaner, faster and more customer-focused. Planned productivity improvements include the rapid expansion and use of regional shared service centers as well as the streamlining of global operations and head office functions, with business units moving closer to their respective key markets. During the course of this program, we will implement and execute various restructuring initiatives across all operating segments and regions.

On completion of the program, ABB expects to realize annual cost savings of approximately \$1 billion. These savings are expected to mainly impact Cost of sales, Selling, general and administrative expenses and Non-order related research and development expenses.

The following table outlines the cumulative amount of costs incurred to date and the total amount of costs expected to be incurred under the program.

	Cumulative costs incurred up to December 31, 2015	Total expected costs
(\$ in millions)		
Discrete Automation and Motion	45	169
Low Voltage Products	60	126
Process Automation	91	137
Power Products	42	155
Power Systems	46	82
Corporate and Other	86	183
<b>Total</b>	<b>370</b>	<b>852</b>

For details of the nature of the costs incurred and their impact on the Consolidated Financial Statements, see “Note 22 Restructuring and related expenses” to our Consolidated Financial Statements.

The majority of the remaining cash outlays, primarily for employee severance benefits, are expected to occur in 2016 and 2017. We expect that our cash flow from operating

activities will be sufficient to cover any obligations under this restructuring program.

## Other restructuring-related activities and cost savings initiatives

In 2015, 2014 and 2013, we also executed other restructuring-related and cost saving measures to sustainably reduce our costs and protect our profitability. Costs associated with these other measures amounted to \$256 million, \$235 million and \$252 million in 2015, 2014 and 2013, respectively. Estimated cost savings amounted to approximately \$1.2 billion in 2015, \$1.1 billion in 2014 and \$1.2 billion in 2013. These savings were achieved by optimizing global sourcing (excluding changes in commodity prices), through operational excellence improvements, as well as adjustments to our global manufacturing and engineering footprint.

## Liquidity and capital resources

### Principal sources of funding

We meet our liquidity needs principally using cash from operations, proceeds from the issuance of debt instruments (bonds and commercial paper), and short-term bank borrowings.

During 2015, 2014 and 2013, our financial position was strengthened by the positive cash flow from operating activities of \$3,818 million, \$3,845 million and \$3,653 million, respectively.

Our net debt is shown in the table below:

December 31, (\$ in millions)	2015	2014
Short-term debt and current maturities of long-term debt	1,454	353
Long-term debt	5,985	7,312
Cash and equivalents	(4,565)	(5,443)
Marketable securities and short-term investments	(1,633)	(1,325)
<b>Net debt (defined as the sum of the above lines)</b>	<b>1,241</b>	<b>897</b>

Net debt at December 31, 2015, increased \$344 million compared to December 31, 2014, as cash flows from operating activities during 2015 of \$3,818 million were more than offset by the cash outflows for the payment of dividends and the nominal value reduction (totaling \$1,749 million), net purchases of property, plant and equipment and intangible assets (\$808 million) and amounts paid to purchase treasury stock (\$1,487 million). Movements in foreign exchange rates also contributed to the increase in net debt, having an impact of approximately \$160 million. See “Financial Position”, “Investing activities” and “Financing activities” for further details.

Our Group Treasury Operations is responsible for providing a range of treasury management services to our group companies, including investing cash in excess of current business requirements. At December 31, 2015 and 2014, the

proportion of our aggregate “Cash and equivalents” and “Marketable securities and short-term investments” managed by our Group Treasury Operations amounted to approximately 55 percent and 60 percent, respectively.

Throughout 2015 and 2014, the investment strategy for cash (in excess of current business requirements) has generally been to invest in short-term time deposits with maturities of less than 3 months, supplemented at times by investments in corporate commercial paper, money market funds, and in some cases, government securities. During 2015, we also continued to place limited funds in connection with reverse repurchase agreements. We actively monitor credit risk in our investment portfolio and hedging activities. Credit risk exposures are controlled in accordance with policies approved by our senior management to identify, measure, monitor and control credit risks. We closely monitor developments in the credit markets and make appropriate changes to our investment policy as deemed necessary. The rating criteria we require for our counterparts have remained unchanged during 2015 (compared to 2014) as follows—a minimum rating of A/A2 for our banking counterparts, while the minimum required rating for investments in short-term corporate commercial paper is A-1/P-1. In addition to rating criteria, we have specific investment parameters and approved instruments as well as restrictions on the types of investments we make. These parameters are closely monitored on an ongoing basis and amended as we consider necessary.

We believe the cash flows generated from our business, supplemented, when necessary, through access to the capital markets (including short-term commercial paper) and our credit facilities are sufficient to support business operations, capital expenditures, business acquisitions, the payment of dividends to shareholders and contributions to pension plans. Consequently, we believe that our ability to obtain funding from these sources will continue to provide the cash flows necessary to satisfy our working capital and capital expenditure requirements, as well as meet our debt repayments and other financial commitments for the next 12 months. See “Disclosures about contractual obligations and commitments”.

Due to the nature of our operations, our cash flow from operations generally tends to be weaker in the first half of the year than in the second half of the year.

## Debt and interest rates

Total outstanding debt was as follows:

December 31, (\$ in millions)	2015	2014
Short-term debt and current maturities of long-term debt	1,454	353
Long-term debt:		
Bonds	5,811	7,100
Other long-term debt	174	212
<b>Total debt</b>	<b>7,439</b>	<b>7,665</b>

The increase in short-term debt in 2015 was due to the reclassification to short-term debt of both our USD 600 million 2.5% Notes due 2016 and our CHF 500 million 1.25% Bonds due 2016. In addition, we increased the amount of issued commercial paper (\$132 million outstanding at December 31, 2015, compared to \$120 million outstanding at December 31, 2014).

Our debt has been obtained in a range of currencies and maturities and on various interest rate terms. We use derivatives to manage the interest rate exposure arising on certain of our debt obligations. For example, we use interest rate swaps to effectively convert fixed rate debt into floating rate liabilities. After considering the effects of interest rate swaps, the effective average interest rate on our floating rate long-term debt (including current maturities) of \$2,285 million and our fixed rate long-term debt (including current maturities) of \$4,876 million was 0.8 percent and 3.2 percent, respectively. This compares with an effective rate of 1.1 percent for floating rate long-term debt of \$2,310 million and 3.2 percent for fixed rate long-term debt of \$5,056 million at December 31, 2014.

For a discussion of our use of derivatives to modify the interest characteristics of certain of our individual bond issuances, see “Note 12 Debt” to our Consolidated Financial Statements.

## Credit facility

During 2014 we replaced our \$2 billion multicurrency revolving credit facility, maturing in 2015, with a new \$2 billion revolving multicurrency credit facility, maturing in 2019. The credit facility provides us an option in 2015 and 2016 to extend the maturity of the new facility to 2020 and 2021, respectively. In 2015 we exercised the option to extend the maturity of the facility to 2020.

No amount was drawn under the credit facility at December 31, 2015 and 2014. The facility is for general corporate purposes. The facility contains cross-default clauses whereby an event of default would occur if we were to default on indebtedness, as defined in the facility, at or above a specified threshold.

The credit facility does not contain financial covenants that would restrict our ability to pay dividends or raise additional funds in the capital markets. For further details of the credit facility, see “Note 12 Debt” to our Consolidated Financial Statements.

## Commercial paper

At December 31, 2015, we had in place two commercial paper programs:

- a \$2 billion commercial paper program for the private placement of U.S. dollar denominated commercial paper in the United States, and
- a \$2 billion Euro-commercial paper program for the issuance of commercial paper in a variety of currencies (which replaced the previous \$1 billion Euro-commercial paper program in February 2014).

At December 31, 2015, \$132 million was outstanding under the \$2 billion program in the United States, compared to \$120 million outstanding at December 31, 2014.

No amount was outstanding under the \$2 billion Euro-commercial paper program at December 31, 2015 and 2014.

## European program for the issuance of debt

The European program for the issuance of debt allows the issuance of up to (the equivalent of) \$8 billion in certain debt instruments. The terms of the program do not obligate any third party to extend credit to us and the terms and possibility of issuing any debt under the program are determined with respect to, and as of the date of issuance of, each debt instrument. At December 31, 2015, it was more than 12 months since the program had been updated. New bonds could be issued under the program but cannot be listed without us formally updating the program. At December 31, 2015 and 2014, one bond (principal amount of EUR 1,250 million and due in 2019) having a carrying amount of \$1,363 million and \$1,515 million, respectively, was outstanding under this program.

## Australian program for the issuance of debt

During 2012, we set up a program for the issuance of up to AUD 1 billion (equivalent to \$731 million, using December 31, 2015, exchange rates) of medium-term notes and other debt instruments. The terms of the program do not obligate any third party to extend credit to us and the terms and possibility of issuing any debt under the program are determined with respect to, and as of the date of issuance of, each debt instrument. At both December 31, 2015 and 2014, one bond, having a principal amount of AUD 400 million and maturing in 2017, was outstanding under the program. The carrying amount of the bond at December 31, 2015 and 2014, was \$297 million and \$334 million, respectively.

## Credit ratings

Credit ratings are assessments by the rating agencies of the credit risk associated with ABB and are based on information provided by us or other sources that the rating agencies consider reliable. Higher ratings generally result in lower borrowing costs and increased access to capital markets. Our ratings are of "investment grade" which is defined as Baa3 (or above) from Moody's and BBB- (or above) from Standard & Poor's.

At both December 31, 2015 and 2014, our long-term debt was rated A2 by Moody's and A by Standard & Poor's.

## Limitations on transfers of funds

Currency and other local regulatory limitations related to the transfer of funds exist in a number of countries where we operate, including: Algeria, Argentina, Chile, Egypt, India, Indonesia, Kazakhstan, Korea, Malaysia, Peru, Russia, South Africa, Taiwan, Thailand, Turkey and to a certain extent, China. Funds, other than regular dividends, fees or loan repayments, cannot be readily transferred offshore from these countries and are therefore deposited and used for working capital needs in those countries. In addition, there are certain countries where, for tax reasons, it is not considered optimal to transfer the cash offshore. As a consequence, these funds are not available within our Group Treasury Operations to

meet short-term cash obligations outside the relevant country. The above described funds are reported as cash in our Consolidated Balance Sheets, but we do not consider these funds immediately available for the repayment of debt outside the respective countries where the cash is situated, including those described above. At December 31, 2015 and 2014, the balance of "Cash and equivalents" and "Marketable securities and other short-term investments" under such limitations (either regulatory or sub-optimal from a tax perspective) totaled approximately \$1,402 million and \$1,498 million, respectively.

During 2015 we continued to direct our subsidiaries in countries with restrictions to place such cash with our core banks or investment grade banks, in order to minimize credit risk on such cash positions. We continue to closely monitor the situation to ensure bank counterparty risks are minimized.

## Financial position

### Balance sheets

Current assets		
December 31, (\$ in millions)	2015	2014
Cash and equivalents	4,565	5,443
Marketable securities and short-term investments	1,633	1,325
Receivables, net	10,061	11,078
Inventories, net	4,757	5,376
Prepaid expenses	225	218
Deferred taxes	881	902
Other current assets	638	644
<b>Total current assets</b>	<b>22,760</b>	<b>24,986</b>

For a discussion on cash and equivalents, see sections "Liquidity and Capital Resources—Principal sources of funding" and "Cash flows" for further details.

Marketable securities and short-term investments increased in 2015 due primarily to higher amounts invested in money market funds, which are classified as available-for-sale equity securities (see "Cash flows—Investing activities" below).

Receivables decreased 9.2 percent. In local currencies, Receivables decreased 1.0 percent primarily due to collections during 2015 of receivables for certain projects in the Power Systems division. For details on the components of Receivables, see "Note 7 Receivables, net". Inventories decreased 11.5 percent (decreased 2.8 percent in local currencies) compared to 2014 due to a reduction in raw materials and advances to suppliers partially offset by higher work in process.

For a summary of the components of deferred tax assets and liabilities, see "Note 16 Taxes" to our Consolidated Financial Statements.

<b>Current liabilities</b>		
December 31, (\$ in millions)	2015	2014
Accounts payable, trade	4,342	4,765
Billings in excess of sales	1,375	1,455
Short-term debt and current maturities of long-term debt	1,454	353
Advances from customers	1,598	1,624
Deferred taxes	249	289
Provisions for warranties	1,089	1,148
Other provisions	1,920	1,689
Other current liabilities	3,817	4,257
<b>Total current liabilities</b>	<b>15,844</b>	<b>15,580</b>

Accounts payable decreased 8.9 percent. In local currencies, Accounts payable decreased 2.3 percent primarily due to decreases in the Power Systems division. Billings in excess of sales decreased 5.5 percent compared to 2014. In local currencies, Billings in excess of sales increased 2.5 percent primarily due to increases in the Power Systems division. The increase in Short-term debt and current maturities of long-term debt was primarily due to the reclassifications of two public bonds from Long-term debt. Advances from customers declined 1.6 percent. In local currencies, Advances increased 7.6 percent due primarily to an increase of advances received in the Power Products division. Provisions for warranties decreased 5.1 percent. In local currencies, Provisions for warranties increased 1.7 percent primarily due to the current year warranty expense exceeding the current year settlements of warranty claims. Other provisions increased 13.7 percent (increased 19.9 percent in local currencies) primarily due to the accrual of costs under our White Collar Productivity restructuring program. Other current liabilities decreased 10.3 percent. In local currencies, Other current liabilities decreased 2.8 percent primarily due to a decrease in the fair value of current derivatives classified as liabilities and a decrease in current amounts relating to uncertain tax positions.

<b>Non-current assets</b>		
December 31, (\$ in millions)	2015	2014
Property, plant and equipment, net	5,276	5,652
Goodwill	9,671	10,053
Other intangible assets, net	2,337	2,702
Prepaid pension and other employee benefits	68	70
Investments in equity-accounted companies	178	177
Deferred taxes	423	511
Other non-current assets	643	701
<b>Total non-current assets</b>	<b>18,596</b>	<b>19,866</b>

Property, plant and equipment decreased 6.7 percent due primarily to movements in foreign exchange rates. In local currencies, Property, plant and equipment was flat as the current year depreciation was offset by capital expenditures during the year.

Goodwill decreased 3.8 percent due primarily to movements in foreign exchange rates. Other intangible assets decreased 13.5 percent (9.9 percent in local currencies). The decrease in local currencies was due to the current year amortization partly offset by acquisitions and additions during 2015. See "Note 11 Goodwill and other intangible assets" to our Consolidated Financial Statements.

<b>Non-current liabilities</b>		
December 31, (\$ in millions)	2015	2014
Long-term debt	5,985	7,312
Pension and other employee benefits	1,924	2,394
Deferred taxes	965	1,165
Other non-current liabilities	1,650	1,586
<b>Total non-current liabilities</b>	<b>10,524</b>	<b>12,457</b>

Long-term debt decreased 18.1 percent of which 2.9 percentage points was due to movements in foreign exchange rates. The remaining change was due primarily to reclassifications of two public bonds to short-term debt. Pension and other employee benefits decreased 19.6 percent (13.3 percent in local currencies) primarily due to actuarial gains resulting from changes in pension assumptions as well as the benefit of certain pension plan amendments during 2015 (see "Note 17 Employee benefits" to our Consolidated Financial Statements). See "Liquidity and Capital Resources—Debt and interest rates" for information on long-term debt. For a breakdown of other non-current liabilities, see "Note 13 Other provisions, other current liabilities and other non-current liabilities" to our Consolidated Financial Statements. For further explanation regarding deferred taxes, refer to "Note 16 Taxes" to our Consolidated Financial Statements.

## Cash flows

In the Consolidated Statements of Cash Flows, the effects of discontinued operations are not segregated.

The Consolidated Statements of Cash Flows can be summarized as follows:

(\$ in millions)	2015	2014	2013
Net cash provided by operating activities	3,818	3,845	3,653
Net cash used in investing activities	(974)	(1,121)	(717)
Net cash used in financing activities	(3,380)	(3,024)	(3,856)
Effects of exchange rate changes on cash and equivalents	(342)	(278)	66
<b>Net change in cash and equivalents—continuing operations</b>	<b>(878)</b>	<b>(578)</b>	<b>(854)</b>

## Operating activities

(\$ in millions)	2015	2014	2013
Net income	2,055	2,718	2,907
Depreciation and amortization	1,160	1,305	1,318
Total adjustments to reconcile net income to net cash provided by operating activities (excluding depreciation and amortization)	(55)	(200)	(93)
Total changes in operating assets and liabilities	658	22	(479)
<b>Net cash provided by operating activities</b>	<b>3,818</b>	<b>3,845</b>	<b>3,653</b>

Operating activities in 2015 provided net cash of \$3,818 million, a decrease from 2014 of 0.7 percent. The decrease was driven by lower net income, partly offset by improvements in net working capital. Provisions, net, increased by \$330 million reflecting the timing differences for cash payments on

restructuring programs. Although net income in 2015 included restructuring and related expenses of \$370 million in relation to the White Collar Productivity program, cash payments during 2015 amounted to \$35 million. Net working capital also improved due to stronger collections from customers as we decreased our trade receivables but also increased our advances from customers and billings in excess of sales. Improvements in inventory were offset by similar reductions in trade payables.

Operating activities in 2014 provided net cash of \$3,845 million, an increase from 2013 of 5.3 percent. The increase was driven primarily by improvements in net working capital management but offset partially by the cash impacts of the lower net income in 2014. Net income in 2014 also included \$543 million of net gains from the sale of businesses which are not considered operating activities and thus are adjusted for in order to reconcile net income to net cash provided by operating activities.

### Investing activities

(\$ in millions)	2015	2014	2013
Purchases of marketable securities (available-for-sale)	(1,925)	(1,430)	(526)
Purchases of short-term investments	(614)	(1,465)	(30)
Purchases of property, plant and equipment and intangible assets	(876)	(1,026)	(1,106)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(56)	(70)	(914)
Proceeds from sales of marketable securities (available-for-sale)	434	361	1,367
Proceeds from maturity of marketable securities (available-for-sale)	1,022	523	118
Proceeds from short-term investments	653	1,011	47
Proceeds from sales of property, plant and equipment	68	33	80
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	69	1,110	62
Net cash from settlement of foreign currency derivatives	231	(179)	180
Other investing activities	20	11	5
<b>Net cash used in investing activities</b>	<b>(974)</b>	<b>(1,121)</b>	<b>(717)</b>

Net cash used in investing activities in 2015 was \$974 million, compared to \$1,121 million in 2014. Significantly lower proceeds from sales of businesses were partially offset by a reduction in the net amount invested in marketable securities and other short-term investments as well as lower purchases of property, plant and equipment and intangible assets. Net cash used in investing activities was also lower in 2015 compared to 2014 as we received \$231 million in net cash on settlement of foreign currency derivatives relating to investing activities compared with net cash outflows in 2014 of \$179 million.

Total cash disbursements for the purchase of property, plant and equipment and intangibles were lower in 2015 compared to 2014 due primarily to changes in foreign exchange rates. Total purchases of \$876 million included \$568 million

for construction in process (generally for construction of buildings and other property facilities), \$200 million for the purchase of machinery and equipment, \$50 million for the purchase of land and buildings, and \$58 million for the purchase of intangible assets.

During 2015 we continued to increase the amount of our excess liquidity invested in marketable securities and short-term investments with maturities between 3 months and 1 year. Additional amounts were invested primarily in short-term money market funds and commercial paper. The increase in investments during 2015 resulted in a net outflow of \$430 million.

Net cash used in investing activities in 2014 was \$1,121 million, compared to \$717 million in 2013. Higher proceeds from sales of businesses were offset by net purchases of marketable securities while in 2013, there were net sales of marketable securities. In addition, settlements of foreign currency derivatives resulted in a net outflow of \$179 million in 2014 compared to an inflow of \$180 million in 2013. Purchases of property, plant, and equipment were also lower in 2014 than 2013.

During 2014, we received net pre-tax proceeds from sales of businesses and cost- and equity-accounted companies of \$1,110 million, primarily from the divestment of the Full Service business, the Steel Structures business of Thomas & Betts, the HVAC business of Thomas & Betts and the Power Solutions business of Power-One. In 2013, cash paid for acquisitions (net of cash acquired) amounted to \$914 million, primarily relating to the acquisition of Power-One for \$737 million.

Total cash disbursements for the purchase of property, plant and equipment and intangibles were lower in 2014 compared to 2013, partly due to changes in foreign exchange rates. The total purchases of \$1,026 million included \$724 million for construction in progress, \$188 million for the purchase of machinery and equipment, \$38 million for the purchase of land and buildings, and \$76 million for the purchase of intangible assets.

During 2014, we increased the amount of our excess liquidity invested in marketable securities and short-term investments with maturities between 3 months and 1 year. Amounts were invested primarily in commercial paper, reverse repurchase agreements and time deposits. The increase in these investments during 2014 resulted in a net outflow of \$1,000 million. In 2013, to obtain necessary funds to make dividend payments, bond repayments, and to fund acquisitions, we reduced our amount invested in marketable securities and short-term investments, resulting in net proceeds of \$976 million.

## Financing activities

(\$ in millions)	2015	2014	2013
Net changes in debt with maturities of 90 days or less	3	(103)	(697)
Increase in debt	68	150	492
Repayment of debt	(101)	(90)	(1,893)
Delivery of shares	107	38	74
Purchase of treasury stock	(1,487)	(1,003)	—
Dividends paid	(1,357)	(1,841)	(1,667)
Reduction in nominal value of common shares paid to shareholders	(392)	—	—
Dividends paid to noncontrolling shareholders	(137)	(132)	(149)
Other financing activities	(84)	(43)	(16)
<b>Net cash used in financing activities</b>	<b>(3,380)</b>	<b>(3,024)</b>	<b>(3,856)</b>

Our financing activities primarily include debt transactions (both from the issuance of debt securities and borrowings directly from banks), share transactions and payments of distributions to controlling and noncontrolling shareholders.

In 2015, there was no significant net change in the amount of outstanding debt with maturities of 90 days or less. In 2014, the net cash outflow for debt with maturities of 90 days or less related primarily to repayments made of borrowings in various countries offset by a small increase in the amount outstanding under our commercial paper program in the United States. In 2013, the net cash outflow from changes in debt with maturities of 90 days or less principally reflects a reduction in commercial paper outstanding.

In 2015 and 2014, increases in other debt included cash flows from additional borrowings in various countries. In 2013, the increase in debt primarily related to borrowings under borrowing facilities in various countries and issuances of commercial paper with maturities above 90 days.

In 2015 and 2014 repayment of debt reflects repayments of borrowings in various countries. During 2013, \$1,893 million of debt was repaid, partially reflecting the repayment at maturity of the 700 million euro bonds (equivalent to \$918 million at date of repayment). Other repayments during 2013 consisted mainly of repayments of commercial paper issuances having maturities above 90 days and repayments of other short-term debt.

In 2015, "Purchase of treasury stock" reflects the cash paid to purchase 73 million of our own shares in connection with the share buyback program announced in September 2014. In 2014, the amount reflects cash paid to acquire 45 million of our own shares of which 33 million shares were purchased in connection with the share buyback program. For additional information on the share buyback program see "Note 19 Stockholders' equity" to our Consolidated Financial Statements.

## Disclosures about contractual obligations and commitments

The contractual obligations presented in the table below represent our estimates of future payments under fixed contractual obligations and commitments. The amounts in the table may differ from those reported in our Consolidated Balance Sheet at December 31, 2015. Changes in our business needs,

cancellation provisions and changes in interest rates, as well as actions by third parties and other factors, may cause these estimates to change. Therefore, our actual payments in future periods may vary from those presented in the table. The following table summarizes certain of our contractual obligations and principal and interest payments under our debt instruments, leases and purchase obligations at December 31, 2015.

Payments due by period (\$ in millions)	Total	Less than			More than 5 years
		1 year	1-3 years	3-5 years	
Long-term debt obligations	6,989	1,145	1,194	1,388	3,262
Interest payments related to					
long-term debt obligations	1,599	197	338	270	794
Operating lease obligations	1,757	417	636	400	304
Capital lease obligations <sup>(1)</sup>	196	32	46	36	82
Purchase obligations	4,330	3,678	552	98	2
<b>Total</b>	<b>14,871</b>	<b>5,469</b>	<b>2,766</b>	<b>2,192</b>	<b>4,444</b>

<sup>(1)</sup> Capital lease obligations represent the total cash payments to be made in the future and include interest expense of \$71 million and executory costs of \$1 million.

In the table above, the long-term debt obligations reflect the cash amounts to be repaid upon maturity of those debt obligations. The cash obligations above will differ from the long-term debt balance reflected in "Note 12 Debt" to our Consolidated Financial Statements due to the impacts of fair value hedge accounting adjustments and premiums or discounts on certain debt. In addition, capital lease obligations are shown separately in the table above while they are combined with Long-term debt amounts in our Consolidated Balance Sheets.

We have determined the interest payments related to long-term debt obligations by reference to the payments due under the terms of our debt obligations at the time such obligations were incurred. However, we use interest rate swaps to modify the interest characteristics of certain of our debt obligations. The net effect of these swaps may be to increase or decrease the actual amount of our cash interest payment obligations, which may differ from those stated in the above table. For further details on our debt obligations and the related hedges, see "Note 12 Debt" to our Consolidated Financial Statements.

Of the total of \$868 million unrecognized tax benefits (net of deferred tax assets) at December 31, 2015, it is expected that \$17 million will be paid within less than a year. However, we cannot make a reasonably reliable estimate as to the related future payments for the remaining amount.

## Off balance sheet arrangements

### Commercial commitments

We disclose the maximum potential exposure of certain guarantees, as well as possible recourse provisions that may allow us to recover from third parties amounts paid out under such guarantees. The maximum potential exposure does not allow any discounting of our assessment of actual exposure under the guarantees. The information below reflects our maximum potential exposure under the guarantees, which is higher than our assessment of the expected exposure.

## Guarantees

The following table provides quantitative data regarding our third-party guarantees. The maximum potential payments represent a worst-case scenario, and do not reflect our expected outcomes.

December 31, (\$ in millions)	Maximum potential payments	
	2015	2014
Performance guarantees	209	232
Financial guarantees	77	72
Indemnification guarantees	50	50
<b>Total</b>	<b>336</b>	<b>354</b>

The carrying amounts of liabilities recorded in the Consolidated Balance Sheets in respect of the above guarantees were not significant at December 31, 2015 and 2014, and reflect our best estimate of future payments, which we may incur as part of fulfilling our guarantee obligations.

In addition, in the normal course of bidding for and executing certain projects, we have entered into standby letters of credit, bid/performance bonds and surety bonds (collectively "performance bonds") with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. ABB would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in 2015, 2014 and 2013.

For additional descriptions of our performance, financial and indemnification guarantees see "Note 15 Commitments and contingencies" to our Consolidated Financial Statements.

# Consolidated Financial Statements of ABB Group

## Consolidated Income Statements

Year ended December 31 (\$ in millions, except per share data in \$)	2015	2014	2013
Sales of products	29,477	33,279	35,282
Sales of services	6,004	6,551	6,566
<b>Total revenues</b>	<b>35,481</b>	<b>39,830</b>	<b>41,848</b>
Cost of products	(21,694)	(24,506)	(25,728)
Cost of services	(3,653)	(4,109)	(4,128)
<b>Total cost of sales</b>	<b>(25,347)</b>	<b>(28,615)</b>	<b>(29,856)</b>
<b>Gross profit</b>	<b>10,134</b>	<b>11,215</b>	<b>11,992</b>
Selling, general and administrative expenses	(5,574)	(6,067)	(6,094)
Non-order related research and development expenses	(1,406)	(1,499)	(1,470)
Other income (expense), net	(105)	529	(41)
<b>Income from operations</b>	<b>3,049</b>	<b>4,178</b>	<b>4,387</b>
Interest and dividend income	77	80	69
Interest and other finance expense	(286)	(362)	(390)
<b>Income from continuing operations before taxes</b>	<b>2,840</b>	<b>3,896</b>	<b>4,066</b>
Provision for taxes	(788)	(1,202)	(1,122)
<b>Income from continuing operations, net of tax</b>	<b>2,052</b>	<b>2,694</b>	<b>2,944</b>
Income (loss) from discontinued operations, net of tax	3	24	(37)
<b>Net income</b>	<b>2,055</b>	<b>2,718</b>	<b>2,907</b>
Net income attributable to noncontrolling interests	(122)	(124)	(120)
<b>Net income attributable to ABB</b>	<b>1,933</b>	<b>2,594</b>	<b>2,787</b>
<i>Amounts attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	1,930	2,570	2,824
Net income	1,933	2,594	2,787
<i>Basic earnings per share attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Net income	0.87	1.13	1.21
<i>Diluted earnings per share attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Net income	0.87	1.13	1.21
<i>Weighted-average number of shares outstanding (in millions) used to compute:</i>			
Basic earnings per share attributable to ABB shareholders	2,226	2,288	2,297
Diluted earnings per share attributable to ABB shareholders	2,230	2,295	2,305

See accompanying Notes to the Consolidated Financial Statements

## Consolidated Statements of Comprehensive Income

Year ended December 31 (\$ in millions)	2015	2014	2013
<b>Net income</b>	<b>2,055</b>	<b>2,718</b>	<b>2,907</b>
<i>Other comprehensive income (loss), net of tax:</i>			
<b>Foreign currency translation adjustments</b>	<b>(1,058)</b>	<b>(1,680)</b>	<b>141</b>
<i>Available-for-sale securities:</i>			
Net unrealized gains (losses) arising during the year	(7)	(9)	(4)
Reclassification adjustments for net (gains) losses included in net income	1	15	(13)
<b>Unrealized gains (losses) on available-for-sale securities</b>	<b>(6)</b>	<b>6</b>	<b>(17)</b>
<i>Pension and other postretirement plans:</i>			
Prior service (costs) credits arising during the year	88	(3)	(16)
Net actuarial gains (losses) arising during the year	210	(614)	291
Amortization of prior service cost included in net income	26	17	23
Amortization of net actuarial loss included in net income	91	79	99
<b>Pension and other postretirement plan adjustments</b>	<b>415</b>	<b>(521)</b>	<b>397</b>
<i>Cash flow hedge derivatives:</i>			
Net unrealized gains (losses) arising during the year	(20)	(52)	28
Reclassification adjustments for net (gains) losses included in net income	30	9	(43)
<b>Unrealized gains (losses) of cash flow hedge derivatives</b>	<b>10</b>	<b>(43)</b>	<b>(15)</b>
<b>Total other comprehensive income (loss), net of tax</b>	<b>(639)</b>	<b>(2,238)</b>	<b>506</b>
<b>Total comprehensive income, net of tax</b>	<b>1,416</b>	<b>480</b>	<b>3,413</b>
Comprehensive income attributable to noncontrolling interests, net of tax	(100)	(115)	(115)
<b>Total comprehensive income, net of tax, attributable to ABB</b>	<b>1,316</b>	<b>365</b>	<b>3,298</b>

See accompanying Notes to the Consolidated Financial Statements

# Consolidated Balance Sheets

December 31 (\$ in millions, except share data)	2015	2014
Cash and equivalents	4,565	5,443
Marketable securities and short-term investments	1,633	1,325
Receivables, net	10,061	11,078
Inventories, net	4,757	5,376
Prepaid expenses	225	218
Deferred taxes	881	902
Other current assets	638	644
<b>Total current assets</b>	<b>22,760</b>	<b>24,986</b>
Property, plant and equipment, net	5,276	5,652
Goodwill	9,671	10,053
Other intangible assets, net	2,337	2,702
Prepaid pension and other employee benefits	68	70
Investments in equity-accounted companies	178	177
Deferred taxes	423	511
Other non-current assets	643	701
<b>Total assets</b>	<b>41,356</b>	<b>44,852</b>
Accounts payable, trade	4,342	4,765
Billings in excess of sales	1,375	1,455
Short-term debt and current maturities of long-term debt	1,454	353
Advances from customers	1,598	1,624
Deferred taxes	249	289
Provisions for warranties	1,089	1,148
Other provisions	1,920	1,689
Other current liabilities	3,817	4,257
<b>Total current liabilities</b>	<b>15,844</b>	<b>15,580</b>
Long-term debt	5,985	7,312
Pension and other employee benefits	1,924	2,394
Deferred taxes	965	1,165
Other non-current liabilities	1,650	1,586
<b>Total liabilities</b>	<b>26,368</b>	<b>28,037</b>
<i>Commitments and contingencies</i>		
Stockholders' equity:		
Capital stock and additional paid-in capital (2,314,743,264 issued shares at December 31, 2015 and 2014)	1,444	1,777
Retained earnings	20,476	19,939
Accumulated other comprehensive loss	(4,858)	(4,241)
Treasury stock, at cost (123,118,123 and 55,843,639 shares at December 31, 2015 and 2014, respectively)	(2,581)	(1,206)
<b>Total ABB stockholders' equity</b>	<b>14,481</b>	<b>16,269</b>
Noncontrolling interests	507	546
<b>Total stockholders' equity</b>	<b>14,988</b>	<b>16,815</b>
<b>Total liabilities and stockholders' equity</b>	<b>41,356</b>	<b>44,852</b>

See accompanying Notes to the Consolidated Financial Statements

# Consolidated Statements of Cash Flows

Year ended December 31 (\$ in millions)	2015	2014	2013
<b>Operating activities:</b>			
Net income	2,055	2,718	2,907
<i>Adjustments to reconcile net income to net cash provided by operating activities:</i>			
Depreciation and amortization	1,160	1,305	1,318
Pension and other employee benefits	56	16	6
Deferred taxes	(219)	65	(137)
Net loss (gain) from sale of property, plant and equipment	(26)	(17)	(18)
Net loss (gain) from sale of businesses	20	(543)	16
Net loss (gain) from derivatives and foreign exchange	15	167	(39)
Other	99	112	79
<i>Changes in operating assets and liabilities:</i>			
Trade receivables, net	162	(12)	(555)
Inventories, net	105	(176)	324
Trade payables	(112)	257	(70)
Accrued liabilities	(24)	9	71
Billings in excess of sales	35	(118)	(168)
Provisions, net	330	(127)	199
Advances from customers	106	39	(145)
Income taxes payable and receivable	(32)	(13)	(18)
Other assets and liabilities, net	88	163	(117)
<b>Net cash provided by operating activities</b>	<b>3,818</b>	<b>3,845</b>	<b>3,653</b>
<b>Investing activities:</b>			
Purchases of marketable securities (available-for-sale)	(1,925)	(1,430)	(526)
Purchases of short-term investments	(614)	(1,465)	(30)
Purchases of property, plant and equipment and intangible assets	(876)	(1,026)	(1,106)
Acquisition of businesses (net of cash acquired) and increases in cost- and equity-accounted companies	(56)	(70)	(914)
Proceeds from sales of marketable securities (available-for-sale)	434	361	1,367
Proceeds from maturity of marketable securities (available-for-sale)	1,022	523	118
Proceeds from short-term investments	653	1,011	47
Proceeds from sales of property, plant and equipment	68	33	80
Proceeds from sales of businesses (net of transaction costs and cash disposed) and cost- and equity-accounted companies	69	1,110	62
Net cash from settlement of foreign currency derivatives	231	(179)	180
Other investing activities	20	11	5
<b>Net cash used in investing activities</b>	<b>(974)</b>	<b>(1,121)</b>	<b>(717)</b>
<b>Financing activities:</b>			
Net changes in debt with maturities of 90 days or less	3	(103)	(697)
Increase in debt	68	150	492
Repayment of debt	(101)	(90)	(1,893)
Delivery of shares	107	38	74
Purchase of treasury stock	(1,487)	(1,003)	—
Dividends paid	(1,357)	(1,841)	(1,667)
Reduction in nominal value of common shares paid to shareholders	(392)	—	—
Dividends paid to noncontrolling shareholders	(137)	(132)	(149)
Other financing activities	(84)	(43)	(16)
<b>Net cash used in financing activities</b>	<b>(3,380)</b>	<b>(3,024)</b>	<b>(3,856)</b>
Effects of exchange rate changes on cash and equivalents	(342)	(278)	66
<b>Net change in cash and equivalents—continuing operations</b>	<b>(878)</b>	<b>(578)</b>	<b>(854)</b>
Cash and equivalents, beginning of period	5,443	6,021	6,875
<b>Cash and equivalents, end of period</b>	<b>4,565</b>	<b>5,443</b>	<b>6,021</b>
<b>Supplementary disclosure of cash flow information:</b>			
Interest paid	221	259	287
Taxes paid	1,043	1,155	1,278

See accompanying Notes to the Consolidated Financial Statements

# Consolidated Statements of Changes in Stockholders' Equity

Years ended December 31, 2015, 2014 and 2013 (\$ in millions)	Capital stock and additional paid-in capital	Retained earnings
<b>Balance at January 1, 2013</b>	<b>1,691</b>	<b>18,066</b>
Comprehensive income:		
Net income		2,787
Foreign currency translation adjustments, net of tax		
Effect of change in fair value of available-for-sale securities, net of tax		
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax		
Change in derivatives qualifying as cash flow hedges, net of tax		
<b>Total comprehensive income</b>		
Changes in noncontrolling interests	(17)	
Dividends paid to noncontrolling shareholders		
Dividends paid		(1,667)
Share-based payment arrangements	71	
Delivery of shares	(8)	
Call options	13	
Replacement options issued in connection with acquisition	2	
Other	(2)	
<b>Balance at December 31, 2013</b>	<b>1,750</b>	<b>19,186</b>
Comprehensive income:		
Net income		2,594
Foreign currency translation adjustments, net of tax		
Effect of change in fair value of available-for-sale securities, net of tax		
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax		
Change in derivatives qualifying as cash flow hedges, net of tax		
<b>Total comprehensive income</b>		
Changes in noncontrolling interests	(34)	
Dividends paid to noncontrolling shareholders		
Dividends paid		(1,841)
Share-based payment arrangements	73	
Purchase of treasury stock		
Delivery of shares	(17)	
Call options	5	
<b>Balance at December 31, 2014</b>	<b>1,777</b>	<b>19,939</b>
Comprehensive income:		
Net income		1,933
Foreign currency translation adjustments, net of tax		
Effect of change in fair value of available-for-sale securities, net of tax		
Unrecognized income (expense) related to pensions and other postretirement plans, net of tax		
Change in derivatives qualifying as cash flow hedges, net of tax		
<b>Total comprehensive income</b>		
Changes in noncontrolling interests	(30)	(25)
Dividends paid to noncontrolling shareholders		
Dividends paid		(1,317)
Reduction in nominal value of common shares paid to shareholders	(349)	(54)
Share-based payment arrangements	61	
Purchase of treasury stock		
Delivery of shares	(19)	
Call options	4	
<b>Balance at December 31, 2015</b>	<b>1,444</b>	<b>20,476</b>

See accompanying Notes to the Consolidated Financial Statements

Accumulated other comprehensive loss								
Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other post-retirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total accumulated other comprehensive loss	Treasury stock	Total ABB stockholders' equity	Non-controlling interests	Total stockholders' equity
(580)	24	(2,004)	37	(2,523)	(328)	16,906	540	17,446
						2,787	120	2,907
149				149		149	(8)	141
	(17)			(17)		(17)		(17)
		394		394		394	3	397
			(15)	(15)		(15)		(15)
						3,298	115	3,413
						(17)	25	8
						—	(150)	(150)
						(1,667)		(1,667)
						71		71
					82	74		74
						13		13
						2		2
						(2)		(2)
(431)	7	(1,610)	22	(2,012)	(246)	18,678	530	19,208
						2,594	124	2,718
(1,671)				(1,671)		(1,671)	(9)	(1,680)
	6			6		6		6
		(521)		(521)		(521)		(521)
			(43)	(43)		(43)		(43)
						365	115	480
						(34)	33	(1)
						—	(132)	(132)
						(1,841)		(1,841)
						73		73
					(1,015)	(1,015)		(1,015)
					55	38		38
						5		5
(2,102)	13	(2,131)	(21)	(4,241)	(1,206)	16,269	546	16,815
						1,933	122	2,055
(1,033)				(1,033)		(1,033)	(25)	(1,058)
	(6)			(6)		(6)		(6)
		412		412		412	3	415
			10	10		10		10
						1,316	100	1,416
						(55)	(2)	(57)
						—	(137)	(137)
						(1,317)		(1,317)
						(403)		(403)
						61		61
					(1,501)	(1,501)		(1,501)
					126	107		107
						4		4
(3,135)	7	(1,719)	(11)	(4,858)	(2,581)	14,481	507	14,988

# Notes to the Consolidated Financial Statements

<b>Note 1</b> <b>The Company</b>	ABB Ltd and its subsidiaries (collectively, the Company) together form a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The Company works with customers to engineer and install networks, facilities and plants with particular emphasis on enhancing efficiency, reliability and productivity for customers who generate, convert, transmit, distribute and consume energy.
<b>Note 2</b> <b>Significant accounting policies</b>	The following is a summary of significant accounting policies followed in the preparation of these Consolidated Financial Statements.
Basis of presentation	The Consolidated Financial Statements are prepared in accordance with United States of America (United States or U.S.) generally accepted accounting principles (U.S. GAAP) and are presented in United States dollars (\$) or USD) unless otherwise stated. The par value of capital stock is denominated in Swiss francs.
Reclassifications	Certain amounts reported for prior years in the Consolidated Financial Statements and the accompanying Notes have been reclassified to conform to the current year's presentation. These changes relate to certain amounts reclassified from Other non-current assets to Long-term debt in the Consolidated Balance Sheet at December 31, 2014, as a result of the early-adoption of an accounting standard update on the presentation of debt issuance costs (see "Applicable for current period" below). In addition, certain amounts reported in the Consolidated Statements of Cash Flows for prior periods have been reclassified to conform to the current period presentation. These reclassifications were within Net cash provided by operating activities.
Scope of consolidation	The Consolidated Financial Statements include the accounts of ABB Ltd and companies which are directly or indirectly controlled by ABB Ltd. Additionally, the Company consolidates variable interest entities if it has determined that it is the primary beneficiary. Intercompany accounts and transactions are eliminated. Investments in joint ventures and affiliated companies in which the Company has the ability to exercise significant influence over operating and financial policies (generally through direct or indirect ownership of 20 percent to 50 percent of the voting rights), are recorded in the Consolidated Financial Statements using the equity method of accounting.
Operating cycle	A portion of the Company's activities (primarily long-term construction activities) has an operating cycle that exceeds one year. For classification of current assets and liabilities related to such activities, the Company elected to use the duration of the individual contracts as its operating cycle. Accordingly, there are accounts receivable, inventories and provisions related to these contracts which will not be realized within one year that have been classified as current.
Use of estimates	<p>The preparation of financial statements in conformity with U.S. GAAP requires management to make assumptions and estimates that directly affect the amounts reported in the Consolidated Financial Statements and the accompanying Notes. The most significant, difficult and subjective of such accounting assumptions and estimates include:</p> <ul style="list-style-type: none"><li>– assumptions and projections, principally related to future material, labor and project-related overhead costs, used in determining the percentage-of-completion on projects,</li><li>– estimates of loss contingencies associated with litigation or threatened litigation and other claims and inquiries, environmental damages, product warranties, self-insurance reserves, regulatory and other proceedings,</li><li>– assumptions used in the calculation of pension and postretirement benefits and the fair value of pension plan assets,</li><li>– recognition and measurement of current and deferred income tax assets and liabilities (including the measurement of uncertain tax positions),</li><li>– growth rates, discount rates and other assumptions used in testing goodwill for impairment,</li><li>– assumptions used in determining inventory obsolescence and net realizable value,</li><li>– estimates and assumptions used in determining the fair values of assets and liabilities assumed in business combinations,</li><li>– growth rates, discount rates and other assumptions used to determine impairment of long-lived assets, and</li><li>– assessment of the allowance for doubtful accounts.</li></ul> <p>The actual results and outcomes may differ from the Company's estimates and assumptions.</p>
Cash and equivalents	<p>Cash and equivalents include highly liquid investments with maturities of three months or less at the date of acquisition.</p> <p>Currency and other local regulatory limitations related to the transfer of funds exist in a number of countries where the Company operates. Funds, other than regular dividends, fees or loan repayments, cannot be readily transferred abroad from these countries and are therefore deposited and used for working capital needs locally. These funds are included in cash and equivalents as they are not considered restricted.</p>
Marketable securities and short-term investments	Management determines the appropriate classification of held-to-maturity and available-for-sale securities at the time of purchase. At each reporting date, the appropriateness of the classification of the Company's investments in debt and equity securities is reassessed. Debt securities are classified as held-to-maturity when the Company has the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are stated at amortized cost, adjusted for

**Note 2**  
**Significant accounting policies,**  
**continued**

accretion of discounts or amortization of premiums to maturity computed under the effective interest method. Such accretion or amortization is included in "Interest and dividend income". Marketable debt securities not classified as held-to-maturity and equity securities that have readily determinable fair values are classified as available-for-sale and reported at fair value.

Unrealized gains and losses on available-for-sale securities are excluded from the determination of earnings and are instead recognized in the "Accumulated other comprehensive loss" component of stockholders' equity, net of tax, until realized. Realized gains and losses on available-for-sale securities are computed based upon the historical cost of these securities, using the specific identification method.

Marketable debt securities are generally classified as either "Cash and equivalents" or "Marketable securities and short-term investments" according to their maturity at the time of acquisition.

Marketable equity securities are generally classified as "Marketable securities and short-term investments", however any marketable securities held as a long-term investment rather than as an investment of excess liquidity, are classified as "Other non-current assets".

The Company performs a periodic review of its debt and equity securities to determine whether an other-than-temporary impairment has occurred. Generally, when an individual security has been in an unrealized loss position for an extended period of time, the Company evaluates whether an impairment has occurred. The evaluation is based on specific facts and circumstances at the time of assessment, which include general market conditions, and the duration and extent to which the fair value is below cost.

If the fair value of a debt security is less than its amortized cost, then an other-than-temporary impairment for the difference is recognized if (i) the Company has the intent to sell the security, (ii) it is more likely than not that the Company will be required to sell the security before recovery of its amortized cost base or (iii) a credit loss exists insofar as the Company does not expect to recover the entire recognized amortized cost of the security. Such impairment charges are generally recognized in "Interest and other finance expense". If the impairment is due to factors other than credit losses, and the Company does not intend to sell the security and it is not more likely than not that it will be required to sell the security before recovery of the security's amortized cost, such impairment charges are recorded in "Accumulated other comprehensive loss".

In addition, for equity securities, the Company assesses whether the cost value will recover within the near-term and whether the Company has the intent and ability to hold that equity security until such recovery occurs. If an other-than-temporary impairment is identified, the security is written down to its fair value and the related losses are recognized in "Interest and other finance expense", unless the impairment relates to equity securities classified as "Other non-current assets", in which case the impairment is reported in "Other income (expense), net".

**Accounts receivable**  
**and allowance for doubtful accounts**

Accounts receivable are recorded at the invoiced amount. The Company has a group-wide policy on the management of credit risk. The policy includes a credit assessment methodology to assess the creditworthiness of customers and assign to those customers a risk category. Third-party agencies' ratings are considered, if available. For customers where agency ratings are not available, the customer's most recent financial statements, payment history and other relevant information are considered in the assignment to a risk category. Customers are assessed at least annually or more frequently when information on significant changes in the customers' financial position becomes known. In addition to the assignment to a risk category, a credit limit per customer is set.

The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in existing accounts receivable. The Company determines the allowance based on historical write-off experience and customer specific data. If an amount has not been settled within its contractual payment term then it is considered past due. The Company reviews the allowance for doubtful accounts regularly and past due balances are reviewed for collectability. Account balances are charged off against the related allowance when the Company believes that the amount will not be recovered.

The Company, in its normal course of business, transfers receivables to third parties, generally without recourse. The transfer is accounted for as a sale when the Company has surrendered control over the receivables. Control is deemed to have been surrendered when (i) the transferred receivables have been put presumptively beyond the reach of the Company and its creditors, even in bankruptcy or other receivership, (ii) the third-party transferees have the right to pledge or exchange the transferred receivables, and (iii) the Company has relinquished effective control over the transferred receivables and does not retain the ability or obligation to repurchase or redeem the transferred receivables. At the time of sale, the sold receivables are removed from the Consolidated Balance Sheets and the related cash inflows are classified as operating activities in the Consolidated Statements of Cash Flows. Costs associated with the sale of receivables, including the related gains and losses from the sales, are included in "Interest and other finance expense". Transfers of receivables that do not meet the requirements for treatment as sales are accounted for as secured borrowings and the related cash flows are classified as financing activities in the Consolidated Statements of Cash Flows.

**Concentrations of credit risk**

The Company sells a broad range of products, systems and services to a wide range of industrial, commercial and utility customers as well as various government agencies and quasi-governmental agencies throughout the world. Concentrations of credit risk with respect to accounts receivable are limited, as the Company's customer base is comprised of a large number of individual customers. Ongoing credit evaluations of customers' financial positions are performed to determine whether the use of credit support instruments such as guarantees, letters of credit or credit insurance are necessary; collateral is not generally required. The Company maintains reserves for potential credit losses as discussed above in "Accounts receivable and allowance for doubtful accounts". Such losses, in the aggregate, are in line with the Company's expectations.

It is the Company's policy to invest cash in deposits with banks throughout the world with certain minimum credit ratings and in high quality, low risk, liquid investments. The Company actively manages its credit risk by routinely reviewing the

**Note 2**  
**Significant accounting policies,**  
**continued**

creditworthiness of the banks and the investments held. The Company has not incurred significant credit losses related to such investments.

The Company's exposure to credit risk on derivative financial instruments is the risk that the counterparty will fail to meet its obligations. To reduce this risk, the Company has credit policies that require the establishment and periodic review of credit limits for individual counterparties. In addition, the Company has entered into close-out netting agreements with most derivative counterparties. Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events. In the Consolidated Financial Statements derivative transactions are presented on a gross basis.

**Revenue recognition**

The Company generally recognizes revenues for the sale of goods when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. With regards to the sale of products, delivery is not considered to have occurred, and therefore no revenues are recognized, until the customer has taken title to the products and assumed the risks and rewards of ownership of the products specified in the purchase order or sales agreement. Generally, the transfer of title and risks and rewards of ownership are governed by the contractually-defined shipping terms. The Company uses various International Commercial shipping terms (as promulgated by the International Chamber of Commerce) in its sales of products to third-party customers, such as Ex Works (EXW), Free Carrier (FCA) and Delivered Duty Paid (DDP). Subsequent to delivery of the products, the Company generally has no further contractual performance obligations that would preclude revenue recognition.

Revenues under long-term construction-type contracts are generally recognized using the percentage-of-completion method of accounting. The Company principally uses the cost-to-cost method to measure progress towards completion on contracts. Under this method, progress of contracts is measured by actual costs incurred in relation to the Company's best estimate of total estimated costs, which are reviewed and updated routinely for contracts in progress. The cumulative effect of any change in estimate is recorded in the period when the change in estimate is determined.

Short-term construction-type contracts, or long-term construction-type contracts for which reasonably dependable estimates cannot be made or for which inherent hazards make estimates difficult, are accounted for under the completed-contract method. 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.

For non construction-type contracts that contain customer acceptance provisions, revenue is deferred until customer acceptance occurs or the Company has demonstrated the customer-specified objective criteria have been met or the contractual acceptance period has lapsed.

Revenues from service transactions are recognized as services are performed. For long-term service contracts, revenues are recognized on a straight-line basis over the term of the contract or, if the performance pattern is other than straight-line, as the services are provided. Service revenues reflect revenues earned from the Company's activities in providing services to customers primarily subsequent to the sale and delivery of a product or complete system. Such revenues consist of maintenance-type contracts, field service activities that include personnel and accompanying spare parts, and installation and commissioning of products as a stand-alone service or as part of a service contract.

Revenues for software license fees are recognized when persuasive evidence of a non-cancelable license agreement exists, delivery has occurred, the license fee is fixed or determinable, and collection is probable. In software arrangements that include rights to multiple software products and/or services, the total arrangement fee is allocated using the residual method. Under this method, revenue is allocated to the undelivered elements based on vendor-specific objective evidence (VSOE) of the fair value of such undelivered elements and the residual amounts of revenue are allocated to the delivered elements. Elements included in multiple element arrangements may consist of software licenses, maintenance (which includes customer support services and unspecified upgrades), hosting, and consulting services. VSOE is based on the price generally charged when an element is sold separately or, in the case of an element not yet sold separately, the price established by management, if it is probable that the price, once established, will not change once the element is sold separately. If VSOE does not exist for an undelivered element, the total arrangement fee will be recognized as revenue over the life of the contract or upon delivery of the undelivered element.

The Company offers multiple element arrangements to meet its customers' needs. These arrangements may involve the delivery of multiple products and/or performance of services (such as installation and training) and the delivery and/or performance may occur at different points in time or over different periods of time. Deliverables of such multiple element arrangements are evaluated to determine the unit of accounting and if certain criteria are met, the Company allocates revenues to each unit of accounting based on its relative selling price. A hierarchy of selling prices is used to determine the selling price of each specific deliverable that includes VSOE (if available), third-party evidence (if VSOE is not available), or estimated selling price if neither of the first two is available. The estimated selling price reflects the Company's best estimate of what the selling prices of elements would be if the elements were sold on a stand-alone basis. Revenue is allocated between the elements of an arrangement at the inception of the arrangement. Such arrangements generally include industry-specific performance and termination provisions, such as in the event of substantial delays or non-delivery.

Revenues are reported net of customer rebates and similar incentives. Taxes assessed by a governmental authority that are directly imposed on revenue-producing transactions between the Company and its customers, such as sales, use, value-added and some excise taxes, are excluded from revenues.

**Contract loss provisions**

Losses on 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.

**Shipping and handling costs**

Shipping and handling costs are recorded as a component of cost of sales.

**Note 2**  
**Significant accounting policies,**  
**continued**

Inventories

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out method, the weighted-average cost method, or in certain circumstances (for example, where the completed-contract method of revenue recognition is used) the specific identification method. Inventoried costs are stated at acquisition cost or actual production cost, including direct material and labor and applicable manufacturing overheads. Adjustments to reduce the cost of inventory to its net market value are made, if required, for decreases in sales prices, obsolescence or similar reductions in the estimated net realizable value.

Impairment of long-lived assets

Long-lived assets that are held and used are assessed for impairment when events or circumstances indicate that the carrying amount of the asset may not be recoverable. If the asset's net carrying value exceeds the asset's net undiscounted cash flows expected to be generated over its remaining useful life including net proceeds expected from disposition of the asset, if any, the carrying amount of the asset is reduced to its estimated fair value. The estimated fair value is determined using a market, income and/or cost approach.

Property, plant and equipment

Property, plant and equipment is stated at cost, less accumulated depreciation and is depreciated using the straight-line method. The estimated useful lives of the assets are generally as follows:

- factories and office buildings: 30 to 40 years,
- other facilities: 15 years,
- machinery and equipment: 3 to 15 years,
- furniture and office equipment: 3 to 8 years, and
- leasehold improvements are depreciated over their estimated useful life or, for operating leases, over the lease term, if shorter.

Goodwill and other intangible assets

Goodwill is reviewed for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may not be recoverable.

Goodwill is evaluated for impairment at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment. For the annual impairment review in 2015, the reporting units were the same as the operating segments for Discrete Automation and Motion, Low Voltage Products, Power Products and Power Systems, while for the Process Automation operating segment, the reporting units were determined to be one level below the operating segment.

When evaluating goodwill for impairment, the Company uses either a qualitative or quantitative assessment method for each reporting unit. The qualitative assessment involves determining, based on an evaluation of qualitative factors, if it is more likely than not that the fair value of a reporting unit is less than its carrying value. If, based on this qualitative assessment, it is determined to be more likely than not that the reporting unit's fair value is less than its carrying value, the two-step quantitative impairment test (described below) is performed, otherwise no further analysis is required. If the Company elects not to perform the qualitative assessment for a reporting unit, the two-step quantitative impairment test is performed.

The two-step quantitative impairment test calculates the fair value of a reporting unit (based on the income approach whereby the fair value of a reporting unit is calculated based on the present value of future cash flows) and compares it to the reporting unit's carrying value. If the carrying value of the net assets of a reporting unit exceeds the fair value of the reporting unit then the Company performs the second step of the impairment test to determine the implied fair value of the reporting unit's goodwill. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, the Company records an impairment charge equal to the difference.

The cost of acquired intangible assets with a finite life is amortized using a method of amortization that reflects the pattern of intangible assets' expected contributions to future cash flows. If that pattern cannot be reliably determined, the straight-line method is used. The amortization periods range from 3 to 5 years for software and from 5 to 20 years for customer-, technology- and marketing-related intangibles. Intangible assets with a finite life are tested for impairment upon the occurrence of certain triggering events.

Capitalized software costs

**Software for internal use**

Costs incurred in the application development stage until the software is substantially complete are capitalized and are amortized on a straight-line basis over the estimated useful life of the software, typically ranging from 3 to 5 years.

**Software for sale**

Costs incurred after the software has demonstrated its technological feasibility until the product is available for general release to the customers are capitalized and amortized on a straight-line basis over the estimated life of the product. The Company periodically performs an evaluation to determine that the unamortized cost of software to be sold does not exceed the net realizable value. If the unamortized cost of software to be sold exceeds its net realizable value, the Company records an impairment charge equal to the difference.

Derivative financial instruments and hedging activities

The Company uses derivative financial instruments to manage currency, commodity, interest rate and equity exposures, arising from its global operating, financing and investing activities (see Note 5).

The Company recognizes all derivatives, other than certain derivatives indexed to the Company's own stock, at fair value in the Consolidated Balance Sheets. Derivatives that are not designated as hedging instruments are reported at fair value with derivative gains and losses reported through earnings and classified consistent with the nature of the underlying transaction.

If the derivatives are designated as a hedge, depending on the nature of the hedge, changes in the fair value of the derivatives will either be offset against the change in fair value of the hedged item attributable to the risk being hedged through earnings (in the case of a fair value hedge) or recognized in "Accumulated other comprehensive loss" until the hedged item is recognized in earnings (in the case of a cash flow hedge). The ineffective portion of a derivative's change in fair value is immediately recognized in earnings consistent with the classification of the hedged item. Where derivative

**Note 2**  
**Significant accounting policies,**  
**continued**

financial instruments have been designated as cash flow hedges of forecasted transactions and such forecasted transactions are no longer probable of occurring, hedge accounting is discontinued and any derivative gain or loss previously included in "Accumulated other comprehensive loss" is reclassified into earnings consistent with the nature of the original forecasted transaction. Gains or losses from derivatives designated as hedging instruments in a fair value hedge are reported through earnings and classified consistent with the nature of the underlying hedged transaction.

Certain commercial contracts may grant rights to the Company or the counterparties, or contain other provisions that are considered to be derivatives. Such embedded derivatives are assessed at inception of the contract and depending on their characteristics, accounted for as separate derivative instruments and shown at their fair value in the balance sheet with changes in their fair value reported in earnings consistent with the nature of the commercial contract to which they relate.

Derivatives are classified in the Consolidated Statements of Cash Flows in the same section as the underlying item. Cash flows from the settlement of undesignated derivatives used to manage the risks of different underlying items on a net basis, are classified within "Net cash provided by operating activities", as the underlying items are primarily operational in nature. Other cash flows on the settlement of derivatives are recorded within "Net cash used in investing activities".

**Leases**

The Company leases primarily real estate and office equipment. Rental expense for operating leases is recorded on a straight-line basis over the life of the lease term. Lease transactions where substantially all risks and rewards incident to ownership are transferred from the lessor to the lessee are accounted for as capital leases. All other leases are accounted for as operating leases. Amounts due under capital leases are recorded as a liability. The interest in assets acquired under capital leases is recorded as property, plant and equipment. Depreciation and amortization of assets recorded under capital leases is included in depreciation and amortization expense.

**Translation of foreign currencies**  
**and foreign exchange transactions**

The functional currency for most of the Company's subsidiaries is the applicable local currency. The translation from the applicable functional currencies into the Company's reporting currency is performed for balance sheet accounts using exchange rates in effect at the balance sheet date and for income statement accounts using average exchange rates prevailing during the year. The resulting translation adjustments are excluded from the determination of earnings and are recognized in "Accumulated other comprehensive loss" until the subsidiary is sold, substantially liquidated or evaluated for impairment in anticipation of disposal.

Foreign currency exchange gains and losses, such as those resulting from foreign currency denominated receivables or payables, are included in the determination of earnings, except as they relate to intercompany loans that are equity-like in nature with no reasonable expectation of repayment, which are recognized in "Accumulated other comprehensive loss". Exchange gains and losses recognized in earnings are included in "Total revenues", "Total cost of sales", "Selling, general and administrative expenses" or "Interest and other finance expense" consistent with the nature of the underlying item.

**Income taxes**

The Company uses the asset and liability method to account for deferred taxes. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and the tax bases of assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. The Company records a deferred tax asset when it determines that it is more likely than not that the deduction will be sustained based upon the deduction's technical merit. Deferred tax assets and liabilities that can be offset against each other are reported on a net basis. A valuation allowance is recorded to reduce deferred tax assets to the amount that is more likely than not to be realized.

Deferred taxes are provided on unredeemed retained earnings of the Company's subsidiaries. However, deferred taxes are not provided on such unredeemed retained earnings to the extent it is expected that the earnings are permanently reinvested. Such earnings may become taxable upon the sale or liquidation of these subsidiaries or upon the remittance of dividends.

The Company operates in numerous tax jurisdictions and, as a result, is regularly subject to audit by tax authorities. The Company provides for tax contingencies whenever it is deemed more likely than not that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Contingency provisions are recorded based on the technical merits of the Company's filing position, considering the applicable tax laws and Organisation for Economic Co-operation and Development (OECD) guidelines and are based on its evaluations of the facts and circumstances as of the end of each reporting period.

The Company applies a two-step approach to recognize and measure uncertainty in income taxes. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50 percent likely of being realized upon ultimate settlement. Uncertain tax positions that could be settled against existing loss carryforwards or income tax credits are reported net.

The expense related to tax penalties is classified in the Consolidated Income Statements as "Provision for taxes", while interest thereon is classified as "Interest and other finance expense".

**Research and development**

Research and development costs not related to specific customer orders are generally expensed as incurred.

**Earnings per share**

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year, assuming that all potentially dilutive securities were exercised, if dilutive. Potentially dilutive securities include: outstanding written call options, outstanding options and shares granted subject to certain conditions under the Company's share-based payment arrangements. See further discussion related to earnings per share in Note 20 and of potentially dilutive securities in Note 18.

**Note 2**  
**Significant accounting policies,**  
**continued**  
Share-based payment arrangements

The Company has various share-based payment arrangements for its employees, which are described more fully in Note 18. Such arrangements are accounted for under the fair value method. For awards that are equity-settled, total compensation is measured at grant date, based on the fair value of the award at that date, and recorded in earnings over the period the employees are required to render service. For awards that are cash-settled, compensation is initially measured at grant date and subsequently remeasured at each reporting period, based on the fair value and vesting percentage of the award at each of those dates, with changes in the liability recorded in earnings.

Fair value measures

The Company uses fair value measurement principles to record certain financial assets and liabilities on a recurring basis and, when necessary, to record certain non-financial assets at fair value on a non-recurring basis, as well as to determine fair value disclosures for certain financial instruments carried at amortized cost in the financial statements. Financial assets and liabilities recorded at fair value on a recurring basis include foreign currency, commodity and interest rate derivatives, as well as cash-settled call options and available-for-sale securities. Non-financial assets recorded at fair value on a non-recurring basis include long-lived assets that are reduced to their estimated fair value due to impairments.

Fair value is the price that would be received when selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various valuation techniques including the market approach (using observable market data for identical or similar assets and liabilities), the income approach (discounted cash flow models) and the cost approach (using costs a market participant would incur to develop a comparable asset). Inputs used to determine the fair value of assets and liabilities are defined by a three-level hierarchy, depending on the reliability of those inputs. The Company has categorized its financial assets and liabilities and non-financial assets measured at fair value within this hierarchy based on whether the inputs to the valuation technique are observable or unobservable. An observable input is based on market data obtained from independent sources, while an unobservable input reflects the Company's assumptions about market data.

The levels of the fair value hierarchy are as follows:

Level 1: Valuation inputs consist of quoted prices in an active market for identical assets or liabilities (observable quoted prices). Assets and liabilities valued using Level 1 inputs include exchange-traded equity securities, listed derivatives which are actively traded such as commodity futures, interest rate futures and certain actively traded debt securities.

Level 2: Valuation inputs consist of observable inputs (other than Level 1 inputs) such as actively quoted prices for similar assets, quoted prices in inactive markets and inputs other than quoted prices such as interest rate yield curves, credit spreads, or inputs derived from other observable data by interpolation, correlation, regression or other means. The adjustments applied to quoted prices or the inputs used in valuation models may be both observable and unobservable. In these cases, the fair value measurement is classified as Level 2 unless the unobservable portion of the adjustment or the unobservable input to the valuation model is significant, in which case the fair value measurement would be classified as Level 3. Assets and liabilities valued or disclosed using Level 2 inputs include investments in certain funds, reverse repurchase agreements, certain debt securities that are not actively traded, interest rate swaps, commodity swaps, cash-settled call options, forward foreign exchange contracts, foreign exchange swaps and forward rate agreements, time deposits, as well as financing receivables and debt.

Level 3: Valuation inputs are based on the Company's assumptions of relevant market data (unobservable input).

Whenever quoted prices involve bid-ask spreads, the Company ordinarily determines fair values based on mid-market quotes. However, for the purpose of determining the fair value of cash-settled call options serving as hedges of the Company's management incentive plan (MIP), bid prices are used.

When determining fair values based on quoted prices in an active market, the Company considers if the level of transaction activity for the financial instrument has significantly decreased, or would not be considered orderly. In such cases, the resulting changes in valuation techniques would be disclosed. If the market is considered disorderly or if quoted prices are not available, the Company is required to use another valuation technique, such as an income approach.

Disclosures about the Company's fair value measurements of assets and liabilities are included in Note 6.

Contingencies

The Company is subject to proceedings, litigation or threatened litigation and other claims and inquiries, related to environmental, labor, product, regulatory, tax (other than income tax) and other matters, and is 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.

The Company records a provision for its 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 the Company's 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, the Company may be able to recover a portion of the costs relating to these obligations from insurers or other third parties; however, the Company records such amounts only when it is probable that they will be collected.

The Company provides for anticipated costs for warranties when it recognizes revenues on the related products or contracts. Warranty costs include calculated costs arising from imperfections in design, material and workmanship in the Company's products. The Company makes individual assessments on contracts with risks resulting from order-specific conditions or guarantees and assessments on an overall, statistical basis for similar products sold in larger quantities.

**Note 2**  
**Significant accounting policies,**  
**continued**

The Company may have legal obligations to perform environmental clean-up activities related to land and buildings as a result of the normal operations of its business. 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 the control of the Company, but the underlying obligation itself is unconditional and certain. The Company recognizes a provision for these obligations when it is probable that a liability for the clean-up activity has been incurred and a reasonable estimate of its fair value can be made. In some cases, a portion of the costs expected to be incurred to settle these matters may be recoverable. An asset is recorded when it is probable that such amounts are recoverable. Provisions for environmental obligations are not discounted to their present value when the timing of payments cannot be reasonably estimated.

**Pensions and other postretirement**  
**benefits**

The Company has a number of defined benefit pension and other postretirement plans. The Company recognizes an asset for such a plan's overfunded status or a liability for such a plan's underfunded status in its Consolidated Balance Sheets. Additionally, the Company measures such a plan's assets and obligations that determine its funded status as of the end of the year and recognizes the changes in the funded status in the year in which the changes occur. Those changes are reported in "Accumulated other comprehensive loss".

The Company uses actuarial valuations to determine its pension and postretirement benefit costs and credits. The amounts calculated depend on a variety of key assumptions, including discount rates and expected return on plan assets. Current market conditions are considered in selecting these assumptions.

The Company's various pension plan assets are assigned to their respective levels in the fair value hierarchy in accordance with the valuation principles described in the "Fair value measures" section above.

See Note 17 for further discussion of the Company's employee benefit plans.

**Business combinations**

The Company accounts for assets acquired and liabilities assumed in business combinations using the acquisition method and records these at their respective fair values. Contingent consideration is recorded at fair value as an element of purchase price with subsequent adjustments recognized in income.

Identifiable intangibles consist of intellectual property such as trademarks and trade names, customer relationships, patented and unpatented technology, in-process research and development, order backlog and capitalized software; these are amortized over their estimated useful lives. Such intangibles are subsequently subject to evaluation for potential impairment if events or circumstances indicate the carrying amount may not be recoverable. See "Goodwill and other intangible assets" above. Acquisition-related costs are recognized separately from the acquisition and expensed as incurred. Upon gaining control of an entity in which an equity method or cost basis investment was held by the Company, the carrying value of that investment is adjusted to fair value with the related gain or loss recorded in income.

Deferred tax assets and liabilities based on temporary differences between the financial reporting and the tax base of assets and liabilities as well as uncertain tax positions and valuation allowances on acquired deferred tax assets assumed in connection with a business combination are initially estimated as of the acquisition date based on facts and circumstances that existed at the acquisition date. These estimates are subject to change within the measurement period (a period of up to 12 months after the acquisition date during which the acquirer may adjust the provisional acquisition amounts) with any adjustments to the preliminary estimates being recorded to goodwill. Changes in deferred taxes, uncertain tax positions and valuation allowances on acquired deferred tax assets that occur after the measurement period are recognized in income.

**New accounting pronouncements**

*Applicable for current period*

*Simplifying the presentation of debt issuance costs*

In April 2015, an accounting standard update was issued to simplify the presentation of debt issuance costs. Under the update, the Company presents debt issuance costs related to a recognized debt liability in the balance sheet as a direct deduction from the carrying amount of that debt liability rather than as a non-current asset. The existing recognition and measurement guidance for debt issuance costs is not affected by this accounting standard update. In August 2015, an accounting standard update was issued to clarify that the Company may elect to present debt issuance costs related to a line-of-credit arrangement as an asset, regardless of whether or not there are any borrowings outstanding on the line-of-credit arrangement. The Company has elected to early adopt both updates. In connection with the adoption of the update, the Company reclassified deferred debt issuance costs of \$26 million from "Other non-current assets" to "Long-term debt" at December 31, 2014, and has elected to continue to present debt issuance costs related to revolving credit facilities as an asset.

*Simplifying the accounting for measurement-period adjustments*

In September 2015, an accounting standard update was issued to simplify the accounting for measurement-period adjustments in a business combination by eliminating the requirement to restate prior period financial statements for measurement-period adjustments. Under the update, the Company is required to recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined, including the cumulative effect of the change in provisional amount as if the accounting had been completed at the acquisition date. The adjustments related to previous reporting periods since the acquisition date must be disclosed by income statement line item either on the face of the income statement or in the notes. The Company elected to early adopt this update. The update is applied prospectively to measurement period adjustments that occur after the effective date. This update did not have a significant impact on the consolidated financial statements.

*Applicable for future periods*

*Revenue from contracts with customers*

In May 2014, an accounting standard update was issued to clarify the principles for recognizing revenues from contracts with customers. The update, which supersedes substantially all existing revenue recognition guidance, provides a single comprehensive model for recognizing revenues on the transfer of promised goods or services to customers in an amount that reflects the consideration that is expected to be received for those goods or services. Under the standard it is possible that more judgments and estimates would be required than under existing standards, including identifying the separate performance obligations in a contract, estimating any variable consideration elements, and allocating the

**Note 2**  
**Significant accounting policies,**  
**continued**

transaction price to each separate performance obligation. The update also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers.

In August 2015, the effective date for the update was deferred and the update is now effective for the Company for annual and interim periods beginning January 1, 2018, and is to be applied either (i) retrospectively to each prior reporting period presented, with the option to elect certain defined practical expedients, or (ii) retrospectively with the cumulative effect of initially applying the update recognized at the date of adoption in retained earnings (with additional disclosure as to the impact on individual financial statement lines affected). Early adoption of the standard is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company is currently evaluating the impact of this update on its consolidated financial statements.

*Disclosures for investments in certain entities that calculate net asset value per share (or its equivalent)*

In May 2015, an accounting standard update was issued regarding fair value disclosures for certain investments. Under the update, the Company would no longer categorize within the fair value hierarchy investments for which fair value is measured using the net asset value per share practical expedient. The amendments also remove the requirement to make certain disclosures for investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the Company has elected to measure the fair value using that practical expedient. This update is effective for the Company for annual and interim periods beginning January 1, 2016, with early adoption permitted, and is applicable retrospectively. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

*Simplifying the measurement of inventory*

In July 2015, an accounting standard update was issued to simplify the subsequent measurement of inventories by replacing the current lower of cost or market test with a lower of cost and net realizable value test. The guidance applies only to inventories for which cost is determined by methods other than last-in first-out and the retail inventory method. Net realizable value is the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal and transportation. The Company will early adopt this update in the first quarter of 2016 and apply it prospectively. The Company does not believe that this update will have a significant impact on its consolidated financial statements.

*Balance sheet classification of deferred taxes*

In November 2015, an accounting standard update was issued which removes the requirement to separate deferred tax liabilities and assets into current and non-current amounts and instead requires all such amounts, as well as any related valuation allowance, to be classified as non-current in the balance sheet. This update is effective for the Company for annual and interim periods beginning January 1, 2017, with early adoption permitted, and is applicable either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. The Company is currently evaluating which transition method it will adopt and the impact of this update on its consolidated financial statements.

*Recognition and measurement of financial assets and financial liabilities*

In January 2016, an accounting standard update was issued to enhance the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. Amongst others, the Company would be required to measure equity investments (except those accounted for under the equity method) at fair value with changes in fair value recognized in net income and to present separately financial assets and financial liabilities by measurement category and form of financial asset. This update is effective for the Company for annual and interim periods beginning January 1, 2018, with early adoption permitted for certain provisions. The Company is currently evaluating the impact of this update on its consolidated financial statements.

**Note 3**  
**Acquisitions and business**  
**divestments**

**Acquisitions**

Acquisitions were as follows:

(\$ in millions, except number of acquired businesses)	2015	2014	2013
Acquisitions (net of cash acquired) <sup>(1)</sup>	37	58	897
Aggregate excess of purchase price over fair value of net assets acquired <sup>(2)</sup>	34	9	525
Number of acquired businesses	3	6	7

<sup>(1)</sup> Excluding changes in cost- and equity-accounted companies but including \$2 million in 2013, representing the fair value of replacement vested stock options issued to Power-One employees at the acquisition date.

<sup>(2)</sup> Recorded as goodwill (see Note 11). Includes adjustments of \$42 million in 2014 and \$63 million in 2013 arising during the measurement period of acquisitions, primarily reflecting a reduction in certain deferred tax liabilities related to Power-One and to Thomas & Betts Inc. (acquired in 2012), respectively.

In the table above, the amount for "Acquisitions" and "Aggregate excess of purchase price over fair value of net assets acquired" in 2013 relates primarily to the acquisition of Power-One Inc. (Power-One).

Acquisitions of controlling interests have been accounted for under the acquisition method and have been included in the Company's Consolidated Financial Statements since the date of acquisition.

While the Company uses its best estimates and assumptions as part of the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, the purchase price allocation for acquisitions is preliminary for up to 12 months after the acquisition date and is subject to refinement as more detailed analyses are completed and additional information about the fair values of the assets and liabilities becomes available.

On July 25, 2013, the Company acquired all outstanding shares of Power-One for \$6.35 per share in cash. The resulting cash outflows for the Company amounted to \$737 million, representing \$705 million for the purchase of the shares (net of cash acquired) and \$32 million related to the cash settlement of Power-One stock options held at the acquisition

**Note 3**  
**Acquisitions and business**  
**divestments, continued**

date. Power-One is a provider of renewable energy solutions and a designer and manufacturer of photo-voltaic inverters. During 2014, the Company disposed of the Power Solutions business of Power-One, which provided energy-efficient power conversion and power management solutions.

The final aggregate allocation of the purchase consideration for business acquisitions in 2013, was as follows:

(\$ in millions)	Allocated amounts <sup>(1)</sup>	Weighted-average useful life
Intangible assets	208	7 years
Fixed assets	124	
Deferred tax liabilities	(74)	
Other assets and liabilities, net	93	
Goodwill <sup>(2)</sup>	546	
<b>Total consideration (net of cash acquired)</b>	<b>897</b>	

<sup>(1)</sup> Excludes measurement period adjustments related to prior year acquisitions.

<sup>(2)</sup> Goodwill recognized is not deductible for income tax purposes.

**Business divestments**

In 2014, the Company received proceeds (net of transaction costs and cash disposed) of \$1,090 million, relating to divestments of consolidated businesses and recorded net gains of \$543 million in "Other income (expense), net" on the sale of such businesses. In 2015 and 2013, there were no significant amounts recognized from divestments of consolidated businesses.

**Note 4**  
**Cash and equivalents,**  
**marketable securities and**  
**short-term investments**

**Current assets**

Cash and equivalents and marketable securities and short-term investments consisted of the following:

December 31, 2015 (\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Cash	1,837			1,837	1,837	
Time deposits	2,821			2,821	2,717	104
Other short-term investments	231			231		231
<i>Debt securities available-for-sale:</i>						
U.S. government obligations	120	2	(1)	121	—	121
Other government obligations	2	—	—	2	—	2
Corporate	519	1	(1)	519	11	508
Equity securities available-for-sale	658	9	—	667	—	667
<b>Total</b>	<b>6,188</b>	<b>12</b>	<b>(2)</b>	<b>6,198</b>	<b>4,565</b>	<b>1,633</b>

December 31, 2014 (\$ in millions)	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value	Cash and equivalents	Marketable securities and short-term investments
Cash	2,218			2,218	2,218	
Time deposits	3,340			3,340	3,140	200
Other short-term investments	225			225		225
<i>Debt securities available-for-sale:</i>						
U.S. government obligations	135	2	(1)	136	—	136
Other government obligations	2	—	—	2	—	2
Corporate	734	4	(1)	737	85	652
Equity securities available-for-sale	98	12	—	110	—	110
<b>Total</b>	<b>6,752</b>	<b>18</b>	<b>(2)</b>	<b>6,768</b>	<b>5,443</b>	<b>1,325</b>

Included in Other short-term investments at December 31, 2015 and 2014, are receivables of \$224 million and \$219 million, respectively, representing reverse repurchase agreements. These collateralized lendings, made to a financial institution, have maturity dates of less than one year.

**Non-current assets**

Included in "Other non-current assets" are certain held-to-maturity marketable securities. At December 31, 2015, the amortized cost, gross unrecognized gain and fair value (based on quoted market prices) of these securities were \$99 million, \$11 million and \$110 million, respectively. At December 31, 2014, the amortized cost, gross unrecognized gain and fair value (based on quoted market prices) of these securities were \$95 million, \$14 million and \$109 million, respectively. These securities are pledged as security for certain outstanding deposit liabilities and the funds received at the respective maturity dates of the securities will only be available to the Company for repayment of these obligations.

**Note 4**  
**Cash and equivalents, marketable securities and short-term investments, continued**  
Gains, losses and contractual maturities

Gross realized gains (reclassified from accumulated other comprehensive loss to income) on available-for-sale securities totaled \$1 million, \$2 million and \$10 million in 2015, 2014 and 2013, respectively. Gross realized losses (reclassified from accumulated other comprehensive loss to income) on available-for-sale securities totaled \$2 million and \$23 million in 2015 and 2014, respectively, and were not significant in 2013. Such gains and losses were included in "Interest and other finance expense".

In 2015, 2014 and 2013, other-than-temporary impairments recognized on available-for-sale equity securities were not significant.

At December 31, 2015, 2014 and 2013, gross unrealized losses on available-for-sale securities that have been in a continuous unrealized loss position were not significant and the Company does not intend and does not expect to be required to sell these securities before the recovery of their amortized cost.

There were no sales of held-to-maturity securities in 2015, 2014 and 2013.

Contractual maturities of debt securities consisted of the following:

December 31, 2015 (\$ in millions)	Available-for-sale		Held-to-maturity	
	Cost basis	Fair value	Cost basis	Fair value
Less than one year	430	430	—	—
One to five years	160	161	99	110
Six to ten years	51	51	—	—
<b>Total</b>	<b>641</b>	<b>642</b>	<b>99</b>	<b>110</b>

At December 31, 2015 and 2014, the Company pledged \$92 million and \$95 million, respectively, of available-for-sale marketable securities as collateral for issued letters of credit and other security arrangements.

**Note 5**  
**Derivative financial instruments**

The Company is exposed to certain currency, commodity, interest rate and equity risks arising from its global operating, financing and investing activities. The Company uses derivative instruments to reduce and manage the economic impact of these exposures.

Currency risk

Due to the global nature of the Company's operations, many of its subsidiaries are exposed to currency risk in their operating activities from entering into transactions in currencies other than their functional currency. To manage such currency risks, the Company's policies require the subsidiaries to hedge their foreign currency exposures from binding sales and purchase contracts denominated in foreign currencies. For forecasted foreign currency denominated sales of standard products and the related foreign currency denominated purchases, the Company's policy is to hedge up to a maximum of 100 percent of the forecasted foreign currency denominated exposures, depending on the length of the forecasted exposures. Forecasted exposures greater than 12 months are not hedged. Forward foreign exchange contracts are the main instrument used to protect the Company against the volatility of future cash flows (caused by changes in exchange rates) of contracted and forecasted sales and purchases denominated in foreign currencies. In addition, within its treasury operations, the Company primarily uses foreign exchange swaps and forward foreign exchange contracts to manage the currency and timing mismatches arising in its liquidity management activities.

Commodity risk

Various commodity products are used in the Company's manufacturing activities. Consequently it is exposed to volatility in future cash flows arising from changes in commodity prices. To manage the price risk of commodities other than electricity, the Company's policies require that the subsidiaries hedge the commodity price risk exposures from binding contracts, as well as at least 50 percent (up to a maximum of 100 percent) of the forecasted commodity exposure over the next 12 months or longer (up to a maximum of 18 months). Primarily swap contracts are used to manage the associated price risks of commodities. As of 2014, the Company no longer enters into electricity futures contracts to manage the price risk on its forecasted electricity needs in certain locations.

Interest rate risk

The Company has issued bonds at fixed rates. Interest rate swaps are used to manage the interest rate risk associated with certain debt and generally such swaps are designated as fair value hedges. In addition, from time to time, the Company uses instruments such as interest rate swaps, interest rate futures, bond futures or forward rate agreements to manage interest rate risk arising from the Company's balance sheet structure but does not designate such instruments as hedges.

Equity risk

The Company is exposed to fluctuations in the fair value of its warrant appreciation rights (WARs) issued under its MIP. A WAR gives its holder the right to receive cash equal to the market price of an equivalent listed warrant on the date of exercise. To eliminate such risk, the Company has purchased cash-settled call options, indexed to the shares of the Company, which entitle the Company to receive amounts equivalent to its obligations under the outstanding WARs.

Volume of derivative activity

In general, while the Company's primary objective in its use of derivatives is to minimize exposures arising from its business, certain derivatives are designated and qualify for hedge accounting treatment while others either are not designated or do not qualify for hedge accounting.

**Note 5**  
**Derivative financial instruments,**  
**continued**

**Foreign exchange and interest rate derivatives**

The gross notional amounts of outstanding foreign exchange and interest rate derivatives (whether designated as hedges or not) were as follows:

Type of derivative December 31, (\$ in millions)	Total notional amounts at		
	2015	2014	2013
Foreign exchange contracts	16,467	18,564	19,351
Embedded foreign exchange derivatives	2,966	3,013	3,049
Interest rate contracts	4,302	2,242	4,693

**Derivative commodity contracts**

The following table shows the notional amounts of outstanding commodity derivatives (whether designated as hedges or not), on a net basis, to reflect the Company's requirements in the various commodities:

Type of derivative December 31,	Unit	Total notional amounts at		
		2015	2014	2013
Copper swaps	metric tonnes	48,903	46,520	42,866
Aluminum swaps	metric tonnes	5,455	3,846	3,525
Nickel swaps	metric tonnes	18	—	18
Lead swaps	metric tonnes	14,625	6,550	7,100
Zinc swaps	metric tonnes	225	200	300
Silver swaps	ounces	1,727,255	1,996,845	1,936,581
Electricity futures	megawatt hours	—	—	279,995
Crude oil swaps	barrels	133,500	128,000	113,000

**Equity derivatives**

At December 31, 2015, 2014 and 2013, the Company held 55 million, 61 million and 67 million cash-settled call options indexed to ABB Ltd shares (conversion ratio 5:1) with a total fair value of \$13 million, \$33 million and \$56 million, respectively.

**Cash flow hedges**

As noted above, the Company mainly uses forward foreign exchange contracts to manage the foreign exchange risk of its operations, commodity swaps to manage its commodity risks and cash-settled call options to hedge its WAR liabilities. Where such instruments are designated and qualify as cash flow hedges, the effective portion of the changes in their fair value is recorded in "Accumulated other comprehensive loss" and subsequently reclassified into earnings in the same line item and in the same period as the underlying hedged transaction affects earnings. Any ineffectiveness in the hedge relationship, or hedge component excluded from the assessment of effectiveness, is recognized in earnings during the current period.

At December 31, 2015, 2014 and 2013, "Accumulated other comprehensive loss" included net unrealized losses of \$11 million and \$21 million and net unrealized gains of \$22 million, respectively, net of tax, on derivatives designated as cash flow hedges. Of the amount at December 31, 2015, net losses of \$2 million are expected to be reclassified to earnings in 2016. At December 31, 2015, the longest maturity of a derivative classified as a cash flow hedge was 51 months.

In 2015, 2014 and 2013, the amounts of gains or losses, net of tax, reclassified into earnings due to the discontinuance of cash flow hedge accounting and the amount of ineffectiveness in cash flow hedge relationships directly recognized in earnings were not significant.

The pre-tax effects of derivative instruments, designated and qualifying as cash flow hedges, on "Accumulated other comprehensive loss" (OCI) and the Consolidated Income Statements were as follows:

Type of derivative designated as a cash flow hedge	2015			
	Gains (losses) recognized in OCI on derivatives (effective portion)	Gains (losses) reclassified from OCI into income (effective portion)		Gains (losses) recognized in income (ineffective portion and amount excluded from effectiveness testing)
	(\$ in millions)	Location	(\$ in millions)	Location
Foreign exchange contracts	(11)	Total revenues	(36)	Total revenues
		Total cost of sales	11	Total cost of sales
Commodity contracts	(9)	Total cost of sales	(10)	Total cost of sales
Cash-settled call options	(6)	SG&A expenses <sup>(1)</sup>	(4)	SG&A expenses <sup>(1)</sup>
<b>Total</b>	<b>(26)</b>		<b>(39)</b>	

Note 5  
Derivative financial instruments,  
continued

Type of derivative designated as a cash flow hedge	2014			
	Gains (losses) recognized in OCI on derivatives (effective portion)	Gains (losses) reclassified from OCI into income (effective portion)		Gains (losses) recognized in income (ineffective portion and amount excluded from effectiveness testing)
	(\$ in millions)	Location	(\$ in millions)	Location
Foreign exchange contracts	(42)	Total revenues	(9)	Total revenues
		Total cost of sales	8	Total cost of sales
Commodity contracts	(7)	Total cost of sales	(3)	Total cost of sales
Cash-settled call options	(16)	SG&A expenses <sup>(1)</sup>	(6)	SG&A expenses <sup>(1)</sup>
<b>Total</b>	<b>(65)</b>		<b>(10)</b>	<b>—</b>

Type of derivative designated as a cash flow hedge	2013			
	Gains (losses) recognized in OCI on derivatives (effective portion)	Gains (losses) reclassified from OCI into income (effective portion)		Gains (losses) recognized in income (ineffective portion and amount excluded from effectiveness testing)
	(\$ in millions)	Location	(\$ in millions)	Location
Foreign exchange contracts	22	Total revenues	52	Total revenues
		Total cost of sales	(1)	Total cost of sales
Commodity contracts	(5)	Total cost of sales	(5)	Total cost of sales
Cash-settled call options	16	SG&A expenses <sup>(1)</sup>	8	SG&A expenses <sup>(1)</sup>
<b>Total</b>	<b>33</b>		<b>54</b>	<b>—</b>

<sup>(1)</sup> SG&A expenses represent "Selling, general and administrative expenses".

Net derivative losses of \$30 million and \$9 million and net derivative gains of \$43 million, net of tax, were reclassified from "Accumulated other comprehensive loss" to earnings during 2015, 2014 and 2013, respectively.

Fair value hedges

To reduce its interest rate exposure arising primarily from its debt issuance activities, the Company uses interest rate swaps. Where such instruments are designated as fair value hedges, the changes in the fair value of these instruments, as well as the changes in fair value of the risk component of the underlying debt being hedged, are recorded as offsetting gains and losses in "Interest and other finance expense". Hedge ineffectiveness of instruments designated as fair value hedges in 2015, 2014 and 2013, was not significant.

The effect of derivative instruments, designated and qualifying as fair value hedges, on the Consolidated Income Statements was as follows:

Type of derivative designated as a fair value hedge	2015			
	Gains (losses) recognized in income on derivatives designated as fair value hedges		Gains (losses) recognized in income on hedged item	
	Location	(\$ in millions)	Location	(\$ in millions)
Interest rate contracts	Interest and other finance expense	8	Interest and other finance expense	(4)

Type of derivative designated as a fair value hedge	2014			
	Gains (losses) recognized in income on derivatives designated as fair value hedges		Gains (losses) recognized in income on hedged item	
	Location	(\$ in millions)	Location	(\$ in millions)
Interest rate contracts	Interest and other finance expense	84	Interest and other finance expense	(83)

Type of derivative designated as a fair value hedge	2013			
	Gains (losses) recognized in income on derivatives designated as fair value hedges		Gains (losses) recognized in income on hedged item	
	Location	(\$ in millions)	Location	(\$ in millions)
Interest rate contracts	Interest and other finance expense	(34)	Interest and other finance expense	35

**Note 5**  
**Derivative financial instruments,**  
**continued**

Derivatives not designated  
in hedge relationships

Derivative instruments that are not designated as hedges or do not qualify as either cash flow or fair value hedges are economic hedges used for risk management purposes. Gains and losses from changes in the fair values of such derivatives are recognized in the same line in the income statement as the economically hedged transaction.

Furthermore, under certain circumstances, the Company is required to split and account separately for foreign currency derivatives that are embedded within certain binding sales or purchase contracts denominated in a currency other than the functional currency of the subsidiary and the counterparty.

The gains (losses) recognized in the Consolidated Income Statements on derivatives not designated in hedging relationships were as follows:

Type of derivative not designated as a hedge (\$ in millions)	Gains (losses) recognized in income			
	Location	2015	2014	2013
Foreign exchange contracts	Total revenues	(216)	(533)	(95)
	Total cost of sales	16	19	80
	SG&A expenses <sup>(1)</sup>	13	2	(1)
	Non-order related research and development	(1)	—	—
	Interest and other finance expense	287	(260)	223
Embedded foreign exchange contracts	Total revenues	127	149	101
	Total cost of sales	(25)	(27)	(10)
	SG&A expenses <sup>(1)</sup>	(5)	—	—
Commodity contracts	Total cost of sales	(61)	(28)	(50)
	Interest and other finance expense	1	1	1
Interest rate contracts	Interest and other finance expense	(1)	(1)	(3)
Cash-settled call options	Interest and other finance expense	—	(1)	—
Cross-currency interest rate swaps	Interest and other finance expense	(1)	—	—
<b>Total</b>		<b>134</b>	<b>(679)</b>	<b>246</b>

<sup>(1)</sup> SG&A expenses represent "Selling, general and administrative expenses".

The fair values of derivatives included in the Consolidated Balance Sheets were as follows:

	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
December 31, 2015 (\$ in millions)				
<i>Derivatives designated as hedging instruments:</i>				
Foreign exchange contracts	15	10	8	16
Commodity contracts	—	—	3	—
Interest rate contracts	6	86	—	—
Cash-settled call options	8	5	—	—
<b>Total</b>	<b>29</b>	<b>101</b>	<b>11</b>	<b>16</b>
<i>Derivatives not designated as hedging instruments:</i>				
Foreign exchange contracts	172	32	237	81
Commodity contracts	2	—	29	9
Cross-currency interest rate swaps	—	—	—	1
Embedded foreign exchange derivatives	94	53	41	27
<b>Total</b>	<b>268</b>	<b>85</b>	<b>307</b>	<b>118</b>
<b>Total fair value</b>	<b>297</b>	<b>186</b>	<b>318</b>	<b>134</b>

**Note 5**  
**Derivative financial instruments,**  
**continued**

	Derivative assets		Derivative liabilities	
	Current in "Other current assets"	Non-current in "Other non-current assets"	Current in "Other current liabilities"	Non-current in "Other non-current liabilities"
December 31, 2014 (\$ in millions)				
<i>Derivatives designated as hedging instruments:</i>				
Foreign exchange contracts	9	9	20	16
Commodity contracts	—	—	3	—
Interest rate contracts	—	85	—	—
Cash-settled call options	21	11	—	—
<b>Total</b>	<b>30</b>	<b>105</b>	<b>23</b>	<b>16</b>
<i>Derivatives not designated as hedging instruments:</i>				
Foreign exchange contracts	156	25	369	72
Commodity contracts	4	—	19	3
Cash-settled call options	1	1	—	—
Embedded foreign exchange derivatives	98	58	27	17
<b>Total</b>	<b>259</b>	<b>84</b>	<b>415</b>	<b>92</b>
<b>Total fair value</b>	<b>289</b>	<b>189</b>	<b>438</b>	<b>108</b>

Close-out netting agreements provide for the termination, valuation and net settlement of some or all outstanding transactions between two counterparties on the occurrence of one or more pre-defined trigger events.

Although the Company is party to close-out netting agreements with most derivative counterparties, the fair values in the tables above and in the Consolidated Balance Sheets at December 31, 2015 and 2014, have been presented on a gross basis.

The Company's netting agreements and other similar arrangements allow net settlements under certain conditions. At December 31, 2015 and 2014, information related to these offsetting arrangements was as follows:

December 31, 2015 (\$ in millions)					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	336	(215)	—	—	121
Reverse repurchase agreements	224	—	—	(224)	—
<b>Total</b>	<b>560</b>	<b>(215)</b>	<b>—</b>	<b>(224)</b>	<b>121</b>

December 31, 2015 (\$ in millions)					
Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	384	(215)	(3)	—	166
<b>Total</b>	<b>384</b>	<b>(215)</b>	<b>(3)</b>	<b>—</b>	<b>166</b>

December 31, 2014 (\$ in millions)					
Type of agreement or similar arrangement	Gross amount of recognized assets	Derivative liabilities eligible for set-off in case of default	Cash collateral received	Non-cash collateral received	Net asset exposure
Derivatives	322	(216)	—	—	106
Reverse repurchase agreements	219	—	—	(219)	—
<b>Total</b>	<b>541</b>	<b>(216)</b>	<b>—</b>	<b>(219)</b>	<b>106</b>

**Note 5**  
**Derivative financial instruments,**  
**continued**

December 31, 2014 (\$ in millions)

Type of agreement or similar arrangement	Gross amount of recognized liabilities	Derivative liabilities eligible for set-off in case of default	Cash collateral pledged	Non-cash collateral pledged	Net liability exposure
Derivatives	502	(216)	(3)	—	283
<b>Total</b>	<b>502</b>	<b>(216)</b>	<b>(3)</b>	<b>—</b>	<b>283</b>

**Note 6**  
**Fair values**

Recurring fair value measures

The fair values of financial assets and liabilities measured at fair value on a recurring basis were as follows:

December 31, 2015 (\$ in millions)	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>				
Available-for-sale securities in "Cash and equivalents":				
Debt securities — Corporate	—	11	—	11
Available-for-sale securities in "Marketable securities and short-term investments":				
Equity securities	—	667	—	667
Debt securities — U.S. government obligations	121	—	—	121
Debt securities — Other government obligations	—	2	—	2
Debt securities — Corporate	—	508	—	508
Derivative assets — current in "Other current assets"	1	296	—	297
Derivative assets — non-current in "Other non-current assets"	—	186	—	186
<b>Total</b>	<b>122</b>	<b>1,670</b>	<b>—</b>	<b>1,792</b>
<b>Liabilities</b>				
Derivative liabilities — current in "Other current liabilities"	3	315	—	318
Derivative liabilities — non-current in "Other non-current liabilities"	—	134	—	134
<b>Total</b>	<b>3</b>	<b>449</b>	<b>—</b>	<b>452</b>

December 31, 2014 (\$ in millions)	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>				
Available-for-sale securities in "Cash and equivalents":				
Debt securities — Corporate	—	85	—	85
Available-for-sale securities in "Marketable securities and short-term investments":				
Equity securities	—	110	—	110
Debt securities — U.S. government obligations	136	—	—	136
Debt securities — Other government obligations	—	2	—	2
Debt securities — Corporate	—	652	—	652
Derivative assets — current in "Other current assets"	—	289	—	289
Derivative assets — non-current in "Other non-current assets"	—	189	—	189
<b>Total</b>	<b>136</b>	<b>1,327</b>	<b>—</b>	<b>1,463</b>
<b>Liabilities</b>				
Derivative liabilities — current in "Other current liabilities"	—	438	—	438
Derivative liabilities — non-current in "Other non-current liabilities"	—	108	—	108
<b>Total</b>	<b>—</b>	<b>546</b>	<b>—</b>	<b>546</b>

The Company uses the following methods and assumptions in estimating fair values of financial assets and liabilities measured at fair value on a recurring basis:

- Available-for-sale securities in "Cash and equivalents", "Marketable securities and short-term investments" and "Other non-current assets": If quoted market prices in active markets for identical assets are available, these are considered Level 1 inputs; however, when markets are not active, these inputs are considered Level 2. If such quoted market prices are not available, fair value is determined using market prices for similar assets or present value techniques, applying an appropriate risk-free interest rate adjusted for nonperformance risk. The inputs used in present value techniques are observable and fall into the Level 2 category.

**Note 6****Fair values, continued**

– *Derivatives*: The fair values of derivative instruments are determined using quoted prices of identical instruments from an active market, if available (Level 1). If quoted prices are not available, price quotes for similar instruments, appropriately adjusted, or present value techniques, based on available market data, or option pricing models are used. Cash-settled call options hedging the Company's WAR liability are valued based on bid prices of the equivalent listed warrant. The fair values obtained using price quotes for similar instruments or valuation techniques represent a Level 2 input unless significant unobservable inputs are used.

**Non-recurring fair value measures**

There were no significant non-recurring fair value measurements during 2015 and 2014.

**Disclosure about financial instruments carried on a cost basis**

The fair values of financial instruments carried on a cost basis were as follows:

December 31, 2015 (\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>					
Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months):					
Cash	1,837	1,837	—	—	1,837
Time deposits	2,717	—	2,717	—	2,717
Marketable securities and short-term investments (excluding available-for-sale securities):					
Time deposits	104	—	104	—	104
Receivables under reverse repurchase agreements	224	—	224	—	224
Other short-term investments	7	7	—	—	7
Other non-current assets:					
Loans granted	29	—	30	—	30
Held-to-maturity securities	99	—	110	—	110
Restricted cash and cash deposits	176	55	138	—	193
<b>Liabilities</b>					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)					
	1,427	614	817	—	1,431
Long-term debt (excluding capital lease obligations)	5,889	5,307	751	—	6,058
Non-current deposit liabilities in "Other non-current liabilities"	215	—	244	—	244

December 31, 2014 (\$ in millions)	Carrying value	Level 1	Level 2	Level 3	Total fair value
<b>Assets</b>					
Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months):					
Cash	2,218	2,218	—	—	2,218
Time deposits	3,140	—	3,140	—	3,140
Marketable securities and short-term investments (excluding available-for-sale securities):					
Time deposits	200	—	200	—	200
Receivables under reverse repurchase agreements	219	—	219	—	219
Other short-term investments	6	6	—	—	6
Other non-current assets:					
Loans granted	41	—	44	—	44
Held-to-maturity securities	95	—	109	—	109
Restricted cash and cash deposits	198	64	161	—	225
<b>Liabilities</b>					
Short-term debt and current maturities of long-term debt (excluding capital lease obligations)					
	324	115	209	—	324
Long-term debt (excluding capital lease obligations)	7,198	6,148	1,404	—	7,552
Non-current deposit liabilities in "Other non-current liabilities"	222	—	267	—	267

The Company uses the following methods and assumptions in estimating fair values of financial instruments carried on a cost basis:

– *Cash and equivalents (excluding available-for-sale securities with original maturities up to 3 months), and Marketable securities and short-term investments (excluding available-for-sale securities)*: The carrying amounts approximate the fair values as the items are short-term in nature.

**Note 6**  
**Fair values, continued**

- *Other non-current assets*: Includes (i) loans granted whose fair values are based on the carrying amount adjusted using a present value technique to reflect a premium or discount based on current market interest rates (Level 2 inputs), (ii) held-to-maturity securities (see Note 4) whose fair values are based on quoted market prices in inactive markets (Level 2 inputs), (iii) restricted cash whose fair values approximate the carrying amounts (Level 1) and (iv) cash deposits pledged in respect of certain non-current deposit liabilities whose fair values are determined using a discounted cash flow methodology based on current market interest rates (Level 2 inputs).
- *Short-term debt and current maturities of long-term debt (excluding capital lease obligations)*: Short-term debt includes commercial paper, bank borrowings and overdrafts. The carrying amounts of short-term debt and current maturities of long-term debt, excluding capital lease obligations, approximate their fair values.
- *Long-term debt (excluding capital lease obligations)*: Fair values of outstanding bonds are determined using quoted market prices (Level 1 inputs), if available. For other bonds and other long-term debt, the fair values are determined using a discounted cash flow methodology based upon borrowing rates of similar debt instruments and reflecting appropriate adjustments for non-performance risk (Level 2 inputs).
- *Non-current deposit liabilities in "Other non-current liabilities"*: The fair values of non-current deposit liabilities are determined using a discounted cash flow methodology based on risk-adjusted interest rates (Level 2 inputs).

**Note 7**  
**Receivables, net**

"Receivables, net" consisted of the following:

December 31, (\$ in millions)	2015	2014
Trade receivables	7,197	7,715
Other receivables	665	701
Allowance	(258)	(279)
	<b>7,604</b>	<b>8,137</b>
<i>Unbilled receivables, net:</i>		
Costs and estimated profits in excess of billings	3,385	4,087
Advance payments consumed	(928)	(1,146)
	<b>2,457</b>	<b>2,941</b>
<b>Total</b>	<b>10,061</b>	<b>11,078</b>

"Trade receivables" in the table above includes contractual retention amounts billed to customers of \$545 million and \$489 million at December 31, 2015 and 2014, respectively. Management expects that the substantial majority of related contracts will be completed and the substantial majority of the billed amounts retained by the customer will be collected. Of the retention amounts outstanding at December 31, 2015, 66 percent and 20 percent are expected to be collected in 2016 and 2017, respectively.

"Other receivables" in the table above consists of value added tax, claims, rental deposits and other non-trade receivables.

"Costs and estimated profits in excess of billings" in the table above represents revenues earned and recognized for contracts under the percentage-of-completion or completed-contract method of accounting. Management expects that the majority of the amounts will be collected within one year of the respective balance sheet date.

The reconciliation of changes in the allowance for doubtful accounts is as follows:

(\$ in millions)	2015	2014	2013
<b>Balance at January 1,</b>	<b>279</b>	<b>317</b>	<b>271</b>
Additions	118	103	147
Deductions	(113)	(118)	(92)
Exchange rate differences	(26)	(23)	(9)
<b>Balance at December 31,</b>	<b>258</b>	<b>279</b>	<b>317</b>

**Note 8**  
**Inventories, net**

"Inventories, net" consisted of the following:

December 31, (\$ in millions)	2015	2014
Raw materials	1,793	2,105
Work in process	1,574	1,761
Finished goods	1,442	1,572
Advances to suppliers	188	253
	<b>4,997</b>	<b>5,691</b>
Advance payments consumed	(240)	(315)
<b>Total</b>	<b>4,757</b>	<b>5,376</b>

"Work in process" in the table above contains inventoried costs relating to long-term contracts of \$411 million and \$338 million at December 31, 2015 and 2014, respectively. "Advance payments consumed" in the table above relates to contractual advances received from customers on work in process.

**Note 9****Other non-current assets**

"Other non-current assets" consisted of the following:

December 31, (\$ in millions)	2015	2014
Pledged financial assets	220	229
Derivatives (including embedded derivatives) (see Note 5)	186	189
Investments	58	65
Restricted cash	55	64
Other	124	154
<b>Total</b>	<b>643</b>	<b>701</b>

The Company entered into structured leasing transactions with U.S. investors prior to 1999. At the inception of the leasing arrangements the Company placed certain amounts in restricted cash deposits and held-to-maturity debt securities. These amounts, included as "Pledged financial assets" in the table above, are pledged as security for certain outstanding deposit liabilities included in "Other non-current liabilities" (see Note 13) and the funds received upon maturity of the respective pledged financial assets will only be available to the Company for repayment of these obligations.

"Investments" represents shares and other equity investments carried at cost.

**Note 10****Property, plant and equipment, net**

"Property, plant and equipment, net" consisted of the following:

December 31, (\$ in millions)	2015	2014
Land and buildings	4,003	4,142
Machinery and equipment	7,554	7,762
Construction in progress	559	653
	<b>12,116</b>	<b>12,557</b>
Accumulated depreciation	(6,840)	(6,905)
<b>Total</b>	<b>5,276</b>	<b>5,652</b>

Assets under capital leases included in "Property, plant and equipment, net" were as follows:

December 31, (\$ in millions)	2015	2014
Land and buildings	149	192
Machinery and equipment	53	88
	<b>202</b>	<b>280</b>
Accumulated depreciation	(113)	(163)
<b>Total</b>	<b>89</b>	<b>117</b>

In 2015, 2014 and 2013, depreciation, including depreciation of assets under capital leases, was \$764 million, \$851 million and \$842 million, respectively.

**Note 11****Goodwill and other intangible assets**

Changes in "Goodwill" were as follows:

(\$ in millions)	Discrete	Low	Process Automation	Power Products	Power Systems	Corporate and Other	Total
	Automation and Motion	Voltage Products					
Cost at January 1, 2014	3,914	3,059	1,229	736	1,709	41	10,688
Accumulated impairment charges	—	—	—	—	—	(18)	(18)
<b>Balance at January 1, 2014</b>	<b>3,914</b>	<b>3,059</b>	<b>1,229</b>	<b>736</b>	<b>1,709</b>	<b>23</b>	<b>10,670</b>
Goodwill acquired during the year <sup>(1)</sup>	(52)	1	24	9	—	27	9
Goodwill allocated to disposals	—	(181)	(19)	—	(7)	(27)	(234)
Exchange rate differences and other	(92)	(172)	(60)	(25)	(42)	(1)	(392)
<b>Balance at December 31, 2014</b>	<b>3,770</b>	<b>2,707</b>	<b>1,174</b>	<b>720</b>	<b>1,660</b>	<b>22</b>	<b>10,053</b>
Goodwill acquired during the year	24	—	6	4	—	—	34
Goodwill allocated to disposals	—	—	(1)	—	(23)	—	(24)
Exchange rate differences and other	(92)	(200)	(32)	(15)	(52)	(1)	(392)
<b>Balance at December 31, 2015</b>	<b>3,702</b>	<b>2,507</b>	<b>1,147</b>	<b>709</b>	<b>1,585</b>	<b>21</b>	<b>9,671</b>

<sup>(1)</sup> Amounts include adjustments arising during the twelve-month measurement period subsequent to the respective acquisition date.

In 2015, there were no significant acquisitions or divestments.

In 2014, goodwill allocated to disposals primarily related to the divestments of the Meyer Steel Structures and heating, ventilation and air conditioning (HVAC) businesses of Thomas & Betts included in the Low Voltage Products segment.

**Note 11**  
**Goodwill and other intangible**  
**assets, continued**

Intangible assets other than goodwill consisted of the following:

December 31, (\$ in millions)	2015			2014		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Capitalized software for internal use	692	(567)	125	719	(599)	120
Capitalized software for sale	401	(357)	44	405	(354)	51
<i>Intangibles other than software:</i>						
Customer-related	2,517	(767)	1,750	2,618	(623)	1,995
Technology-related	790	(585)	205	782	(479)	303
Marketing-related	308	(140)	168	314	(120)	194
Other	67	(22)	45	72	(33)	39
<b>Total</b>	<b>4,775</b>	<b>(2,438)</b>	<b>2,337</b>	<b>4,910</b>	<b>(2,208)</b>	<b>2,702</b>

Additions to intangible assets other than goodwill consisted of the following:

(\$ in millions)	2015	2014
Capitalized software for internal use	63	52
Capitalized software for sale	15	28
<i>Intangibles other than software:</i>		
Technology-related	33	—
Other	—	16
<b>Total</b>	<b>111</b>	<b>96</b>

There were no significant intangible assets acquired in business combinations during 2015 and 2014.

Amortization expense of intangible assets other than goodwill consisted of the following:

(\$ in millions)	2015	2014	2013
Capitalized software for internal use	60	72	81
Capitalized software for sale	21	20	34
Intangibles other than software	315	362	361
<b>Total</b>	<b>396</b>	<b>454</b>	<b>476</b>

In 2015, 2014 and 2013, impairment charges on intangible assets other than goodwill were not significant.

At December 31, 2015, future amortization expense of intangible assets other than goodwill is estimated to be:

(\$ in millions)	
2016	364
2017	271
2018	236
2019	175
2020	175
Thereafter	1,116
<b>Total</b>	<b>2,337</b>

**Note 12**  
**Debt**

The Company's total debt at December 31, 2015 and 2014, amounted to \$7,439 million and \$7,665 million, respectively.

**Short-term debt and current**  
**maturities of long-term debt**

The Company's "Short-term debt and current maturities of long-term debt" consisted of the following:

December 31, (\$ in millions)	2015	2014
Short-term debt (weighted-average interest rate of 4.2% and 5.8%, respectively)	278	299
Current maturities of long-term debt (weighted-average nominal interest rate of 2.0% and 5.9%, respectively)	1,176	54
<b>Total</b>	<b>1,454</b>	<b>353</b>

Short-term debt primarily represented short-term loans from various banks and issued commercial paper.

At December 31, 2015, the Company had in place two commercial paper programs: a \$2 billion Euro-commercial paper program for the issuance of commercial paper in a variety of currencies (which replaced the previous \$1 billion Euro-commercial paper program in February 2014), and a \$2 billion commercial paper program for the private placement of U.S. dollar denominated commercial paper in the United States. During 2014, the Company terminated its 5 billion Swedish krona commercial paper program which provided for the issuance of Swedish krona and euro-denominated

**Note 12**  
**Debt, continued**

commercial paper. At December 31, 2015 and 2014, \$132 million and \$120 million, respectively, was outstanding under the \$2 billion program in the United States.

In addition, during 2014, the Company replaced its \$2 billion multicurrency revolving credit facility, maturing 2015, with a new 5-year multicurrency credit facility maturing in 2019. The new credit facility provided the Company an option in 2015 and 2016 to extend the maturity to 2020 and 2021, respectively. The Company exercised the option in 2015 to extend the maturity of the facility to 2020. The facility is for general corporate purposes. Interest costs on drawings under the facility are LIBOR or EURIBOR (depending on the currency of the drawings) plus a margin of 0.20 percent, while commitment fees (payable on the unused portion of the facility) amount to 35 percent of the margin, which represents commitment fees of 0.07 percent per annum. Utilization fees, payable on drawings, amount to 0.075 percent per annum on drawings up to one-third of the facility, 0.15 percent per annum on drawings in excess of one-third but less than or equal to two-thirds of the facility, or 0.30 percent per annum on drawings over two-thirds of the facility. No amount was drawn at December 31, 2015 and 2014. The facility contains cross-default clauses whereby an event of default would occur if the Company were to default on indebtedness as defined in the facility, at or above a specified threshold.

**Long-term debt**

The Company utilizes derivative instruments to modify the interest characteristics of its long-term debt. In particular, the Company uses interest rate swaps to effectively convert certain fixed-rate long-term debt into floating rate obligations. The carrying value of debt, designated as being hedged by fair value hedges, is adjusted for changes in the fair value of the risk component of the debt being hedged.

The following table summarizes the Company's long-term debt considering the effect of interest rate swaps. Consequently, a fixed-rate debt subject to a fixed-to-floating interest rate swap is included as a floating rate debt in the table below:

December 31, (\$ in millions, except % data)	2015			2014		
	Balance	Nominal rate	Effective rate	Balance	Nominal rate	Effective rate
Floating rate	2,285	2.7%	0.8%	2,310	2.7%	1.1%
Fixed rate	4,876	3.2%	3.2%	5,056	3.2%	3.2%
	<b>7,161</b>			<b>7,366</b>		
Current portion of long-term debt	(1,176)	2.0%	1.4%	(54)	5.9%	5.9%
<b>Total</b>	<b>5,985</b>			<b>7,312</b>		

At December 31, 2015, the principal amounts of long-term debt repayable (excluding capital lease obligations) at maturity were as follows:

(\$ in millions)	
2016	1,145
2017	823
2018	371
2019	1,381
2020	7
Thereafter	3,262
<b>Total</b>	<b>6,989</b>

Details of the Company's outstanding bonds were as follows:

December 31, (in millions)	2015			2014		
	Nominal outstanding	Carrying value <sup>(1)</sup>		Nominal outstanding	Carrying value <sup>(1)</sup>	
<i>Bonds:</i>						
2.5% USD Notes, due 2016	USD 600	\$ 599		USD 600	\$ 598	
1.25% CHF Bonds, due 2016	CHF 500	\$ 510		CHF 500	\$ 511	
1.625% USD Notes, due 2017	USD 500	\$ 499		USD 500	\$ 498	
4.25% AUD Notes, due 2017	AUD 400	\$ 297		AUD 400	\$ 334	
1.50% CHF Bonds, due 2018	CHF 350	\$ 352		CHF 350	\$ 351	
2.625% EUR Instruments, due 2019	EUR 1,250	\$ 1,363		EUR 1,250	\$ 1,515	
4.0% USD Notes, due 2021	USD 650	\$ 641		USD 650	\$ 640	
2.25% CHF Bonds, due 2021	CHF 350	\$ 383		CHF 350	\$ 378	
5.625% USD Notes, due 2021	USD 250	\$ 279		USD 250	\$ 283	
2.875% USD Notes, due 2022	USD 1,250	\$ 1,275		USD 1,250	\$ 1,271	
4.375% USD Notes, due 2042	USD 750	\$ 722		USD 750	\$ 721	
<b>Total</b>		<b>\$ 6,920</b>			<b>\$ 7,100</b>	

<sup>(1)</sup> USD carrying values include unamortized debt issuance costs, bond discounts or premiums, as well as adjustments for fair value hedge accounting, where appropriate.

The 2.5% USD Notes, due 2016, and the 4.0% USD Notes, due 2021, pay interest semi-annually in arrears, at fixed annual rates of 2.5 percent and 4.0 percent, respectively. The Company may redeem these notes prior to maturity, in whole or in part, at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the

**Note 12**  
**Debt, continued**

present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date.

The 1.25% CHF Bonds, due 2016, and the 2.25% Bonds, due 2021, pay interest annually in arrears, at fixed annual rates of 1.25 percent and 2.25 percent, respectively. The Company has the option to redeem the bonds prior to maturity, in whole, at par plus accrued interest, if 85 percent of the aggregate principal amount of the bonds has been redeemed or purchased and cancelled. The Company entered into interest rate swaps to hedge its interest obligations on these bonds. After considering the impact of such swaps, these bonds effectively became floating rate Swiss franc obligations and consequently have been shown as floating rate debt in the table of long-term debt above.

The 1.50% CHF Bonds, due 2018, pay interest annually in arrears at a fixed annual rate of 1.5 percent. The Company has the option to redeem the bonds prior to maturity, in whole, at par plus accrued interest, if 85 percent of the aggregate principal amount of the bonds has been redeemed or purchased and cancelled.

The 2.625% EUR Instruments, due 2019, pay interest annually in arrears at a fixed rate of 2.625 percent per annum.

The 1.625% USD Notes, due 2017, pay interest semi-annually in arrears at a fixed annual rate of 1.625 percent. The 2.875% USD Notes, due 2022, pay interest semi-annually in arrears at a fixed annual rate of 2.875 percent. The 4.375% USD Notes, due 2042, pay interest semi-annually in arrears at a fixed annual rate of 4.375 percent. The Company may redeem any of these notes prior to maturity, in whole or in part, at the greater of (i) 100 percent of the principal amount of the notes to be redeemed and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date. These notes, registered with the U.S. Securities and Exchange Commission, were issued by ABB Finance (USA) Inc., a 100 percent owned finance subsidiary, and were fully and unconditionally guaranteed by ABB Ltd. There are no significant restrictions on the ability of the parent company to obtain funds from its subsidiaries by dividend or loan. In reliance on Rule 3-10 of Regulation S-X, the separate financial statements of ABB Finance (USA) Inc. are not provided. The Company has entered into interest rate swaps for an aggregate nominal amount of \$1,050 million to partially hedge its interest obligations on the 2.875% USD Notes, due 2022. After considering the impact of such swaps, \$1,050 million of the outstanding principal is shown as floating rate debt in the table of long-term debt above.

The 5.625% USD Notes, due 2021, pay interest semi-annually in arrears at a fixed annual rate of 5.625 percent. The Company has the option to redeem the notes prior to maturity at the greater of (i) 100 percent of the principal amount of the notes to be redeemed, and (ii) the sum of the present values of remaining scheduled payments of principal and interest (excluding interest accrued to the redemption date) discounted to the redemption date at a rate defined in the note terms, plus interest accrued at the redemption date.

The 4.25% AUD Notes, due 2017, pay fixed interest of 4.25 percent semi-annually in arrears. The Company entered into interest rate swaps to hedge its interest obligations on these bonds. After considering the impact of such swaps, these bonds effectively became floating rate Australian dollar obligations and consequently have been shown as floating rate debt in the table of long-term debt above.

The Company's bonds contain cross-default clauses which would allow the bondholders to demand repayment if the Company were to default on any borrowing at or above a specified threshold. Furthermore, all such bonds constitute unsecured obligations of the Company and rank pari passu with other debt obligations.

In addition to the bonds described above, included in long-term debt at December 31, 2015 and 2014, are capital lease obligations, bank borrowings of subsidiaries and other long-term debt, none of which is individually significant.

**Note 13**  
**Other provisions, other**  
**current liabilities and**  
**other non-current liabilities**

"Other Provisions" consisted of the following:

December 31, (\$ in millions)	2015	2014
Contract-related provisions	724	749
Restructuring and restructuring-related provisions	538	225
Provisions for contractual penalties and compliance and litigation matters	220	237
Provision for insurance-related reserves	190	239
Other	248	239
<b>Total</b>	<b>1,920</b>	<b>1,689</b>

**Note 13**  
**Other provisions, other**  
**current liabilities and**  
**other non-current liabilities,**  
**continued**

“Other current liabilities” consisted of the following:

December 31, (\$ in millions)	2015	2014
Employee-related liabilities	1,709	1,746
Accrued expenses	457	545
Non-trade payables	319	312
Derivative liabilities (see Note 5)	318	438
Other tax liabilities	271	271
Income taxes payable	240	293
Accrued customer rebates	161	165
Deferred income	156	169
Accrued interest	67	76
Pension and other employee benefits (see Note 17)	66	75
Other	53	167
<b>Total</b>	<b>3,817</b>	<b>4,257</b>

“Other non-current liabilities” consisted of the following:

December 31, (\$ in millions)	2015	2014
Income tax related liabilities	851	760
Non-current deposit liabilities (see Note 9)	215	222
Derivative liabilities (see Note 5)	134	108
Environmental provisions (see Note 15)	86	109
Deferred income	85	89
Employee-related liabilities	66	52
Provisions for contractual penalties and compliance and litigation matters	31	41
Other	182	205
<b>Total</b>	<b>1,650</b>	<b>1,586</b>

**Note 14**  
**Leases**

The Company’s lease obligations primarily relate to real estate and office equipment. Rent expense was \$497 million, \$558 million and \$602 million in 2015, 2014 and 2013, respectively. Sublease income received by the Company on leased assets was \$13 million, \$17 million and \$22 million in 2015, 2014 and 2013, respectively.

At December 31, 2015, future net minimum lease payments for operating leases, having initial or remaining non-cancelable lease terms in excess of one year, consisted of the following:

(\$ in millions)	
2016	417
2017	350
2018	286
2019	220
2020	180
Thereafter	304
	<b>1,757</b>
Sublease income	(34)
<b>Total</b>	<b>1,723</b>

At December 31, 2015, the future net minimum lease payments for capital leases and the present value of the net minimum lease payments consisted of the following:

(\$ in millions)	
2016	32
2017	24
2018	22
2019	21
2020	15
Thereafter	82
<b>Total minimum lease payments</b>	<b>196</b>
Less amount representing estimated executory costs included in total minimum lease payments	(1)
<b>Net minimum lease payments</b>	<b>195</b>
Less amount representing interest	(71)
<b>Present value of minimum lease payments</b>	<b>124</b>

**Note 14**  
**Leases, continued**

Minimum lease payments have not been reduced by minimum sublease rentals due in the future under non-cancelable subleases. Such minimum sublease rentals were not significant. The present value of minimum lease payments is included in "Short-term debt and current maturities of long-term debt" or "Long-term debt" in the Consolidated Balance Sheets.

**Note 15**  
**Commitments and contingencies**  
**Contingencies — Environmental**

The Company is engaged in environmental clean-up activities at certain sites arising under various United States and other environmental protection laws and under certain agreements with third parties. In some cases, these environmental remediation actions are subject to legal proceedings, investigations or claims, and it is uncertain to what extent the Company is actually obligated to perform. Provisions for these unresolved matters have been set up if it is probable that the Company has incurred a liability and the amount of loss can be reasonably estimated. The lower end of an estimated range is accrued when a single best estimate is not determinable. The required amounts of the provisions may change in the future as developments occur.

If a provision has been recognized for any of these matters, the Company records an asset when it is probable that it will recover a portion of the costs expected to be incurred to settle them. Management is of the opinion, based upon information presently available, that the resolution of any such obligation and non-collection of recoverable costs would not have a further material adverse effect on the Company's Consolidated Financial Statements.

The Company is involved in the remediation of environmental contamination at present or former facilities, primarily in the United States. The clean-up of these sites involves primarily soil and groundwater contamination. A significant portion of the provisions in respect of these contingencies reflects the provisions of acquired companies.

The impact of environmental obligations on "Income from continuing operations, net of tax" was not significant in 2015, 2014 and 2013. The impact on "Income (loss) from discontinued operations, net of tax" was a charge of \$41 million in 2013 and was not significant in 2015 and 2014.

The effect of environmental obligations on the Company's Consolidated Statements of Cash Flows was not significant in 2015, 2014 and 2013.

Environmental provisions included in the Company's Consolidated Balance Sheets were as follows:

December 31, (\$ in millions)	2015	2014
Other provisions	30	37
Other non-current liabilities	86	109
<b>Total</b>	<b>116</b>	<b>146</b>

Provisions for the above estimated losses have not been discounted as the timing of payments cannot be reasonably estimated.

**Contingencies —**  
**Regulatory, Compliance and Legal**

**Antitrust**

In April 2014, the European Commission announced its decision regarding its investigation of anticompetitive practices in the cables industry and granted the Company full immunity from fines under the European Commission's leniency program. In December 2013, the Company agreed with the Brazilian Antitrust Authority (CADE) to settle its ongoing investigation into the Company's involvement in anticompetitive practices in the cables industry and the Company agreed to pay a fine of approximately 1.5 million Brazilian reais (equivalent to approximately \$1 million on date of payment). The Company's cables business remains under investigation for alleged anticompetitive practices in certain other jurisdictions. An informed judgment about the outcome of these remaining investigations or the amount of potential loss or range of loss for the Company, if any, relating to these remaining investigations cannot be made at this stage.

In Brazil, the Company's Gas Insulated Switchgear business is under investigation by the CADE for alleged anticompetitive practices. In addition, the CADE has opened an investigation into certain other power businesses of the Company, including flexible alternating current transmission systems (FACTS) and power transformers. An informed judgment about the outcome of these investigations or the amount of potential loss or range of loss for the Company, if any, relating to these investigations cannot be made at this stage.

With respect to those aforementioned matters which are still ongoing, management is cooperating fully with the antitrust authorities.

**General**

In addition, the Company is aware of proceedings, or the threat of proceedings, against it and others in respect of private claims by customers and other third parties with regard to certain actual or alleged anticompetitive practices. Also, the Company is subject to other various legal proceedings, investigations, and claims that have not yet been resolved. With respect to the above-mentioned regulatory matters and commercial litigation contingencies, the Company will bear the costs of the continuing investigations and any related legal proceedings.

**Liabilities recognized**

At December 31, 2015 and 2014, the Company had aggregate liabilities of \$160 million and \$147 million, respectively, included in "Other provisions" and "Other non-current liabilities", for the above regulatory, compliance and legal contingencies, and none of the individual liabilities recognized was significant. As it is not possible to make an informed judgment on the outcome of certain matters and as it is not possible, based on information currently available to management, to estimate the maximum potential liability on other matters, there could be material adverse outcomes beyond the amounts accrued.

**Note 15**  
**Commitments and contingencies,**  
**continued**  
**Guarantees**

General

The following table provides quantitative data regarding the Company's third-party guarantees. The maximum potential payments represent a "worst-case scenario", and do not reflect management's expected outcomes.

December 31, (\$ in millions)	Maximum potential payments	
	2015	2014
Performance guarantees	209	232
Financial guarantees	77	72
Indemnification guarantees	50	50
<b>Total</b>	<b>336</b>	<b>354</b>

The carrying amount of liabilities recorded in the Consolidated Balance Sheets reflects the Company's best estimate of future payments, which it may incur as part of fulfilling its guarantee obligations. In respect of the above guarantees, the carrying amounts of liabilities at December 31, 2015 and 2014, were not significant.

**Performance guarantees**

Performance guarantees represent obligations where the Company guarantees the performance of a third party's product or service according to the terms of a contract. Such guarantees may include guarantees that a project will be completed within a specified time. If the third party does not fulfill the obligation, the Company will compensate the guaranteed party in cash or in kind. Performance guarantees include surety bonds, advance payment guarantees and standby letters of credit. There were no significant performance guarantees at December 31, 2015 and 2014.

The Company is engaged in executing a number of projects as a member of consortia that include third parties. In certain of these cases, the Company guarantees not only its own performance but also the work of third parties. The original maturity dates of these guarantees range from one to six years. At December 31, 2015 and 2014, the maximum potential amount payable under these guarantees as a result of third-party non-performance was \$136 million and \$156 million, respectively.

**Financial guarantees and commercial commitments**

Financial guarantees represent irrevocable assurances that the Company will make payment to a beneficiary in the event that a third party fails to fulfill its financial obligations and the beneficiary under the guarantee incurs a loss due to that failure.

At December 31, 2015 and 2014, the Company had a maximum potential amount payable of \$77 million and \$72 million, respectively, under financial guarantees outstanding. Of these amounts, \$17 million and \$12 million at December 31, 2015 and 2014, respectively, was in respect of guarantees issued on behalf of companies in which the Company formerly had or has an equity interest. The guarantees outstanding have various maturity dates up to 2020.

In addition, in the normal course of bidding for and executing certain projects, the Company has entered into standby letters of credit, bid/performance bonds and surety bonds (collectively "performance bonds") with various financial institutions. Customers can draw on such performance bonds in the event that the Company does not fulfill its contractual obligations. The Company would then have an obligation to reimburse the financial institution for amounts paid under the performance bonds. There have been no significant amounts reimbursed to financial institutions under these types of arrangements in 2015, 2014 and 2013.

**Indemnification guarantees**

The Company has indemnified certain purchasers of divested businesses for potential claims arising from the operations of the divested businesses. To the extent the maximum potential loss related to such indemnifications could not be calculated, no amounts have been included under maximum potential payments in the table above. Indemnifications for which maximum potential losses could not be calculated include indemnifications for legal claims. There were no significant indemnification guarantees at December 31, 2015 and 2014.

**Product and order-related contingencies**

The Company calculates its provision for product warranties based on historical claims experience and specific review of certain contracts.

The reconciliation of the "Provisions for warranties", including guarantees of product performance, was as follows:

(\$ in millions)	2015	2014
<b>Balance at January 1,</b>	<b>1,148</b>	<b>1,362</b>
Net change in warranties due to acquisitions and divestments	—	11
Claims paid in cash or in kind	(281)	(319)
Net increase in provision for changes in estimates, warranties issued and warranties expired	301	224
Exchange rate differences	(79)	(130)
<b>Balance at December 31,</b>	<b>1,089</b>	<b>1,148</b>

**Note 15**  
**Commitments and contingencies,**  
**continued**

Related party transactions

The Company conducts business with certain companies where members of the Company's Board of Directors or Executive Committee act, or in recent years have acted, as directors or senior executives. The Company's Board of Directors has determined that the Company's business relationships with those companies do not constitute material business relationships. This determination was made in accordance with the Company's related party transaction policy which was prepared based on the Swiss Code of Best Practice and the independence criteria set forth in the corporate governance rules of the New York Stock Exchange.

**Note 16**

**Taxes**

"Provision for taxes" consisted of the following:

(\$ in millions)	2015	2014	2013
Current taxes	1,005	1,130	1,258
Deferred taxes	(217)	72	(136)
<b>Tax expense from continuing operations</b>	<b>788</b>	<b>1,202</b>	<b>1,122</b>
<b>Tax expense (benefit) from discontinued operations</b>	<b>(2)</b>	<b>1</b>	<b>(8)</b>

Tax expense from continuing operations is reconciled below from the Company's weighted-average global tax rate (rather than from the Swiss domestic statutory tax rate) as the parent company of the ABB Group, ABB Ltd, is domiciled in Switzerland and income generated in jurisdictions outside of Switzerland (hereafter "foreign jurisdictions") which has already been subject to corporate income tax in those foreign jurisdictions is, to a large extent, tax exempt in Switzerland. There is no requirement in Switzerland for any parent company of a group to file a tax return of the consolidated group determining domestic and foreign pre-tax income. As the Company's consolidated income from continuing operations is predominantly earned outside of Switzerland, corporate income tax in foreign jurisdictions largely determines the weighted-average global tax rate of the Company.

The reconciliation of "Tax expense from continuing operations" at the weighted-average tax rate to the effective tax rate is as follows:

(\$ in millions, except % data)	2015	2014	2013
<b>Income from continuing operations before taxes</b>	<b>2,840</b>	<b>3,896</b>	<b>4,066</b>
<b>Weighted-average global tax rate</b>	<b>21.8%</b>	<b>23.8%</b>	<b>22.7%</b>
Income taxes at weighted-average tax rate	619	929	922
Items taxed at rates other than the weighted-average tax rate	(36)	146	110
Impact of non-deductible goodwill allocated to divested businesses	9	77	—
Changes in valuation allowance, net	57	52	31
Effects of changes in tax laws and enacted tax rates	—	(52)	1
Other, net	139	50	58
<b>Tax expense from continuing operations</b>	<b>788</b>	<b>1,202</b>	<b>1,122</b>
<b>Effective tax rate for the year</b>	<b>27.7%</b>	<b>30.9%</b>	<b>27.6%</b>

In 2015, the benefit reported in "Items taxed at rates other than the weighted-average tax rate" predominantly included \$50 million related to tax credits arising from research and development activities. In 2014 and 2013, the expense reported in "Items taxed at rates other than the weighted-average tax rate" predominantly related to tax credits arising in foreign jurisdictions for which the technical merits did not allow a benefit to be taken.

In 2015, 2014 and 2013, "Changes in valuation allowance, net" included reductions in valuation allowances recorded in certain jurisdictions where the Company determined that it was more likely than not that such deferred tax assets (recognized for net operating losses and temporary differences in those jurisdictions) would be realized, as well as increases in the valuation allowance in certain other jurisdictions. In 2015, the "Changes in valuation allowance, net" included an expense of \$21 million related to certain of the Company's operations in Asia. In 2014, the "Changes in valuation allowance, net" included an expense of \$31 million related to certain of the Company's operations in South America and in 2013, the "Changes in valuation allowance, net" included an expense of \$104 million related to certain of the Company's operations in Central Europe and South America, as well as a benefit of \$42 million related to certain of the Company's operations in Central Europe.

In 2014, the "Effects of change in tax laws and enacted tax rates" included a benefit of \$62 million related to enacted changes in double tax treaties.

**Note 16**  
**Taxes, continued**

In 2015, 2014 and 2013, "Other, net" of \$139 million, \$50 million and \$58 million, respectively, included expenses of \$52 million, \$45 million and \$71 million, respectively, in relation to items that were deducted for financial accounting purposes, but were not tax deductible, such as interest expense, local taxes on productive activities, disallowed meals and entertainment expenses and other similar items. In 2015, "Other, net" included a net charge of \$74 million due to the interpretation of tax law and double tax treaty agreements by competent tax authorities.

In 2014, "Provision for taxes" included \$279 million relating to income taxes recorded on \$543 million of net gains from sale of businesses. This expense is primarily included in "Income taxes at weighted-average tax rate" and "Impact of non-deductible goodwill allocated to divested businesses".

Deferred income tax assets and liabilities consisted of the following:

December 31, (\$ in millions)	2015	2014
<i>Deferred tax assets:</i>		
Unused tax losses and credits	623	644
Provisions and other accrued liabilities	887	825
Pension	528	671
Inventories	267	297
Property, plant and equipment and other non-current assets	282	265
Other	89	112
<b>Total gross deferred tax asset</b>	<b>2,676</b>	<b>2,814</b>
Valuation allowance	(606)	(600)
<b>Total gross deferred tax asset, net of valuation allowance</b>	<b>2,070</b>	<b>2,214</b>
<i>Deferred tax liabilities:</i>		
Property, plant and equipment	(279)	(343)
Intangibles and other non-current assets	(721)	(766)
Pension and other accrued liabilities	(143)	(191)
Inventories	(91)	(118)
Other current assets	(139)	(149)
Unremitted earnings	(523)	(612)
Other	(84)	(76)
<b>Total gross deferred tax liability</b>	<b>(1,980)</b>	<b>(2,255)</b>
<b>Net deferred tax asset (liability)</b>	<b>90</b>	<b>(41)</b>
<i>Included in:</i>		
"Deferred taxes"—current assets	881	902
"Deferred taxes"—non-current assets	423	511
"Deferred taxes"—current liabilities	(249)	(289)
"Deferred taxes"—non-current liabilities	(965)	(1,165)
<b>Net deferred tax asset (liability)</b>	<b>90</b>	<b>(41)</b>

Certain entities have deferred tax assets related to net operating loss carry-forwards and other items. As recognition of these assets in certain entities did not meet the more likely than not criterion, valuation allowances have been recorded and amount to \$606 million and \$600 million, at December 31, 2015 and 2014, respectively. "Unused tax losses and credits" at December 31, 2015 and 2014, in the table above, included \$127 million and \$151 million, respectively, for which the Company has established a full valuation allowance as, due to limitations imposed by the relevant tax law, the Company determined that, more likely than not, such deferred tax assets would not be realized.

At December 31, 2015 and 2014, deferred tax liabilities totaling \$523 million and \$612 million, respectively, have been provided for primarily in respect of withholding taxes, dividend distribution taxes or additional corporate income taxes (hereafter "withholding taxes") on unremitted earnings which will be payable in foreign jurisdictions on the repatriation of earnings to Switzerland. Income which has been generated outside of Switzerland and has already been subject to corporate income tax in such foreign jurisdictions is, to a large extent, tax exempt in Switzerland. Therefore, generally no or only limited Swiss income tax has to be provided for on the repatriated earnings of foreign subsidiaries.

Certain countries levy withholding taxes on dividend distributions. Such taxes cannot always be fully reclaimed by the shareholder, although they have to be declared and withheld by the subsidiary. In 2015 and 2014, certain taxes arose in certain foreign jurisdictions for which the technical merits do not allow utilization of benefits. At December 31, 2015 and 2014, foreign subsidiary retained earnings subject to withholding taxes upon distribution of approximately \$500 million and \$100 million, respectively, were considered as permanently reinvested, as these funds are used for financing current operations as well as business growth through working capital and capital expenditure in those countries and, consequently, no deferred tax liability was recorded.

At December 31, 2015, net operating loss carry-forwards of \$2,144 million and tax credits of \$92 million were available to reduce future taxes of certain subsidiaries. Of these amounts, \$1,285 million of loss carry-forwards and \$73 million of tax credits will expire in varying amounts through 2035. The largest amount of these carry-forwards related to the Company's Central Europe operations.

(\$ in millions)	Unrecognized tax benefits	Penalties and interest related to unrecognized tax benefits	Total
<b>Classification as unrecognized tax items on January 1, 2013</b>	<b>669</b>	<b>127</b>	<b>796</b>
Net change due to acquisitions and divestments	17	2	19
Increase relating to prior year tax positions	43	36	79
Decrease relating to prior year tax positions	(30)	—	(30)
Increase relating to current year tax positions	90	4	94
Decrease relating to current year tax positions	(1)	—	(1)
Decrease due to settlements with tax authorities	(18)	(5)	(23)
Decrease as a result of the applicable statute of limitations	(46)	(13)	(59)
Exchange rate differences	9	3	12
<b>Balance at December 31, 2013, which would, if recognized, affect the effective tax rate</b>	<b>733</b>	<b>154</b>	<b>887</b>
Net change due to acquisitions and divestments	(3)	1	(2)
Increase relating to prior year tax positions	25	39	64
Decrease relating to prior year tax positions	(24)	(7)	(31)
Increase relating to current year tax positions	85	—	85
Decrease relating to current year tax positions	(1)	—	(1)
Decrease due to settlements with tax authorities	(19)	(10)	(29)
Decrease as a result of the applicable statute of limitations	(36)	(19)	(55)
Exchange rate differences	(55)	(12)	(67)
<b>Balance at December 31, 2014, which would, if recognized, affect the effective tax rate</b>	<b>705</b>	<b>146</b>	<b>851</b>
Increase relating to prior year tax positions	52	38	90
Decrease relating to prior year tax positions	(33)	(3)	(36)
Increase relating to current year tax positions	155	—	155
Decrease due to settlements with tax authorities	(38)	(13)	(51)
Decrease as a result of the applicable statute of limitations	(62)	(15)	(77)
Exchange rate differences	(35)	(8)	(43)
<b>Balance at December 31, 2015, which would, if recognized, affect the effective tax rate</b>	<b>744</b>	<b>145</b>	<b>889</b>

In 2015, 2014 and 2013, the "Increase relating to current year tax positions" included a total of \$127 million, \$56 million and \$62 million, respectively, in taxes related to the interpretation of tax law and double tax treaty agreements by competent tax authorities.

At December 31, 2015, the Company expected the resolution, within the next twelve months, of uncertain tax positions related to pending court cases amounting to \$17 million for taxes, penalties and interest. Otherwise, the Company had not identified any other significant changes which were considered reasonably possible to occur within the next twelve months.

At December 31, 2015, the earliest significant open tax years that remained subject to examination were the following:

Region	Year
Europe	2007
The Americas	2012
Asia, Middle East & Africa	2006

**Note 17**  
**Employee benefits**

The Company operates defined benefit pension plans, defined contribution pension plans, and termination indemnity plans, in accordance with local regulations and practices. These plans cover a large portion of the Company's employees and provide benefits to employees in the event of death, disability, retirement, or termination of employment. Certain of these plans are multi-employer plans. The Company also operates other postretirement benefit plans including postretirement health care benefits and other employee-related benefits for active employees including long-service award plans. The measurement date used for the Company's employee benefit plans is December 31. The funding policies of the Company's plans are consistent with the local government and tax requirements.

The Company recognizes in its Consolidated Balance Sheets the funded status of its defined benefit pension plans, postretirement plans, and other employee-related benefits measured as the difference between the fair value of the plan assets and the benefit obligation.

Obligations and funded status  
of the plans

The change in benefit obligation, change in fair value of plan assets, and funded status recognized in the Consolidated Balance Sheets were as follows:

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2015	2014	2015	2014
<b>Benefit obligations at January 1,</b>	<b>12,355</b>	<b>12,063</b>	<b>245</b>	<b>236</b>
Service cost	267	243	1	1
Interest cost	305	409	8	10
Contributions by plan participants	76	81	—	—
Benefit payments	(614)	(632)	(15)	(14)
Benefit obligations of businesses acquired (divested)	—	(27)	—	—
Actuarial (gain) loss	(469)	1,536	(31)	14
Plan amendments and other	(141)	(64)	(27)	—
Exchange rate differences	(555)	(1,254)	(3)	(2)
<b>Benefit obligation at December 31,</b>	<b>11,224</b>	<b>12,355</b>	<b>178</b>	<b>245</b>
<b>Fair value of plan assets at January 1,</b>	<b>10,465</b>	<b>10,930</b>	<b>—</b>	<b>—</b>
Actual return on plan assets	(8)	918	—	—
Contributions by employer	243	308	15	14
Contributions by plan participants	76	81	—	—
Benefit payments	(614)	(632)	(15)	(14)
Plan assets of businesses acquired (divested)	—	(25)	—	—
Plan amendments and other	—	(68)	—	—
Exchange rate differences	(419)	(1,047)	—	—
<b>Fair value of plan assets at December 31,</b>	<b>9,743</b>	<b>10,465</b>	<b>—</b>	<b>—</b>
<b>Funded status—underfunded</b>	<b>(1,481)</b>	<b>(1,890)</b>	<b>(178)</b>	<b>(245)</b>

The amounts recognized in "Accumulated other comprehensive loss" and "Noncontrolling interests" were:

December 31, (\$ in millions)	Defined pension benefits			Other postretirement benefits		
	2015	2014	2013	2015	2014	2013
Net actuarial loss	(2,383)	(2,765)	(2,050)	(8)	(39)	(25)
Prior service (cost) credit	127	2	(21)	33	16	24
<b>Amount recognized in OCI<sup>(1)</sup> and NCI<sup>(2)</sup></b>	<b>(2,256)</b>	<b>(2,763)</b>	<b>(2,071)</b>	<b>25</b>	<b>(23)</b>	<b>(1)</b>
Taxes associated with amount recognized in OCI and NCI	512	652	459	—	—	—
<b>Amount recognized in OCI and NCI, net of tax<sup>(3)</sup></b>	<b>(1,744)</b>	<b>(2,111)</b>	<b>(1,612)</b>	<b>25</b>	<b>(23)</b>	<b>(1)</b>

<sup>(1)</sup> OCI represent "Accumulated other comprehensive loss".

<sup>(2)</sup> NCI represents "Noncontrolling interests".

<sup>(3)</sup> NCI, net of tax, amounted to \$0 million, \$(3) million and \$(3) million at December 31, 2015, 2014 and 2013, respectively.

In addition, the following amounts were recognized in the Company's Consolidated Balance Sheets:

December 31, (\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2015	2014	2015	2014
Overfunded plans	42	42	—	—
Underfunded plans—current	(18)	(19)	(14)	(16)
Underfunded plans—non-current	(1,505)	(1,913)	(164)	(229)
<b>Funded status—underfunded</b>	<b>(1,481)</b>	<b>(1,890)</b>	<b>(178)</b>	<b>(245)</b>

**Note 17**  
**Employee benefits, continued**

December 31, (\$ in millions)	2015	2014
<b>Non-current assets</b>		
Overfunded pension plans	42	42
Other employee-related benefits	26	28
<b>Prepaid pension and other employee benefits</b>	<b>68</b>	<b>70</b>

December 31, (\$ in millions)	2015	2014
<b>Current liabilities</b>		
Underfunded pension plans	(18)	(19)
Underfunded other postretirement benefit plans	(14)	(16)
Other employee-related benefits	(34)	(40)
<b>Pension and other employee benefits (see Note 13)</b>	<b>(66)</b>	<b>(75)</b>

December 31, (\$ in millions)	2015	2014
<b>Non-current liabilities</b>		
Underfunded pension plans	(1,505)	(1,913)
Underfunded other postretirement benefit plans	(164)	(229)
Other employee-related benefits	(255)	(252)
<b>Pension and other employee benefits</b>	<b>(1,924)</b>	<b>(2,394)</b>

The funded status, calculated using the projected benefit obligation (PBO) and fair value of plan assets, for pension plans with a PBO in excess of fair value of plan assets (underfunded) or fair value of plan assets in excess of PBO (overfunded), respectively, was:

December 31, (\$ in millions)	2015			2014		
	PBO	Assets	Difference	PBO	Assets	Difference
PBO exceeds assets	10,413	8,890	(1,523)	11,576	9,644	(1,932)
Assets exceed PBO	811	853	42	779	821	42
<b>Total</b>	<b>11,224</b>	<b>9,743</b>	<b>(1,481)</b>	<b>12,355</b>	<b>10,465</b>	<b>(1,890)</b>

The accumulated benefit obligation (ABO) for all defined benefit pension plans was \$10,924 million and \$11,869 million at December 31, 2015 and 2014, respectively. The funded status, calculated using the ABO and fair value of plan assets for pension plans with ABO in excess of fair value of plan assets (underfunded) or fair value of plan assets in excess of ABO (overfunded), respectively, was:

December 31, (\$ in millions)	2015			2014		
	ABO	Assets	Difference	ABO	Assets	Difference
ABO exceeds assets	8,781	7,496	(1,285)	9,921	8,091	(1,830)
Assets exceed ABO	2,143	2,247	104	1,948	2,374	426
<b>Total</b>	<b>10,924</b>	<b>9,743</b>	<b>(1,181)</b>	<b>11,869</b>	<b>10,465</b>	<b>(1,404)</b>

All of the Company's other postretirement benefit plans are unfunded.

**Components of net periodic benefit cost**

Net periodic benefit cost consisted of the following:

December 31, (\$ in millions)	Defined pension benefits			Other postretirement benefits		
	2015	2014	2013	2015	2014	2013
Service cost	267	243	249	1	1	1
Interest cost	305	409	373	8	10	9
Expected return on plan assets	(456)	(481)	(479)	—	—	—
Amortization of prior service cost (credit)	38	27	34	(9)	(9)	(9)
Amortization of net actuarial loss	127	99	136	1	—	4
Curtailments, settlements and special termination benefits	5	4	1	—	—	2
<b>Net periodic benefit cost</b>	<b>286</b>	<b>301</b>	<b>314</b>	<b>1</b>	<b>2</b>	<b>7</b>

The net actuarial loss and prior service cost for defined pension benefits estimated to be amortized from "Accumulated other comprehensive loss" into net periodic benefit cost in 2016 is \$116 million and \$40 million, respectively.

**Note 17**  
**Employee benefits, continued**

The net prior service credit for other postretirement benefits estimated to be amortized from "Accumulated other comprehensive loss" into net periodic benefit cost in 2016 is \$11 million. There is no significant actuarial gain or loss to be amortized in 2016.

**Assumptions**

The following weighted-average assumptions were used to determine benefit obligations:

December 31, (in %)	Defined pension benefits		Other postretirement benefits	
	2015	2014	2015	2014
Discount rate	2.63	2.61	3.63	3.49
Rate of compensation increase	1.53	1.65	—	—
Rate of pension increase	0.92	1.04	—	—

The discount rate assumptions are based upon AA-rated corporate bonds. In those countries with sufficient liquidity in corporate bonds, the Company used the current market long-term corporate bond yields and matched the bond duration with the average duration of the pension liabilities. In those countries where the liquidity of the AA-rated corporate bonds was deemed to be insufficient, the Company determined the discount rate by adding the credit spread derived from an AA corporate bond index in another relevant liquid market, as adjusted for interest rate differentials, to the domestic government bond curve or interest rate swap curve.

The following weighted-average assumptions were used to determine the "Net periodic benefit cost":

(in %)	Defined pension benefits			Other postretirement benefits		
	2015	2014	2013	2015	2014	2013
Discount rate	2.61	3.58	3.22	3.49	4.17	3.35
Expected long-term rate of return on plan assets	4.58	4.60	4.79	—	—	—
Rate of compensation increase	1.65	1.81	1.71	—	—	—

The "Expected long-term rate of return on plan assets" is derived for each benefit plan by considering the expected future long-term return assumption for each individual asset class. A single long-term return assumption is then derived for each plan based upon the plan's target asset allocation.

The Company maintains other postretirement benefit plans, which are generally contributory with participants' contributions adjusted annually. The assumptions used were:

December 31,	2015	2014
Health care cost trend rate assumed for next year	7.68%	8.00%
Rate to which the trend rate is assumed to decline (the ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2028	2028

A one-percentage-point change in assumed health care cost trend rates would have the following effects at December 31, 2015:

(\$ in millions)	1-percentage-point	
	Increase	Decrease
Effect on total of service and interest cost	—	(1)
Effect on postretirement benefit obligation	13	(11)

**Plan assets**

The Company has pension plans in various countries with the majority of the Company's pension liabilities deriving from a limited number of these countries.

The pension plans are typically funded by regular contributions from employees and the Company. These plans are typically administered by boards of trustees (which include Company representatives) whose primary responsibilities include ensuring that the plans meet their liabilities through contributions and investment returns. The boards of trustees have the responsibility for making key investment strategy decisions within a risk-controlled framework.

The pension plan assets are invested in diversified portfolios that are managed by third-party asset managers, in accordance with local statutory regulations, pension plan rules and the respective plans' investment guidelines, as approved by the boards of trustees.

Plan assets are generally segregated from those of the Company and invested with the aim of meeting the respective plans' projected future pension liabilities. Plan assets are measured at fair value at the balance sheet date.

**Note 17**  
**Employee benefits, continued**

The boards of trustees manage the assets of the pension plans in a risk-controlled manner and assess the risks embedded in the pension plans through asset/liability management studies. Asset/liability management studies typically take place every three years. However, the risks of the plans are monitored on an ongoing basis.

The board of trustees' investment goal is to maximize the long-term returns of plan assets within specified risk parameters, while considering the future liabilities and liquidity needs of the individual plans. Risk measures taken into account include the funding ratio of the plan, the likelihood of extraordinary cash contributions being required, the risk embedded in each individual asset class, and the plan asset portfolio as a whole.

The Company's global pension asset allocation is the result of the asset allocations of the individual plans, which are set by the respective boards of trustees. The target asset allocation of the Company's plans on a weighted-average basis is as follows:

Asset class	Target percentage
Equity	25
Fixed income	56
Real estate	11
Other	8
	<b>100</b>

The actual asset allocations of the plans are in line with the target asset allocations.

Equity assets primarily include investments in large-cap and mid-cap publicly-traded companies. Fixed income assets primarily include corporate bonds of companies from diverse industries and government bonds. Both fixed income and equity assets are invested either via funds or directly in segregated investment mandates, and include an allocation to emerging markets. Real estate consists primarily of direct investments in real estate in Switzerland held in the Swiss plans. The "Other" asset class includes investments in private equity, hedge funds, commodities, and cash and reflects a variety of investment strategies.

Based on the above global asset allocation and the fair values of the plan assets, the expected long-term return on assets at December 31, 2015, is 4.28 percent. The Company and the local boards of trustees regularly review the investment performance of the asset classes and individual asset managers. Due to the diversified nature of the investments, the Company is of the opinion that no significant concentration of risks exists in its pension fund assets.

The Company does not expect any plan assets to be returned to the employer during 2016.

At December 31, 2015 and 2014, plan assets include ABB Ltd's shares (as well as an insignificant amount of the Company's debt instruments) with a total value of \$9 million and \$15 million, respectively.

The fair values of the Company's pension plan assets by asset class are presented below. For further information on the fair value hierarchy and an overview of the Company's valuation techniques applied, see the "Fair value measures" section of Note 2.

December 31, 2015 (\$ in millions)	Level 1	Level 2	Level 3	Total fair value
<b>Asset class</b>				
Equity				
Equity securities	364	—	—	<b>364</b>
Mutual funds/commingled funds	—	1,633	—	<b>1,633</b>
Emerging market mutual funds/commingled funds	—	328	—	<b>328</b>
Fixed income				
Government and corporate securities	587	949	—	<b>1,536</b>
Government and corporate—mutual funds/commingled funds	—	3,257	—	<b>3,257</b>
Emerging market bonds—mutual funds/commingled funds	—	669	—	<b>669</b>
Real estate	—	74	1,106	<b>1,180</b>
Insurance contracts	—	121	—	<b>121</b>
Cash and short-term investments	160	219	—	<b>379</b>
Private equity	—	—	123	<b>123</b>
Hedge funds	—	—	94	<b>94</b>
Commodities	—	59	—	<b>59</b>
<b>Total</b>	<b>1,111</b>	<b>7,309</b>	<b>1,323</b>	<b>9,743</b>

**Note 17**  
**Employee benefits, continued**

December 31, 2014 (\$ in millions)	Level 1	Level 2	Level 3	Total fair value
<b>Asset class</b>				
Equity				
Equity securities	433	—	—	433
Mutual funds/commingled funds	—	1,821	—	1,821
Emerging market mutual funds/commingled funds	—	487	—	487
Fixed income				
Government and corporate securities	638	1,211	—	1,849
Government and corporate—mutual funds/commingled funds	—	3,521	—	3,521
Emerging market bonds—mutual funds/commingled funds	—	671	—	671
Real estate	—	94	842	936
Insurance contracts	—	126	—	126
Cash and short-term investments	274	56	—	330
Private equity	—	—	136	136
Hedge funds	—	—	93	93
Commodities	—	62	—	62
<b>Total</b>	<b>1,345</b>	<b>8,049</b>	<b>1,071</b>	<b>10,465</b>

The following table represents the movements of those asset categories whose fair values use significant unobservable inputs (Level 3):

(\$ in millions)	Private equity	Hedge funds	Real estate	Commodities	Total Level 3
<b>Balance at January 1, 2014</b>	<b>155</b>	<b>158</b>	<b>866</b>	<b>32</b>	<b>1,211</b>
Return on plan assets					
Assets still held at December 31, 2014	21	(3)	43	(5)	56
Assets sold during the year	3	8	—	—	11
Purchases (sales)	(39)	(59)	30	—	(68)
Transfers from Level 3	—	—	—	(27)	(27)
Exchange rate differences	(4)	(11)	(97)	—	(112)
<b>Balance at December 31, 2014</b>	<b>136</b>	<b>93</b>	<b>842</b>	<b>—</b>	<b>1,071</b>
Return on plan assets					
Assets still held at December 31, 2015	(9)	1	54	—	46
Assets sold during the year	20	(1)	(1)	—	18
Purchases (sales)	(24)	—	215	—	191
Exchange rate differences	—	1	(4)	—	(3)
<b>Balance at December 31, 2015</b>	<b>123</b>	<b>94</b>	<b>1,106</b>	<b>—</b>	<b>1,323</b>

Real estate properties, which are primarily located in Switzerland, are valued under the income approach using the discounted cash flow method, by which the market value of a property is determined as the total of all projected future earnings discounted to the valuation date. The discount rates are determined for each property individually according to the property's location and specific use, and by considering initial yields of comparable market transactions.

Private equity investments include investments in partnerships and related funds. Such investments consist of publicly-traded and privately-held securities. Publicly-traded securities that are quoted in inactive markets are valued using available quotes and adjusted for liquidity restrictions. Privately-held securities are valued taking into account various factors, such as the most recent financing involving unrelated new investors, earnings multiple analyses using comparable companies and discounted cash flow analyses.

Hedge funds are not normally exchange-traded and the shares of the funds cannot be redeemed daily. Depending on the fund structure, the fair values are derived through modeling techniques based on the values of the underlying assets adjusted to reflect liquidity and transferability restrictions.

**Note 17**  
**Employee benefits, continued**  
**Contributions**

Employer contributions were as follows:

(\$ in millions)	Defined pension benefits		Other postretirement benefits	
	2015	2014	2015	2014
Total contributions to defined benefit pension and other postretirement benefit plans	243	308	15	14
Of which, discretionary contributions to defined benefit pension plans	31	75	—	—

In 2015 and 2014, the discretionary contributions included non-cash contributions totaling \$22 million and \$25 million, respectively, of available-for-sale debt securities to certain of the Company's pension plans in the United Kingdom. In 2013, the discretionary contributions included non-cash contributions totaling \$160 million of available-for-sale debt securities to certain of the Company's pension plans in Germany and the United Kingdom.

The Company expects to contribute approximately \$252 million, including \$15 million of discretionary contributions, to its defined benefit pension plans in 2016. These discretionary contributions are expected to be non-cash contributions. The Company expects to contribute approximately \$15 million to its other postretirement benefit plans in 2016.

The Company also contributes to a number of defined contribution plans. The aggregate expense for these plans was \$218 million, \$236 million and \$243 million in 2015, 2014 and 2013, respectively. Contributions to multi-employer plans were not significant in 2015, 2014 and 2013.

**Estimated future benefit payments**

The expected future cash flows to be paid by the Company's plans in respect of pension and other postretirement benefit plans at December 31, 2015, are as follows:

(\$ in millions)	Defined pension benefits	Other postretirement benefits
2016	641	15
2017	604	15
2018	604	14
2019	595	14
2020	583	14
Years 2021-2025	2,822	63

**Note 18**  
**Share-based payment arrangements**

The Company has three principal share-based payment plans, as more fully described in the respective sections below. Compensation cost for equity-settled awards is recorded in "Total cost of sales" and in "Selling, general and administrative expenses" and totaled \$61 million, \$73 million and \$71 million in 2015, 2014 and 2013, respectively. Compensation cost for cash-settled awards is recorded in "Selling, general and administrative expenses" and is disclosed in the "WARs", "LTIP" and "Other share-based payments" sections of this note. The total tax benefit recognized in 2015, 2014 and 2013, was not significant.

At December 31, 2015, the Company had the ability to issue up to 94 million new shares out of contingent capital in connection with share-based payment arrangements. In addition, 37 million shares (of the 123 million shares held by the Company as treasury stock at December 31, 2015) could be used to settle share-based payment arrangements (the remaining shares of treasury stock are held for cancellation—see Note 19).

As the primary trading market for the shares of ABB Ltd is the SIX Swiss Exchange, on which the shares are traded in Swiss francs, certain data disclosed below related to the instruments granted under share-based payment arrangements are presented in Swiss francs.

**MIP**

Under the MIP, the Company offers options and cash-settled WARs (and prior to the 2010 launch offered also physically-settled warrants) to key employees for no consideration.

The warrants and options granted under the MIP allow participants to purchase shares of ABB Ltd at predetermined prices. Participants may sell the warrants and options rather than exercise the right to purchase shares. Equivalent warrants are listed by a third-party bank on the SIX Swiss Exchange, which facilitates pricing and transferability of instruments granted under this plan. The options entitle the holder to request that the third-party bank purchase such options at the market price of equivalent listed warrants related to that MIP launch. If the participant elects to sell the warrants or options, the instruments will thereafter be held by a third party and, consequently, the Company's obligation to deliver shares will be toward this third party. Each WAR gives the participant the right to receive, in cash, the market price of an equivalent listed warrant on the date of exercise of the WAR. Participants may exercise or sell warrants and options and exercise WARs after the vesting period, which is three years from the date of grant. Vesting restrictions can be waived in certain circumstances such as death or disability. All warrants, options and WARs expire six years from the date of grant.

**Note 18**  
**Share-based payment**  
**arrangements, continued**

**Warrants and options**

The fair value of each warrant and option is estimated on the date of grant using a lattice model that uses the weighted-average assumptions noted in the table below. Expected volatilities are based on implied volatilities from equivalent listed warrants on ABB Ltd shares. The expected term of the warrants and options granted is the contractual six-year life of each warrant and option, based on the fact that after the vesting period, a participant can elect to sell the warrant or option rather than exercise the right to purchase shares, thereby realizing the time value of the warrants and options. The risk-free rate is based on a six-year Swiss franc interest rate, reflecting the six-year contractual life of the warrants and options. In estimating forfeitures, the Company has used the data from previous comparable MIP launches.

	2015	2014	2013
Expected volatility	17%	18%	21%
Dividend yield	3.2%	2.9%	2.9%
Expected term	6 years	6 years	6 years
Risk-free interest rate	-0.3%	0.2%	0.6%

Presented below is a summary of the activity related to warrants and options under the MIP:

	Number of instruments (in millions)	Number of shares (in millions) <sup>(1)</sup>	Weighted-average exercise price (in Swiss francs) <sup>(2)</sup>	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in millions of Swiss francs) <sup>(3)</sup>
<b>Outstanding at January 1, 2015</b>	<b>342.7</b>	<b>68.5</b>	<b>20.64</b>		
Granted	86.5	17.3	19.50		
Exercised <sup>(4)</sup>	(25.2)	(5.0)	18.69		
Forfeited	(4.9)	(1.0)	20.43		
<b>Outstanding at December 31, 2015</b>	<b>399.1</b>	<b>79.8</b>	<b>20.51</b>	<b>3.5</b>	<b>27</b>
<b>Vested and expected to vest at December 31, 2015</b>	<b>390.6</b>	<b>78.1</b>	<b>20.52</b>	<b>3.4</b>	<b>27</b>
<b>Exercisable at December 31, 2015</b>	<b>173.1</b>	<b>34.6</b>	<b>20.40</b>	<b>1.9</b>	<b>27</b>

<sup>(1)</sup> Information presented reflects the number of shares of ABB Ltd that can be received upon exercise, as warrants and options have a conversion ratio of 5:1.

<sup>(2)</sup> Information presented reflects the exercise price per share of ABB Ltd.

<sup>(3)</sup> Computed using the closing price, in Swiss francs, of ABB Ltd shares on the SIX Swiss Exchange and the exercise price per share of ABB Ltd.

<sup>(4)</sup> The cash received upon exercise amounted to approximately \$101 million. The shares were delivered out of treasury stock.

At December 31, 2015, there was \$52 million of total unrecognized compensation cost related to non-vested options granted under the MIP. That cost is expected to be recognized over a weighted-average period of 2.0 years. The weighted-average grant-date fair value (per instrument) of options granted during 2015, 2014 and 2013, was 0.39 Swiss francs, 0.49 Swiss francs and 0.66 Swiss francs, respectively. In 2015 the aggregate intrinsic value (on the date of exercise) of instruments exercised was \$10 million, while in 2014 it was not significant. There were no exercises in 2013.

Presented below is a summary, by launch, related to instruments outstanding at December 31, 2015:

Exercise price (in Swiss francs) <sup>(1)</sup>	Number of instruments (in millions)	Number of shares (in millions) <sup>(2)</sup>	Weighted-average remaining contractual term (in years)
22.50	36.7	7.3	0.4
25.50	43.1	8.6	1.4
15.75	58.1	11.6	2.4
17.50	14.5	2.9	2.4
21.50	83.7	16.7	3.4
21.00	77.3	15.5	4.7
19.50	85.7	17.2	5.6
<b>Total number of instruments and shares</b>	<b>399.1</b>	<b>79.8</b>	<b>3.5</b>

<sup>(1)</sup> Information presented reflects the exercise price per share of ABB Ltd.

<sup>(2)</sup> Information presented reflects the number of shares of ABB Ltd that can be received upon exercise.

**WARs**

As each WAR gives the holder the right to receive cash equal to the market price of the equivalent listed warrant on date of exercise, the Company records a liability based upon the fair value of outstanding WARs at each period end, accreted on a straight-line basis over the three-year vesting period. In "Selling, general and administrative expenses", the Company recorded an expense of \$26 million in 2013, as a result of changes in both the fair value and vested portion of the outstanding WARs. The amount recorded in 2015 and 2014 was not significant. To hedge its exposure to fluctuations in the fair value of outstanding WARs, the Company purchased cash-settled call options, which entitle the Company to receive amounts equivalent to its obligations under the outstanding WARs. The cash-settled call options are recorded as derivatives measured at fair value (see Note 5), with subsequent changes in fair value recorded in earnings to the extent that they offset the change in fair value of the liability for the WARs. In 2015 and 2014, the Company recorded an

**Note 18**  
**Share-based payment**  
**arrangements, continued**

expense of \$12 million and \$11 million, respectively, and in 2013 an income of \$16 million, in "Selling, general and administrative expenses" related to the cash-settled call options.

The aggregate fair value of outstanding WARs was \$13 million and \$33 million at December 31, 2015 and 2014, respectively. The fair value of WARs was determined based upon the trading price of equivalent warrants listed on the SIX Swiss Exchange.

Presented below is a summary of the activity related to WARs:

	Number of WARs (in millions)
<b>Outstanding at January 1, 2015</b>	<b>61.2</b>
Granted	10.5
Exercised	(15.9)
Forfeited	(0.6)
<b>Outstanding at December 31, 2015</b>	<b>55.2</b>
<b>Exercisable at December 31, 2015</b>	<b>20.2</b>

The aggregate fair value at date of grant of WARs granted in 2015 and 2014 was not significant, while in 2013 it was \$13 million. In both 2015 and 2013, share-based liabilities of \$9 million were paid upon exercise of WARs by participants. In 2014, the amount paid was not significant.

**ESAP**

The employee share acquisition plan (ESAP) is an employee stock-option plan with a savings feature. Employees save over a twelve-month period, by way of regular payroll deductions. At the end of the savings period, employees choose whether to exercise their stock options using their savings plus interest to buy ABB Ltd shares (American Depositary Shares (ADS) in the case of employees in the United States and Canada—each ADS representing one registered share of the Company) at the exercise price set at the grant date, or have their savings returned with interest. The savings are accumulated in bank accounts held by a third-party trustee on behalf of the participants and earn interest. Employees can withdraw from the ESAP at any time during the savings period and will be entitled to a refund of their accumulated savings.

The fair value of each option is estimated on the date of grant using the same option valuation model as described under the MIP, using the assumptions noted in the table below. The expected term of the option granted has been determined to be the contractual one-year life of each option, at the end of which the options vest and the participants are required to decide whether to exercise their options or have their savings returned with interest. The risk-free rate is based on one-year Swiss franc interest rates, reflecting the one-year contractual life of the options. In estimating forfeitures, the Company has used the data from previous ESAP launches.

	2015	2014	2013
Expected volatility	20%	18%	20%
Dividend yield	3.9%	3.1%	2.8%
Expected term	1 year	1 year	1 year
Risk-free interest rate	-0.8%	-0.1%	0.0%

Presented below is a summary of activity under the ESAP:

	Number of shares (in millions) <sup>(1)</sup>	Weighted- average exercise price (in Swiss francs) <sup>(2)</sup>	Weighted- average remaining contractual (in millions of Swiss term (in years)	Aggregate intrinsic value francs) <sup>(2), (3)</sup>
<b>Outstanding at January 1, 2015</b>	<b>3.9</b>	<b>20.97</b>		
Granted	3.7	18.78		
Forfeited	(0.3)	20.96		
Not exercised (savings returned plus interest)	(3.6)	20.97		
<b>Outstanding at December 31, 2015</b>	<b>3.7</b>	<b>18.78</b>	<b>0.8</b>	—
<b>Vested and expected to vest at December 31, 2015</b>	<b>3.6</b>	<b>18.78</b>	<b>0.8</b>	—
<b>Exercisable at December 31, 2015</b>	—	—	—	—

<sup>(1)</sup> Includes shares represented by ADS.

<sup>(2)</sup> Information presented for ADS is based on equivalent Swiss franc denominated awards.

<sup>(3)</sup> Computed using the closing price, in Swiss francs, of ABB Ltd shares on the SIX Swiss Exchange and the exercise price of each option in Swiss francs.

**Note 18**  
**Share-based payment**  
**arrangements, continued**

The exercise prices per ABB Ltd share and per ADS of 18.78 Swiss francs and \$19.10, respectively, for the 2015 grant, 20.97 Swiss francs and \$21.81, respectively, for the 2014 grant, and 22.90 Swiss francs and \$25.21, respectively, for the 2013 grant were determined using the closing price of the ABB Ltd share on SIX Swiss Exchange and ADS on the New York Stock Exchange on the respective grant dates. For the 2013 grant, the exercise price was effectively reduced as for every ten shares bought through exercise of the options one additional free share would be delivered; therefore the effective exercise prices per ABB Ltd share and per ADS were 20.82 Swiss francs and \$22.92, respectively.

At December 31, 2015, the total unrecognized compensation cost related to non-vested options granted under the ESAP was not significant. The weighted-average grant-date fair value (per option) of options granted during 2015, 2014 and 2013, was 1.07 Swiss francs, 1.19 Swiss francs and 2.79 Swiss francs, respectively. The total intrinsic value (on the date of exercise) of options exercised in 2013 was \$24 million while in 2015 and 2014 it was not significant.

**LTIP**

The Company has a long-term incentive plan (LTIP) for members of its Executive Committee and selected other senior executives (Eligible Participants), as defined in the terms of the LTIP. The LTIP involves annual conditional grants of the Company's stock to such Eligible Participants that are subject to certain conditions.

The 2015 LTIP launch is composed of two performance components: (i) a component which is based on the achievement of a consolidated net income threshold and (ii) a component which is based on the Company's earnings per share performance. The 2014 and 2013 launches under the LTIP are each composed of two components: (i) a performance component based on the Company's earnings per share performance and (ii) a retention component.

For shares to vest under the threshold net income component of the 2015 LTIP launch, the Company's consolidated net income has to reach a certain level set by the Board of Directors at the launch of the LTIP. The shares will not vest if this threshold is not achieved and will vest at 100 percent if this threshold is equaled or exceeded. In addition, the Eligible Participant has to fulfill the service condition as defined in the terms and conditions of the LTIP.

For the earnings per share performance component of the 2015, 2014 and 2013 LTIP launches, the actual number of shares that will vest at a future date is dependent on (i) the Company's weighted cumulative earnings per share performance over three financial years, beginning with the year of launch, and (ii) the fulfillment of the service condition as defined in the terms and conditions of the LTIP. The cumulative earnings per share performance is weighted as follows: 33 percent of the first year's result, 67 percent of the second year's result and 100 percent of the third year's result. The actual number of shares that ultimately vest will vary depending on the weighted cumulative earnings per share outcome, interpolated between a lower threshold (no shares vest) and an upper threshold (the number of shares vesting is capped at 200 percent of the conditional grant).

Under the retention component of the 2014 and 2013 LTIP launches, each Eligible Participant was conditionally granted an individually defined maximum number of shares which fully vest at the end of the respective vesting periods (if the participant remains an Eligible Participant until the end of such period).

Under the threshold net income component of the 2015 LTIP launch, an Eligible Participant receives 70 percent of the shares that have vested in the form of shares and 30 percent of the value of the shares that have vested in cash, with the possibility to elect to also receive the 30 percent portion in shares rather than in cash. For the 2015 LTIP launch, under the earnings per share performance component, an Eligible Participant receives 70 percent of the shares that have vested in the form of shares and 30 percent of the value of the shares that have vested in cash, with the possibility to elect to also receive the 30 percent portion in shares rather than in cash, while for the 2014 and 2013 LTIP launches an Eligible Participant receives, in cash, 100 percent of the value of the shares that have vested. Under the retention component of the 2014 and 2013 LTIP launches, an Eligible Participant receives 70 percent of the shares that have vested in the form of shares and 30 percent of the value of the shares that have vested in cash, with the possibility to elect to also receive the 30 percent portion in shares rather than in cash.

Presented below is a summary of activity under the LTIP:

	Number of Shares			Weighted-average grant-date fair value per share (Swiss francs)
	Equity & Cash or choice of 100% Equity Settlement <sup>(1)</sup> (in millions)	Only Cash Settlement <sup>(2)</sup> (in millions)	Total (in millions)	
<b>Nonvested at January 1, 2015</b>	<b>1.7</b>	<b>1.0</b>	<b>2.7</b>	<b>18.85</b>
Granted	1.0	—	1.0	21.54
Vested	(0.6)	(0.2)	(0.8)	15.30
Forfeited	—	(0.1)	(0.1)	16.08
<b>Nonvested at December 31, 2015</b>	<b>2.1</b>	<b>0.7</b>	<b>2.8</b>	<b>20.96</b>

<sup>(1)</sup> Shares that, subject to vesting, the Eligible Participant can elect to receive 100 percent in the form of shares.

<sup>(2)</sup> Shares that, subject to vesting, the Eligible Participant can only receive in cash.

Equity-settled awards are recorded in the "Capital stock and additional paid-in capital" component of stockholders' equity, with compensation cost recorded in "Selling, general and administrative expenses" over the vesting period (which is from grant date to the end of the vesting period) based on the grant-date fair value of the shares. Cash-settled awards are recorded as a liability, remeasured at fair value at each reporting date for the percentage vested, with changes in the liability recorded in "Selling, general and administrative expenses".

**Note 18**  
**Share-based payment**  
**arrangements, continued**

At December 31, 2015, there was \$16 million of total unrecognized compensation cost related to equity-settled awards under the LTIP. That cost is expected to be recognized over a weighted-average period of 2.1 years. The compensation cost recorded in 2015, 2014 and 2013, for cash-settled awards was not significant.

The aggregate fair value, at the dates of grant, of shares granted in 2015, 2014 and 2013, was approximately \$23 million, \$22 million and \$22 million, respectively. The total grant-date fair value of shares that vested during 2015 and 2014 was \$12 million and \$15 million, respectively, while in 2013 it was not significant. The weighted-average grant-date fair value (per share) of shares granted during 2015, 2014 and 2013, was 21.54 Swiss francs, 20.35 Swiss francs and 20.92 Swiss francs, respectively.

For the net income threshold component of the 2015 LTIP launch, the fair value of the granted shares is based on the probability of reaching the threshold as well as on the market price of the ABB Ltd share at grant date for equity-settled awards and at each reporting date for cash-settled awards. For the earnings per share component of the 2015 LTIP launch, the fair value of granted shares is based on the market price of the ABB Ltd share at grant date for equity-settled awards and at each reporting date for cash-settled awards, as well as the probable outcome of the earnings per share achievement that would result in the vesting of the highest number of shares, as computed using a Monte Carlo simulation model. The main inputs to this model are the Company's and external financial analysts' revenue growth rates and Operational EBITA margin expectations. For the retention component under the 2014 and 2013 LTIP launches, the fair value of granted shares for equity-settled awards is the market price of the ABB Ltd share on grant date and the fair value of granted shares for cash-settled awards is the market price of the ABB Ltd share at each reporting date.

**Other share-based payments**

The Company has other minor share-based payment arrangements with certain employees. The compensation cost related to these arrangements in 2015, 2014 and 2013, was not significant.

**Note 19**  
**Stockholders' equity**

At both December 31, 2015 and 2014, the Company had 2,819 million authorized shares, of which 2,315 million were registered and issued.

At the Annual General Meeting of Shareholders (AGM) in April 2015, shareholders approved the proposals of the Board of Directors to distribute a total of 0.72 Swiss francs per share to shareholders, comprising of a dividend of 0.55 Swiss francs paid out of ABB Ltd's capital contribution reserves and a distribution of 0.17 Swiss francs by way of a nominal value reduction (reduction in the par value of each share) from 1.03 Swiss francs to 0.86 Swiss francs. The approved dividend distribution amounted to \$1,317 million and was paid in May 2015. The nominal value reduction was registered in July 2015 in the commercial register of the canton of Zurich, Switzerland, and was paid in the third quarter of 2015. The approved nominal value reduction was recorded in the second quarter of 2015 as a reduction to Capital stock and additional paid-in capital of \$349 million and a reduction in Retained earnings of \$54 million. At the AGM held in April 2014 and at the AGM held in April 2013, shareholders approved the payment of a dividend of 0.70 Swiss francs per share and 0.68 Swiss francs per share, respectively, out of the capital contribution reserve in stockholders' equity of the unconsolidated statutory financial statements of ABB Ltd, prepared in accordance with Swiss law. The dividends were paid in May 2014 (amounting to \$1,841 million) and May 2013 (amounting to \$1,667 million), respectively.

In the second quarter of 2014, the Company purchased on the open market an aggregate of 12.0 million of its own shares to be available for delivery under its employee share programs. These transactions resulted in an increase in "Treasury stock" of \$282 million.

Furthermore, in September 2014, the Company announced a share buyback program for the purchase of up to \$4 billion of its own shares over a period ending no later than September 2016. The Company intends that approximately three quarters of the shares to be purchased will be held for cancellation (after approval from shareholders) and the remainder will be purchased to be available for its employee share programs. Shares acquired for cancellation are acquired through a separate trading line on the SIX Swiss Exchange (on which only the Company can purchase shares), while shares acquired for delivery under employee share programs are acquired through the ordinary trading line. In 2014, under the announced share buyback program, the Company purchased 26.0 million shares for cancellation and 6.8 million shares to support its employee share programs. These transactions resulted in an increase in Treasury stock of \$733 million. In 2015, under the announced share buyback program, the Company purchased 60.2 million shares for cancellation and 13.1 million shares to support its employee share programs. These transactions resulted in an increase in Treasury stock of \$1,501 million. Subsequent to December 31, 2015, and up to February 24, 2016, the Company purchased, under the announced share buyback program, an additional 13.3 million shares, for approximately \$231 million.

Upon and in connection with each launch of the Company's MIP, the Company sold call options to a bank at fair value, giving the bank the right to acquire shares equivalent to the number of shares represented by the MIP warrant and WAR awards to participants. Under the terms of the agreement with the bank, the call options can only be exercised by the bank to the extent that MIP participants have either sold or exercised their warrants or exercised their WARs. At December 31, 2015, such call options representing 10.7 million shares and with strike prices ranging from 15.75 to 21.50 Swiss francs (weighted-average strike price of 19.45 Swiss francs) were held by the bank. The call options expire in periods ranging from May 2018 to August 2021. However, only 1.5 million of these instruments, with strike prices ranging from 15.75 to 21.50 Swiss francs (weighted-average strike price of 17.44 Swiss francs), could be exercised at December 31, 2015, under the terms of the agreement with the bank.

In addition to the above, at December 31, 2015, the Company had further outstanding obligations to deliver:

- up to 7.3 million shares relating to the options granted under the 2010 launch of the MIP, with a strike price of 22.50 Swiss francs, vested in May 2013 and expiring in May 2016,
- up to 8.6 million shares relating to the options granted under the 2011 launch of the MIP, with a strike price of 25.50 Swiss francs, vested in May 2014 and expiring in May 2017,
- up to 14.5 million shares relating to the options granted under the 2012 launches of the MIP, with a weighted-average strike price of 16.10 Swiss francs, vested in May 2015 and expiring in May 2018,
- up to 16.7 million shares relating to the options granted under the 2013 launch of the MIP, with a strike price of 21.50 Swiss francs, vesting in May 2016 and expiring in May 2019,

**Note 19**  
**Stockholders' equity, continued**

- up to 15.5 million shares relating to the options granted under the 2014 launch of the MIP, with a strike price of 21.00 Swiss francs, vesting in August 2017 and expiring in August 2020,
- up to 17.2 million shares relating to the options granted under the 2015 launch of the MIP, with a strike price of 19.50 Swiss francs, vesting in August 2018 and expiring in August 2021,
- up to 3.7 million shares relating to the ESAP, vesting and expiring in October 2016,
- up to 2.1 million shares to Eligible Participants under the 2015, 2014 and 2013, launches of the LTIP, vesting and expiring in June 2018, August 2017 and June 2016, respectively, and
- up to 1.0 million shares in connection with certain other share-based payment arrangements with employees.

See Note 18 for a description of the above share-based payment arrangements.

In 2015 and 2014, the Company delivered 5.3 million and 1.3 million shares, respectively, out of treasury stock, for options exercised in relation to the MIP. No call options were exercised in 2013. In addition, in November 2014 and 2013, the Company delivered 0.6 million and 3.7 million, respectively, from treasury stock, under the ESAP. In 2015 the number of shares delivered under the ESAP was not significant.

Amounts available to be distributed as dividends to the stockholders of ABB Ltd are based on the requirements of Swiss law and ABB Ltd's Articles of Incorporation, and are determined based on amounts presented in the unconsolidated financial statements of ABB Ltd, prepared in accordance with Swiss law. At December 31, 2015, the total unconsolidated stockholders' equity of ABB Ltd was 9,687 million Swiss francs (\$9,793 million), including 1,991 million Swiss francs (\$2,012 million) representing share capital, 10,191 million Swiss francs (\$10,304 million) representing reserves and 2,495 million Swiss francs (\$2,523 million) representing a reduction of equity for own shares (treasury stock). Of the reserves, 2,495 million Swiss francs (\$2,523 million) relating to own shares and 398 million Swiss francs (\$402 million) representing 20 percent of share capital, are restricted and not available for distribution.

In February 2016, the Company announced that a proposal will be put to the 2016 AGM for approval by the shareholders to distribute 0.74 Swiss francs per share to shareholders by way of a nominal value reduction (a reduction of 0.74 Swiss francs in the par value of each share from 0.86 Swiss francs to 0.12 Swiss francs).

**Note 20**  
**Earnings per share**

Basic earnings per share is calculated by dividing income by the weighted-average number of shares outstanding during the year. Diluted earnings per share is calculated by dividing income 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 and outstanding options and shares granted subject to certain conditions under the Company's share-based payment arrangements. In 2015, 2014 and 2013, outstanding securities representing a maximum of 78 million, 59 million and 47 million shares, respectively, were excluded from the calculation of diluted earnings per share as their inclusion would have been anti-dilutive.

<b>Basic earnings per share:</b>			
(\$ in millions, except per share data in \$)	2015	2014	2013
<i>Amounts attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	1,930	2,570	2,824
Income (loss) from discontinued operations, net of tax	3	24	(37)
<b>Net income</b>	<b>1,933</b>	<b>2,594</b>	<b>2,787</b>
<b>Weighted-average number of shares outstanding (in millions)</b>	<b>2,226</b>	<b>2,288</b>	<b>2,297</b>
<i>Basic earnings per share attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Income (loss) from discontinued operations, net of tax	—	0.01	(0.02)
<b>Net income</b>	<b>0.87</b>	<b>1.13</b>	<b>1.21</b>

<b>Diluted earnings per share:</b>			
(\$ in millions, except per share data in \$)	2015	2014	2013
<i>Amounts attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	1,930	2,570	2,824
Income (loss) from discontinued operations, net of tax	3	24	(37)
<b>Net income</b>	<b>1,933</b>	<b>2,594</b>	<b>2,787</b>
Weighted-average number of shares outstanding (in millions)	2,226	2,288	2,297
<i>Effect of dilutive securities:</i>			
Call options and shares	4	7	8
<b>Adjusted weighted-average number of shares outstanding (in millions)</b>	<b>2,230</b>	<b>2,295</b>	<b>2,305</b>
<i>Diluted earnings per share attributable to ABB shareholders:</i>			
Income from continuing operations, net of tax	0.87	1.12	1.23
Income (loss) from discontinued operations, net of tax	—	0.01	(0.02)
<b>Net income</b>	<b>0.87</b>	<b>1.13</b>	<b>1.21</b>

**Note 21**  
**Other comprehensive income**

The following table includes amounts recorded within "Total other comprehensive income (loss)" including the related income tax effects.

(\$ in millions)	2015			2014			2013		
	Before tax	Tax effect	Net of tax	Before tax	Tax effect	Net of tax	Before tax	Tax effect	Net of tax
<i>Foreign currency translation adjustments:</i>									
<b>Net change during the year</b>	<b>(1,105)</b>	<b>47</b>	<b>(1,058)</b>	<b>(1,691)</b>	<b>11</b>	<b>(1,680)</b>	<b>133</b>	<b>8</b>	<b>141</b>
<i>Available-for-sale securities:</i>									
Net unrealized gains (losses) arising during the year	(8)	1	(7)	(14)	5	(9)	(4)	—	(4)
Reclassification adjustments for net (gains) losses included in net income	1	—	1	21	(6)	15	(14)	1	(13)
<b>Net change during the year</b>	<b>(7)</b>	<b>1</b>	<b>(6)</b>	<b>7</b>	<b>(1)</b>	<b>6</b>	<b>(18)</b>	<b>1</b>	<b>(17)</b>
<i>Pension and other postretirement plans:</i>									
Prior service (costs) credits arising during the year	113	(25)	88	(5)	2	(3)	(20)	4	(16)
Net actuarial gains (losses) arising during the year	285	(75)	210	(826)	212	(614)	423	(132)	291
Amortization of prior service cost included in net income	29	(3)	26	18	(1)	17	25	(2)	23
Amortization of net actuarial loss included in net income	128	(37)	91	99	(20)	79	140	(41)	99
<b>Net change during the year</b>	<b>555</b>	<b>(140)</b>	<b>415</b>	<b>(714)</b>	<b>193</b>	<b>(521)</b>	<b>568</b>	<b>(171)</b>	<b>397</b>
<i>Cash flow hedge derivatives:</i>									
Net gains (losses) arising during the year	(26)	6	(20)	(65)	13	(52)	33	(5)	28
Reclassification adjustments for net (gains) losses included in net income	39	(9)	30	10	(1)	9	(54)	11	(43)
<b>Net change during the year</b>	<b>13</b>	<b>(3)</b>	<b>10</b>	<b>(55)</b>	<b>12</b>	<b>(43)</b>	<b>(21)</b>	<b>6</b>	<b>(15)</b>
<b>Total other comprehensive income (loss)</b>	<b>(544)</b>	<b>(95)</b>	<b>(639)</b>	<b>(2,453)</b>	<b>215</b>	<b>(2,238)</b>	<b>662</b>	<b>(156)</b>	<b>506</b>

The following table shows changes in "Accumulated other comprehensive loss" (OCI) attributable to ABB, by component, net of tax:

(\$ in millions)	Foreign currency translation adjustments	Unrealized gains (losses) on available-for-sale securities	Pension and other postretirement plan adjustments	Unrealized gains (losses) of cash flow hedge derivatives	Total OCI
<b>Balance at January 1, 2013</b>	<b>(580)</b>	<b>24</b>	<b>(2,004)</b>	<b>37</b>	<b>(2,523)</b>
Other comprehensive (loss) income before reclassifications	141	(4)	275	28	440
Amounts reclassified from OCI	—	(13)	122	(43)	66
Total other comprehensive (loss) income	141	(17)	397	(15)	506
<i>Less:</i>					
Amounts attributable to noncontrolling interests	(8)	—	3	—	(5)
<b>Balance at December 31, 2013</b>	<b>(431)</b>	<b>7</b>	<b>(1,610)</b>	<b>22</b>	<b>(2,012)</b>
Other comprehensive (loss) income before reclassifications	(1,680)	(9)	(617)	(52)	(2,358)
Amounts reclassified from OCI	—	15	96	9	120
Total other comprehensive (loss) income	(1,680)	6	(521)	(43)	(2,238)
<i>Less:</i>					
Amounts attributable to noncontrolling interests	(9)	—	—	—	(9)
<b>Balance at December 31, 2014</b>	<b>(2,102)</b>	<b>13</b>	<b>(2,131)</b>	<b>(21)</b>	<b>(4,241)</b>
Other comprehensive (loss) income before reclassifications	(1,058)	(7)	298	(20)	(787)
Amounts reclassified from OCI	—	1	117	30	148
Total other comprehensive (loss) income	(1,058)	(6)	415	10	(639)
<i>Less:</i>					
Amounts attributable to noncontrolling interests	(25)	—	3	—	(22)
<b>Balance at December 31, 2015</b>	<b>(3,135)</b>	<b>7</b>	<b>(1,719)</b>	<b>(11)</b>	<b>(4,858)</b>

**Note 21****Other comprehensive income, continued**

The following table reflects amounts reclassified out of OCI in respect of Pension and other postretirement plan adjustments and Unrealized gains (losses) of cash flow hedge derivatives:

Details about OCI components (\$ in millions)	Location of (gains) losses reclassified from OCI	2015	2014	2013
<i>Pension and other postretirement plan adjustments:</i>				
Amortization of prior service cost	Net periodic benefit cost <sup>(1)</sup>	29	18	25
Amortization of net actuarial losses	Net periodic benefit cost <sup>(1)</sup>	128	99	140
<b>Total before tax</b>		<b>157</b>	<b>117</b>	<b>165</b>
Tax	Provision for taxes	(40)	(21)	(43)
<b>Amounts reclassified from OCI</b>		<b>117</b>	<b>96</b>	<b>122</b>
<i>Unrealized gains (losses) of cash flow hedge derivatives:</i>				
Foreign exchange contracts	Total revenues	36	9	(52)
	Total cost of sales	(11)	(8)	1
Commodity contracts	Total cost of sales	10	3	5
Cash-settled call options	SG&A expenses <sup>(2)</sup>	4	6	(8)
<b>Total before tax</b>		<b>39</b>	<b>10</b>	<b>(54)</b>
Tax	Provision for taxes	(9)	(1)	11
<b>Amounts reclassified from OCI</b>		<b>30</b>	<b>9</b>	<b>(43)</b>

<sup>(1)</sup> These components are included in the computation of net periodic benefit cost (see Note 17).

<sup>(2)</sup> SG&A expenses represent "Selling, general and administrative expenses".

The amounts reclassified out of OCI in respect of Unrealized gains (losses) on available-for-sale securities were not significant in 2015, 2014 and 2013.

**Note 22****Restructuring and related expenses****White Collar Productivity program**

In September 2015, the Company announced a two-year program aimed at making the Company leaner, faster and more customer-focused. Planned productivity improvements include the rapid expansion and use of regional shared service centers as well as the streamlining of global operations and head office functions, with business units moving closer to their respective key markets. In the course of this program, the Company will implement and execute various restructuring initiatives across all operating segments and regions.

The following table outlines the cumulative costs incurred to date and the total amount of costs expected to be incurred under the program per operating segment:

(\$ in millions)	Cumulative costs	Total expected
	incurred up to December 31, 2015	costs
Discrete Automation and Motion	45	169
Low Voltage Products	60	126
Process Automation	91	137
Power Products	42	155
Power Systems	46	82
Corporate and Other	86	183
<b>Total</b>	<b>370</b>	<b>852</b>

Of the total expected costs of \$852 million the majority is related to employee severance costs.

The Company recorded the following expenses under this program:

(\$ in millions)	2015
Employee severance costs	364
Estimated contract settlement, loss order and other costs	5
Inventory and long-lived asset impairments	1
<b>Total</b>	<b>370</b>

**Note 22**  
**Restructuring and related**  
**expenses, continued**

Expenses associated with this program are recorded in the following line items in the Consolidated Income Statements:

(\$ in millions)	2015
Total cost of sales	122
Selling, general and administrative expenses	187
Non-order related research and development expenses	38
Other income (expense), net	23
<b>Total</b>	<b>370</b>

Liabilities associated with the White Collar Productivity program, are primarily included in "Other provisions".  
The following table shows the activity during 2015 by expense type:

(\$ in millions)	Employee severance costs	Contract settlement, loss order and other costs	Total
<b>Liability at January 1, 2015</b>	—	—	—
Expenses	364	5	<b>369</b>
Cash payments	(34)	(1)	<b>(35)</b>
<b>Liability at December 31, 2015</b>	<b>330</b>	<b>4</b>	<b>334</b>

**Other restructuring-related activities**

In addition, in 2015, 2014 and 2013, the Company executed various other minor restructuring-related activities and incurred charges of \$256 million, \$235 million and \$252 million, respectively, which were mainly recorded in "Total cost of sales".

(\$ in millions)	2015	2014	2013
Employee severance costs	207	177	154
Estimated contract settlement, loss order and other costs	27	31	78
Inventory and long-lived asset impairments	22	27	20
<b>Total</b>	<b>256</b>	<b>235</b>	<b>252</b>

At December 31, 2015 and 2014, the balance of other restructuring-related liabilities is primarily included in "Other provisions".

**Note 23**  
**Operating segment**  
**and geographic data**

The Chief Operating Decision Maker (CODM) is the Company's Executive Committee. The CODM allocates resources to and assesses the performance of each operating segment using the information outlined below. The Company's operating segments consist of Discrete Automation and Motion, Low Voltage Products, Process Automation, Power Products and Power Systems. The remaining operations of the Company are included in Corporate and Other.

A description of the types of products and services provided by each reportable segment is as follows:

- *Discrete Automation and Motion*: manufactures and sells motors, generators, variable speed drives, programmable logic controllers, robots and robotics, solar inverters, wind converters, rectifiers, excitation systems, power quality and protection solutions, electric vehicle fast charging infrastructure, components and subsystems for railways, and related services for a wide range of applications in discrete automation, process industries, transportation and utilities.
- *Low Voltage Products*: manufactures and sells products and systems that provide protection, control and measurement for electrical installations, as well as enclosures, switchboards, electronics and electromechanical devices for industrial machines, plants and related service. In addition the segment manufactures products for wiring and cable management, cable protection systems, power connection and safety. The segment also makes intelligent building control systems for home and building automation.
- *Process Automation*: develops and sells control and plant optimization systems, automation products and solutions, including instrumentation, as well as industry-specific application knowledge and services for the oil, gas and petrochemicals, metals and minerals, marine and turbocharging, pulp and paper, chemical and pharmaceuticals, and power industries.
- *Power Products*: manufactures and sells a wide range of products across voltage levels, including circuit breakers, switchgear, capacitors, instrument transformers, power, distribution and traction transformers for electrical and other infrastructure utilities, as well as industrial and commercial customers.
- *Power Systems*: designs, installs and upgrades high-efficiency transmission and distribution systems and power plant automation and electrification solutions, including monitoring and control products, software and services and incorporating components manufactured by both the Company and by third parties, for power generation, transmission and distribution utilities, other infrastructure utilities, as well as other industrial and commercial enterprises.
- *Corporate and Other*: includes headquarters, central research and development, the Company's real estate activities, Group treasury operations and other minor business activities.

Effective January 1, 2015, the Company changed its primary measure of segment performance from Operational EBITDA to Operational EBITA, which represents income from operations excluding amortization expense on intangibles arising upon acquisitions (acquisition-related amortization), restructuring and restructuring-related expenses, gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items, as well as foreign exchange/commodity timing differences in income from operations consisting of: (i) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

**Note 23**  
**Operating segment**  
**and geographic data,**  
**continued**

The segment performance for 2014 and 2013 has been restated to reflect this change.

The CODM primarily reviews the results of each segment on a basis that is before the elimination of profits made on inventory sales between segments. Segment results below are presented before these eliminations, with a total deduction for intersegment profits to arrive at the Company's consolidated Operational EBITA. Intersegment sales and transfers are accounted for as if the sales and transfers were to third parties, at current market prices.

The following tables present segment revenues, Operational EBITA, the reconciliations of consolidated Operational EBITA to income from continuing operations before taxes, as well as depreciation and amortization, and capital expenditures for 2015, 2014 and 2013, as well as total assets at December 31, 2015, 2014 and 2013.

2015 (\$ in millions)	Third-party revenues	Intersegment revenues	Total revenues
Discrete Automation and Motion	8,492	635	9,127
Low Voltage Products	6,210	337	6,547
Process Automation	6,235	139	6,374
Power Products	8,352	1,198	9,550
Power Systems	6,132	210	6,342
Corporate and Other	60	1,459	1,519
Intersegment elimination	—	(3,978)	(3,978)
<b>Consolidated</b>	<b>35,481</b>	<b>—</b>	<b>35,481</b>

2014 (\$ in millions)	Third-party revenues	Intersegment revenues	Total revenues
Discrete Automation and Motion	9,296	846	10,142
Low Voltage Products	7,117	415	7,532
Process Automation	7,745	203	7,948
Power Products	8,782	1,551	10,333
Power Systems	6,686	334	7,020
Corporate and Other	204	1,592	1,796
Intersegment elimination	—	(4,941)	(4,941)
<b>Consolidated</b>	<b>39,830</b>	<b>—</b>	<b>39,830</b>

2013 (\$ in millions)	Third-party revenues	Intersegment revenues	Total revenues
Discrete Automation and Motion	8,909	1,006	9,915
Low Voltage Products	7,338	391	7,729
Process Automation	8,287	210	8,497
Power Products	9,096	1,936	11,032
Power Systems	8,025	350	8,375
Corporate and Other	193	1,583	1,776
Intersegment elimination	—	(5,476)	(5,476)
<b>Consolidated</b>	<b>41,848</b>	<b>—</b>	<b>41,848</b>

**Note 23**  
**Operating segment**  
**and geographic data,**  
**continued**

(\$ in millions)	2015	2014	2013
<b>Operational EBITA:</b>			
Discrete Automation and Motion	1,271	1,589	1,622
Low Voltage Products	1,096	1,241	1,265
Process Automation	755	958	1,022
Power Products	1,178	1,319	1,435
Power Systems	274	(96)	326
Corporate and Other and Intersegment elimination	(405)	(536)	(523)
<b>Consolidated Operational EBITA</b>	<b>4,169</b>	<b>4,475</b>	<b>5,147</b>
Acquisition-related amortization	(310)	(380)	(390)
Restructuring and restructuring-related expenses <sup>(1)</sup>	(674)	(235)	(252)
Gains and losses on sale of businesses, acquisition-related expenses and certain non-operational items	(120)	482	(181)
Foreign exchange/commodity timing differences in income from operations:			
Unrealized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	67	(223)	60
Realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized	(68)	(42)	14
Unrealized foreign exchange movements on receivables/payables (and related assets/liabilities)	(15)	101	(11)
<b>Income from operations</b>	<b>3,049</b>	<b>4,178</b>	<b>4,387</b>
Interest and dividend income	77	80	69
Interest and other finance expense	(286)	(362)	(390)
<b>Income from continuing operations before taxes</b>	<b>2,840</b>	<b>3,896</b>	<b>4,066</b>

<sup>(1)</sup> Amounts also include the incremental implementation costs in relation to the White Collar Productivity program.

(\$ in millions)	Depreciation and amortization			Capital expenditure <sup>(1)</sup>			Total assets <sup>(1)</sup> at December 31,		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
Discrete Automation and Motion	295	309	285	145	192	214	9,452	10,123	10,931
Low Voltage Products	271	301	323	166	184	204	7,481	7,978	9,389
Process Automation	75	88	87	52	49	68	3,851	4,268	4,537
Power Products	191	217	223	164	220	252	6,869	7,396	7,669
Power Systems	138	175	183	75	92	101	6,120	6,855	7,905
Corporate and Other	190	215	217	274	289	267	7,583	8,232	7,601
<b>Consolidated</b>	<b>1,160</b>	<b>1,305</b>	<b>1,318</b>	<b>876</b>	<b>1,026</b>	<b>1,106</b>	<b>41,356</b>	<b>44,852</b>	<b>48,032</b>

<sup>(1)</sup> Capital expenditure and Total assets are after intersegment eliminations and therefore reflect third-party activities only.

**Geographic information**

Effective January 1, 2015, the Company streamlined its regional organization, reducing the number of regions to three. The geographic information for revenues in 2014 and 2013, and for long-lived assets at December 31, 2014, has been restated to reflect this change.

Geographic information for revenues and long-lived assets was as follows:

(\$ in millions)	Revenues			Long-lived assets at December 31,	
	2015	2014	2013	2015	2014
Europe	11,602	13,745	14,450	3,253	3,460
The Americas	10,554	11,490	12,133	1,113	1,215
Asia, Middle East and Africa	13,325	14,595	15,265	910	977
<b>Total</b>	<b>35,481</b>	<b>39,830</b>	<b>41,848</b>	<b>5,276</b>	<b>5,652</b>

Revenues by geography reflect the location of the customer. Approximately 20 percent, 19 percent and 18 percent of the Company's total revenues in 2015, 2014, and 2013, respectively, came from customers in the United States. Approximately 13 percent, 13 percent, and 12 percent of the Company's total revenues in 2015, 2014, and 2013, respectively, were generated from customers in China. In 2015, 2014 and 2013, more than 98 percent of the Company's total revenues were generated from customers outside Switzerland.

Long-lived assets represent "Property, plant and equipment, net" and are shown by location of the assets. At December 31, 2015, approximately 16 percent of the Company's long-lived assets were located in each of Switzerland, the United States and Sweden. At December 31, 2014, approximately 16 percent of the long-lived assets were located in each of Switzerland and the United States while approximately 15 percent were located in Sweden.

The Company does not segregate revenues derived from transactions with external customers for each type or group of products and services. Accordingly, it is not practicable for the Company to present revenues from external customers by product and service type.

**Note 23**  
**Operating segment**  
**and geographic data,**  
**continued**  
2016 Realignment of segments

On September 9, 2015, the Company announced a reorganization of its operating segments aimed at delivering more customer value in a better, more focused way from its combined power and automation offering. Effective January 1, 2016, ABB commenced operating with four segments, namely Discrete Automation and Motion, Electrification Products, Process Automation and Power Grids.

There were no significant changes in the Discrete Automation and Motion segment.

The new Electrification Products segment includes the combined businesses of the previous Low Voltage Products segment and the Medium Voltage Products business, previously included in the former Power Products segment.

The scope of businesses in the Process Automation segment has been expanded to include the Distributed Control Systems business from the former Power Systems segment.

The new Power Grids segment includes the remaining businesses of the former Power Products and Power Systems segments, excluding the businesses transferred to other segments as described above.

**Note 24**  
**Compensation**

The disclosures required by the Swiss Code of Obligations on compensation to the Board of Directors and Executive Committee are shown in the Compensation report in this Annual Report.

# Report of management on internal control over financial reporting

The Board of Directors and management of ABB Ltd and its consolidated subsidiaries ("ABB") are responsible for establishing and maintaining adequate internal control over financial reporting. ABB's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of the published Consolidated Financial Statements in accordance with U.S. generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with ABB's policies and procedures may deteriorate.

Management conducted an assessment of the effectiveness of internal control over financial reporting based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment, management has concluded that ABB's internal control over financial reporting was effective as of December 31, 2015.

Ernst & Young AG, an independent registered public accounting firm, has issued an opinion on the effectiveness of ABB's internal control over financial reporting as of December 31, 2015, which is included on page 160 of this Annual Report.



**Ulrich Spiesshofer**  
Chief Executive Officer



**Eric Elzvik**  
Chief Financial Officer

Zurich, Switzerland  
February 25, 2016

# Report of the Statutory Auditor on the Consolidated Financial Statements

## To the General Meeting of ABB Ltd, Zurich

As statutory auditor, we have audited the consolidated financial statements of ABB Ltd, which comprise the consolidated balance sheets as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, cash flows and changes in stockholders' equity, and notes thereto (pages 108 to 157), for each of the three years in the period ended December 31, 2015.

### Board of Directors' Responsibility

The Board of Directors is responsible for the preparation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Swiss law, Swiss Auditing Standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of ABB Ltd as of December 31, 2015 and 2014, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in accordance with U.S. generally accepted accounting principles and comply with Swiss law.

### Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), ABB Ltd's internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO), and our report dated February 25, 2016 expressed an unqualified opinion on the effectiveness of ABB Ltd's internal control over financial reporting.

## Ernst & Young AG

### Leslie Clifford

Licensed audit expert  
(Auditor in charge)

Zurich, Switzerland  
February 25, 2016

### Robin Errico

Licensed audit expert

# Report of the Independent Auditor on internal control over financial reporting

## To the Board of Directors and Stockholders of ABB Ltd, Zurich

We have audited ABB Ltd's internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). ABB Ltd's Board of Directors and management are responsible for maintaining effective internal control over financial reporting, and management is responsible for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Report of management on internal control over financial reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, ABB Ltd maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria.

We also have audited, in accordance with Swiss law, Swiss Auditing Standards and the standards of the Public Company Accounting Oversight Board (United States), the 2015 consolidated financial statements of ABB Ltd and our report dated February 25, 2016, expressed an unqualified opinion thereon.

## Ernst & Young AG

**Leslie Clifford**  
Licensed audit expert  
(Auditor in charge)

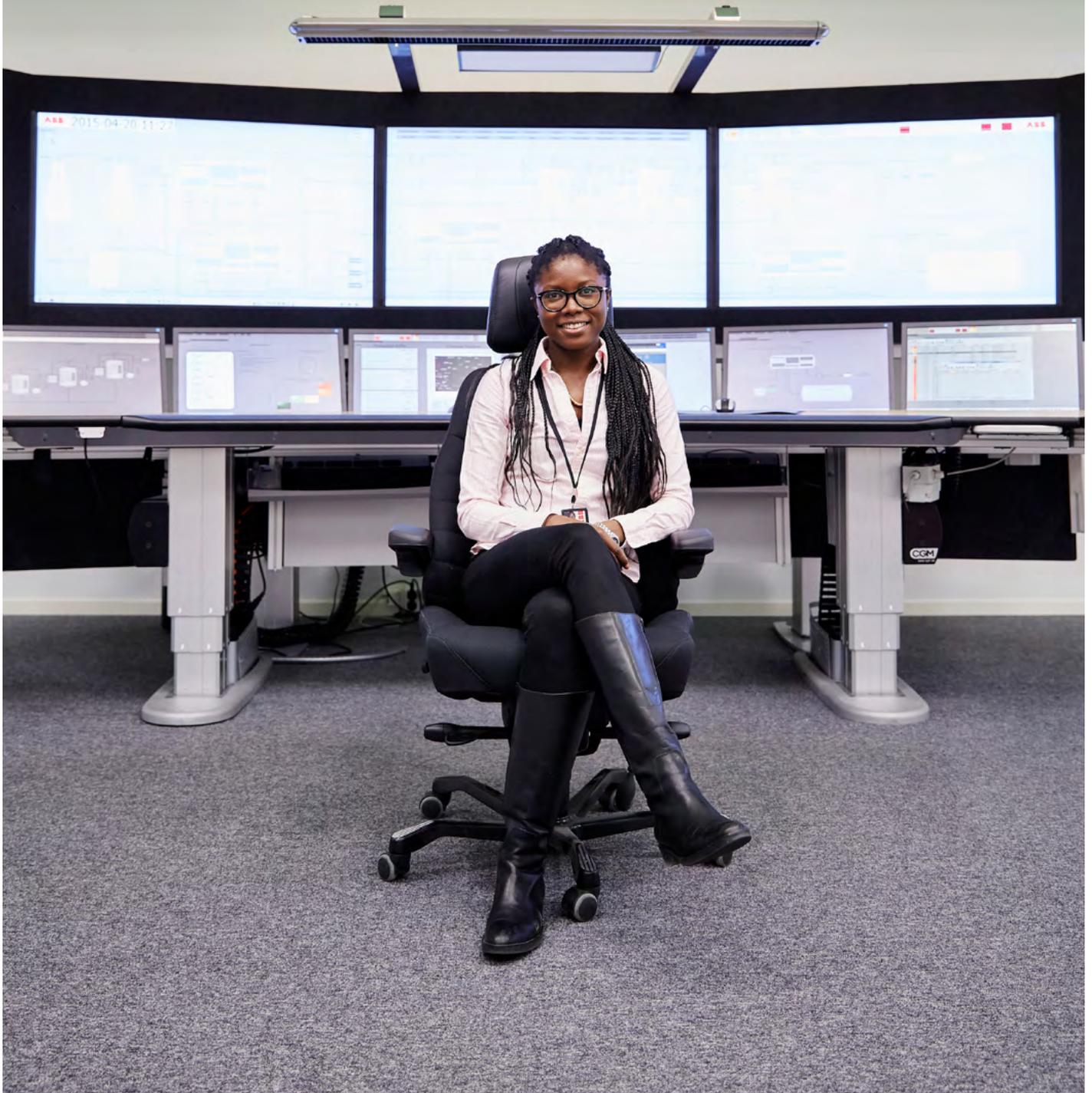
**Robin Errico**  
Licensed audit expert

Zurich, Switzerland  
February 25, 2016



**Lweendo** – Product Management, Västerås, Sweden

“We’re always getting customer feedback and results from system testing, so every day there are new challenges to solve around system functionality, design and user experience.... What I appreciate is how every decision we make is a reflection of the whole team’s thinking.”



# ABB Ltd Statutory Financial Statements

## Contents

---

**164** ABB Ltd Management Report 2015

---

**165** Financial Statements of ABB Ltd, Zurich

178 Proposed appropriation of available earnings

179 Report of the Statutory Auditor

# ABB Ltd

## Management Report 2015

ABB Ltd is the holding company of the ABB Group, owning directly or indirectly all subsidiaries globally.

**The major business activities during 2015 can be summarized as follows:**

### Management services

The company provided management services to a Group company of CHF 30 million.

### Share transactions

- share buyback for employee share programs of CHF 258 million
- share buyback for reduction of share capital of CHF 1,183 million
- share deliveries for employee share programs of CHF 125 million

### Dividend payment to external shareholders

- from capital contribution reserve of CHF 1,233 million
- in form of a par value reduction of CHF 378 million

### Share capital

The Company reduced its share capital by CHF 394 million in the form of a par value reduction from CHF 1.03 to CHF 0.86 per share.

### Other information

In 2015, the Company employed on average 20 employees.

Once a year, the Company's board of directors performs a risk assessment in accordance with the Group's risk management process and discusses appropriate actions if necessary.

The Company does not carry out any research and development business.

In 2016, the Company will continue to operate as the holding company of the ABB Group. No change of business is expected.

February 25, 2016

# Financial Statements of ABB Ltd, Zurich

## Income Statement

Year ended December 31 (CHF in thousands)	Note	2015	2014
Dividend income	8	3,000,000	600,000
Finance income		16,577	27,216
Other operating income	9	47,550	43,734
Finance expense		(26,099)	(34,175)
Personnel expenses		(32,030)	(40,479)
Other operating expenses		(29,940)	(25,592)
<b>Net income before taxes</b>		<b>2,976,058</b>	<b>570,704</b>
Income taxes		(2,341)	(597)
<b>Net income</b>		<b>2,973,717</b>	<b>570,107</b>

## Balance Sheet

December 31 (CHF in thousands)	Note	2015	2014
Cash		835	1,012
Cash deposit with ABB Group Treasury Operations	2	1,979,217	1,891,494
Non-trade receivables		82	944
Non-trade receivables – Group		10,215	7,687
Accrued income and prepaid expenses		–	2,100
Accrued income and prepaid expenses – Group		3,329	3,100
Other short-term assets		697	–
<b>Total current assets</b>		<b>1,994,375</b>	<b>1,906,337</b>
Participation	3	8,973,229	8,973,229
Other long-term assets		4,944	7,481
<b>Total non-current assets</b>		<b>8,978,173</b>	<b>8,980,710</b>
<b>Total assets</b>		<b>10,972,548</b>	<b>10,887,047</b>
Non-trade payables		18,909	10,717
Non-trade payables – Group		1,797	738
Deferred income and accrued expenses		64,581	23,734
Deferred income and accrued expenses – Group		126	1,233
Interest-bearing liabilities	5	499,775	–
<b>Total current liabilities</b>		<b>585,188</b>	<b>36,422</b>
Interest-bearing liabilities	5	700,052	1,199,562
<b>Total non-current liabilities</b>		<b>700,052</b>	<b>1,199,562</b>
<b>Total liabilities</b>		<b>1,285,240</b>	<b>1,235,984</b>
Share capital	7	1,990,679	2,384,186
Legal reserves			
Legal reserves from capital contribution	7	30,430	1,263,005
Legal reserves from retained earnings	7	1,000,000	1,000,000
Free reserves			
Other reserves	7	540,072	535,171
Retained earnings	7	5,647,858	5,077,751
Net income		2,973,717	570,107
Own shares	7	(2,495,448)	(1,179,157)
<b>Total stockholders' equity</b>		<b>9,687,308</b>	<b>9,651,063</b>
<b>Total liabilities and stockholders' equity</b>		<b>10,972,548</b>	<b>10,887,047</b>

## Cash Flow Statement

Year ended December 31 (CHF in thousands)	Note	2015	2014
<b>Operating activities:</b>			
Net income		2,973,717	570,107
<i>Adjustments to reconcile net income to net cash provided by operating activities:</i>			
Reversal of amortization other assets		1,840	1,993
Change in valuation of bonds		265	263
<i>Changes in operating assets and liabilities:</i>			
Receivables		205	(704)
Current liabilities		48,991	(17,697)
<b>Net cash provided by operating activities</b>		<b>3,025,018</b>	<b>553,962</b>
<b>Investing activities:</b>			
Repayment of loans granted to Group companies		—	900,000
<b>Net cash provided by investing activities</b>		<b>0</b>	<b>900,000</b>
<b>Financing activities:</b>			
Purchase of own shares	7	(1,441,493)	(945,303)
Delivery of own shares	7	114,115	64,344
Dividends paid			
from Legal reserves from capital contribution	7	(1,232,575)	(1,378,517)
from par value reduction	7	(377,519)	—
<b>Net cash used in financing activities</b>		<b>(2,937,472)</b>	<b>(2,259,476)</b>
<b>Net change in cash and equivalents</b>		<b>87,546</b>	<b>(805,514)</b>
Cash and equivalents, opening balance		1,892,506	2,698,020
<b>Cash and equivalents, closing balance</b>		<b>1,980,052</b>	<b>1,892,506</b>

# Notes to Financial Statements

## Note 1 General

ABB Ltd, Zurich, Switzerland (the Company) is the parent company of the ABB Group. Its unconsolidated financial statements are prepared in accordance with Swiss law and serve as complementary information to the consolidated financial statements.

The financial statements have been prepared in accordance with Article 957 et seqq. of Title 32 of the Swiss Code of Obligations.

Group companies are all companies in which the Company, directly or indirectly, has more than 50% of the voting rights or over which it exerts a significant influence. A Group company is fully consolidated.

## Note 2 Cash deposit with ABB Group Treasury Operations

The Company deposits available cash in Swiss francs with Group Treasury Operations. The deposits are stated at the lower of cost or fair value.

## Note 3 Participation

### December 31, 2015 and 2014

Company name	Purpose	Domicile	Share capital	Ownership and voting rights
ABB Asea Brown Boveri Ltd	Holding	CH-Zurich	CHF 2,768,000,000	100%

The participation is valued at the lower of cost or fair value, using generally accepted valuation principles.

**Note 4**  
**Indirect Participations**

The following tables set forth the name, country of incorporation, ownership and voting rights, as well as share capital, of the significant indirect subsidiaries of the Company, as of December 31, 2015 and 2014.

December 31, 2015	ABB ownership		Share capital in thousands	Footnote	Currency
	Country	and voting rights %			
SARPI - Société Algérienne pour la réalisation de projets industriels, Alger	Algeria	50.00	814,500		DZD
ABB S.A., Buenos Aires	Argentina	100.00	278,860		ARS
ABB Australia Pty Limited, Moorebank, NSW	Australia	100.00	131,218		AUD
ABB Group Investment Management Pty. Ltd., Moorebank, NSW	Australia	100.00	355,312		AUD
ABB N.V., Zaventem	Belgium	100.00	13,290		EUR
ABB Ltda., Osasco	Brazil	100.00	994,708		BRL
ABB Bulgaria EOOD, Sofia	Bulgaria	100.00	65,110		BGN
ABB Canada Holding Limited Partnership, Saint-Laurent, Quebec	Canada	100.00	–		CAD
ABB Inc., Saint-Laurent, Quebec	Canada	100.00	–	(1)	CAD
Thomas & Betts Limited, Saint-Jean-sur-Richelieu, Quebec	Canada	100.00	–	(1)	CAD
ABB S.A., Santiago	Chile	100.00	4,741,936		CLP
ABB Beijing Drive Systems Co. Ltd., Beijing	China	90.00	5,000		USD
ABB (China) Ltd., Beijing	China	100.00	310,000		USD
ABB Engineering (Shanghai) Ltd., Shanghai	China	100.00	40,000		USD
ABB High Voltage Switchgear Co. Ltd., Beijing	China	60.00	11,400		USD
ABB Xiamen Low Voltage Equipment Co. Ltd., Xiamen	China	100.00	15,800		USD
ABB Xiamen Switchgear Co. Ltd., Xiamen	China	64.30	23,500		USD
ABB Xinhui Low Voltage Switchgear Co. Ltd., Xinhui	China	90.00	6,200		USD
ABB s.r.o., Prague	Czech Republic	100.00	400,000		CZK
ABB A/S, Skovlunde	Denmark	100.00	100,000		DKK
ABB for Electrical Industries (ABB ARAB) S.A.E., Cairo	Egypt	100.00	353,479		EGP
Asea Brown Boveri S.A.E., Cairo	Egypt	100.00	116,000		USD
ABB AS, Jüri	Estonia	100.00	1,663		EUR
ABB Oy, Helsinki	Finland	100.00	10,003		EUR
ABB France, Cergy Pontoise	France	99.83	25,778		EUR
ABB S.A., Cergy Pontoise	France	100.00	45,921		EUR
ABB Automation GmbH, Mannheim	Germany	100.00	15,000		EUR
ABB Automation Products GmbH, Ladenburg	Germany	100.00	10,620		EUR
ABB Beteiligungs- und Verwaltungsges. mbH, Mannheim	Germany	100.00	61,355		EUR
ABB Stotz-Kontakt GmbH, Heidelberg	Germany	100.00	7,500		EUR
Busch-Jaeger Elektro GmbH, Lüdenscheid	Germany	100.00	1,535		EUR
ABB Holding Ltd., Hong Kong	Hong Kong	100.00	27,887		HKD
ABB (Hong Kong) Ltd., Hong Kong	Hong Kong	100.00	20,000		HKD
ABB Global Industries and Services Private Limited, Bangalore	India	100.00	608,930		INR
ABB India Limited, Bangalore	India	75.00	423,817		INR
ABB S.p.A., Milan	Italy	100.00	110,000		EUR
ABB K.K., Tokyo	Japan	100.00	1,000,000		JPY
ABB Ltd., Seoul	Korea, Republic of	100.00	18,670,000		KRW
ABB Holdings Sdn. Bhd., Subang Jaya	Malaysia	100.00	4,490		MYR
ABB Malaysia Sdn. Bhd., Subang Jaya	Malaysia	100.00	3,500		MYR
ABB Mexico S.A. de C.V., San Luis Potosi SLP	Mexico	100.00	633,368		MXN
Asea Brown Boveri S.A. de C.V., San Luis Potosi SLP	Mexico	100.00	667,686		MXN
ABB B.V., Rotterdam	Netherlands	100.00	9,200		EUR
ABB Capital B.V., Rotterdam	Netherlands	100.00	1,000		USD
ABB Finance B.V., Rotterdam	Netherlands	100.00	20		EUR
ABB Holdings B.V., Rotterdam	Netherlands	100.00	119		EUR
ABB Investments B.V., Rotterdam	Netherlands	100.00	100		EUR
Thomas & Betts Netherlands B.V., Barendrecht	Netherlands	100.00	227		EUR
ABB AS, Billingstad	Norway	100.00	250,000		NOK
ABB Holding AS, Billingstad	Norway	100.00	240,000		NOK
ABB Sp. z o.o., Warsaw	Poland	99.92	350,656		PLN
ABB Ltd., Moscow	Russian Federation	100.00	5,686		RUB
ABB Contracting Company Ltd., Riyadh	Saudi Arabia	65.00	40,000		SAR
ABB Electrical Industries Ltd., Riyadh	Saudi Arabia	65.00	168,750		SAR

**Note 4**  
**Indirect Participations, continued**

<b>December 31, 2015</b>		<b>ABB ownership and voting rights</b>		<b>Share capital</b>	<b>Footnote</b>	<b>Currency</b>
<b>Company name/location</b>	<b>Country</b>	<b>%</b>	<b>in thousands</b>			
ABB Holdings Pte. Ltd., Singapore	Singapore	100.00	32,797			SGD
ABB Pte. Ltd., Singapore	Singapore	100.00	28,842			SGD
ABB Holdings (Pty) Ltd., Longmeadow	South Africa	100.00	4,050			ZAR
ABB South Africa (Pty) Ltd., Longmeadow	South Africa	74.91	1			ZAR
Asea Brown Boveri S.A., Madrid	Spain	100.00	33,318			EUR
ABB AB, Västerås	Sweden	100.00	400,000			SEK
ABB Norden Holding AB, Västerås	Sweden	100.00	2,344,783			SEK
ABB Information Systems Ltd., Zurich	Switzerland	100.00	500			CHF
ABB Investment Holding GmbH, Zurich	Switzerland	100.00	92,054			CHF
ABB Management Services Ltd., Zurich	Switzerland	100.00	571			CHF
ABB Schweiz AG, Baden	Switzerland	100.00	55,000			CHF
ABB Turbo Systems AG, Baden	Switzerland	100.00	10,000			CHF
ABB LIMITED, Bangkok	Thailand	100.00	1,034,000			THB
ABB Elektrik Sanayi A.S., Istanbul	Turkey	99.95	13,410			TRY
ABB Industries (L.L.C.), Dubai	United Arab Emirates	49.00	5,000		(2)	AED
ABB Holdings Limited, Warrington	United Kingdom	100.00	226,014			GBP
ABB Limited, Warrington	United Kingdom	100.00	120,000			GBP
ABB Finance (USA) Inc., Delaware	United States	100.00	1			USD
ABB Holdings Inc., Cary, NC	United States	100.00	2			USD
ABB Inc., Cary, NC	United States	100.00	1			USD
ABB Treasury Center (USA), Inc., Wilmington, Delaware	United States	100.00	1			USD
Baldor Electric Company, Fort Smith, AR	United States	100.00	–			USD
Edison Holding Corporation, Delaware	United States	100.00	10			USD
Power-One Renewable Energy Solutions LLC, Delaware	United States	100.00	–			USD
Thomas & Betts Corporation, Knoxville, TN	United States	100.00	1			USD
Verdi Holding Corporation, Delaware	United States	100.00	–			USD

(1) Shares without par value.

(2) Company consolidated as ABB exercises full management control.

<b>December 31, 2014</b>		<b>ABB ownership and voting rights</b>		<b>Share capital</b>	<b>Footnote</b>	<b>Currency</b>
<b>Company name/location</b>	<b>Country</b>	<b>%</b>	<b>in thousands</b>			
ABB S.A., Buenos Aires	Argentina	100.00	278,860			ARS
ABB Australia Pty Limited, Moorebank, NSW	Australia	100.00	131,218			AUD
ABB AG, Vienna	Austria	100.00	15,000			EUR
ABB N.V., Zaventem	Belgium	100.00	13,290			EUR
ABB Ltda., Osasco	Brazil	100.00	590,314			BRL
ABB Bulgaria EOOD, Sofia	Bulgaria	100.00	65,110			BGN
ABB Inc., Saint-Laurent, Quebec	Canada	100.00	–		(1)	CAD
Thomas & Betts Limited, Saint-Jean-sur-Richelieu, Quebec	Canada	100.00	–		(1)	CAD
ABB (China) Ltd., Beijing	China	100.00	310,000			USD
ABB Ltda., Bogotá	Colombia	100.00	486,440			COP
ABB Ltd., Zagreb	Croatia	100.00	2,730			HRK
ABB s.r.o., Prague	Czech Republic	100.00	400,000			CZK
ABB A/S, Skovlunde	Denmark	100.00	100,000			DKK
ABB Ecuador S.A., Quito	Ecuador	96.87	325			USD
Asea Brown Boveri S.A.E., Cairo	Egypt	100.00	116,000			USD
ABB AS, Jüri	Estonia	100.00	1,663			EUR
ABB Oy, Helsinki	Finland	100.00	10,003			EUR
ABB S.A., Cergy Pontoise	France	100.00	45,921			EUR
ABB AG, Mannheim	Germany	100.00	167,500			EUR
ABB Automation GmbH, Mannheim	Germany	100.00	15,000			EUR
ABB Automation Products GmbH, Ladenburg	Germany	100.00	10,620			EUR
ABB Beteiligungs- und Verwaltungsges. mbH, Mannheim	Germany	100.00	61,355			EUR
ABB Stotz-Kontakt GmbH, Heidelberg	Germany	100.00	7,500			EUR
Busch-Jaeger Elektro GmbH, Lüdenscheid	Germany	100.00	1,535			EUR

**Note 4**  
**Indirect Participations, continued**

December 31, 2014	ABB ownership				
	Company name/location	Country	and voting rights %	Share capital in thousands	Footnote Currency
Asea Brown Boveri S.A., Metamorphosis Attica	Greece	100.00	1,721		EUR
ABB (Hong Kong) Ltd., Hong Kong	Hong Kong	100.00	20,000		HKD
ABB Engineering Trading and Service Ltd., Budapest	Hungary	100.00	444,090		HUF
ABB India Limited, Bangalore	India	75.00	423,817		INR
ABB Limited, Dublin	Ireland	100.00	635		EUR
ABB Technologies Ltd., Haifa	Israel	99.99	420		ILS
ABB S.p.A., Milan	Italy	100.00	107,000		EUR
Power-One Italy S.p.A., Terranuova Bracciolini	Italy	100.00	22,000		EUR
ABB K.K., Tokyo	Japan	100.00	1,000,000		JPY
ABB Ltd., Seoul	Korea, Republic of	100.00	18,670,000		KRW
ABB Holdings Sdn. Bhd., Subang Jaya	Malaysia	100.00	4,490		MYR
Asea Brown Boveri S.A. de C.V., San Luis Potosi SLP	Mexico	100.00	667,686		MXN
ABB B.V., Rotterdam	Netherlands	100.00	9,200		EUR
ABB Capital B.V., Rotterdam	Netherlands	100.00	9,080		EUR
ABB Finance B.V., Rotterdam	Netherlands	100.00	20		EUR
ABB Holdings B.V., Rotterdam	Netherlands	100.00	119		EUR
ABB Investments B.V., Rotterdam	Netherlands	100.00	100		EUR
ABB Limited, Auckland	New Zealand	100.00	34,000		NZD
ABB Holding AS, Billingstad	Norway	100.00	240,000		NOK
ABB S.A., Lima	Peru	98.18	29,116		PEN
ABB, Inc., Paranaque, Metro Manila	Philippines	100.00	123,180		PHP
ABB Sp. z o.o., Warsaw	Poland	99.92	350,656		PLN
ABB (Asea Brown Boveri), S.A., Oeiras	Portugal	100.00	4,117		EUR
ABB Ltd., Moscow	Russian Federation	100.00	5,686		RUB
ABB Contracting Company Ltd., Riyadh	Saudi Arabia	65.00	40,000		SAR
ABB Holdings Pte. Ltd., Singapore	Singapore	100.00	32,797		SGD
ABB Holdings (Pty) Ltd., Longmeadow	South Africa	100.00	4,050		ZAR
Asea Brown Boveri S.A., Madrid	Spain	100.00	33,318		EUR
ABB AB, Västerås	Sweden	100.00	400,000		SEK
ABB Norden Holding AB, Västerås	Sweden	100.00	2,344,783		SEK
ABB Schweiz AG, Baden	Switzerland	100.00	55,000		CHF
ABB Technology Ltd., Zurich	Switzerland	100.00	100		CHF
ABB LIMITED, Bangkok	Thailand	100.00	1,034,000		THB
ABB Elektrik Sanayi A.S., Istanbul	Turkey	99.95	13,410		TRY
ABB Ltd., Kiev	Ukraine	100.00	85,400		UAH
ABB Industries (L.L.C.), Dubai	United Arab Emirates	49.00	5,000	(2)	AED
ABB Holdings Limited, Warrington	United Kingdom	100.00	226,014		GBP
ABB Limited, Warrington	United Kingdom	100.00	120,000		GBP
ABB Holdings Inc., Cary, NC	United States	100.00	2		USD
ABB Inc., Cary, NC	United States	100.00	1		USD
Baldor Electric Company, Fort Smith, AR	United States	100.00	–		USD
Kuhlman Electric Corporation, Crystal Springs, MS	United States	100.00	–		USD
Power-One, Inc., Delaware	United States	100.00	–		USD
Thomas & Betts Corporation, Knoxville, TN	United States	100.00	1		USD

(1) Shares without par value

(2) Company consolidated as ABB exercises full management control

**Note 5**  
Interest-bearing liabilities

December 31 (CHF in thousands)		2015	2014
Bond 2011-2016 1.25% coupon	nominal value	500,000	500,000
	discount on issuance	(225)	(507)
Bond 2012-2018 1.5% coupon	nominal value	350,000	350,000
Bond 2011-2021 2.25% coupon	nominal value	350,000	350,000
	premium on issuance	52	69
<b>Total</b>		<b>1,199,827</b>	<b>1,199,562</b>
thereof current liabilities		499,775	–
thereof non-current liabilities		700,052	1,199,562

The 1.25% Bonds, due 2016, the 1.5% Bonds, due 2018 and the 2.25% Bonds, due 2021, pay interest annually in arrears, at fixed annual rates of 1.25 percent, 1.5 percent and 2.25 percent, respectively. The Company has the option to redeem the bonds prior to maturity, in whole, at par plus accrued interest, if 85% of the aggregate principle amount of the bonds has been redeemed or purchased and cancelled.

The bonds, issued prior to January 1, 2013, are stated at their nominal value less any discount or plus any premium on issuance. Bonds are accreted/amortized to par over the period to maturity.

The Company has, through Group Treasury Operations, entered into interest rate swaps with banks to effectively convert the bonds maturing 2016 and 2021 into floating rate obligations.

**Note 6**  
Contingent liabilities

The Company has issued a support letter to a surety institution for the issuance of surety bonds on behalf of Group companies. The amount issued under this letter was CHF 741,900 thousand as of December 31, 2015 and CHF 742,200 thousand as of December 31, 2014.

Furthermore, the Company has Keep-well agreements with certain Group companies. A Keep-well agreement is a shareholder agreement between the Company and a Group company. These agreements provide for maintenance of a minimum net worth in the Group company and the maintenance of 100 percent direct or indirect ownership by the Company.

The Keep-well agreements additionally provide that if at any time the Group company has insufficient liquid assets to meet any payment obligation on its debt (as defined in the agreements) and has insufficient unused commitments under its credit facilities with its lenders, the Company will make available to the Group company sufficient funds to enable it to fulfill such payment obligation as it falls due. A Keep-well agreement is not a guarantee by the Company for payment of the indebtedness, or any other obligation, of a Group company. No party external to the ABB Group is a party to any Keep-well agreement.

In addition, the Company has provided certain guarantees securing the performance of Group companies in connection with commercial paper programs, indentures or other debt instruments to enable them to fulfill the payment obligation under such instruments as they fall due. The amount guaranteed under these instruments was CHF 5,727,720 thousand as of December 31, 2015 and CHF 5,904,174 thousand as of December 31, 2014.

Furthermore, the Company is the guarantor in the Group's USD 2 billion multicurrency revolving credit facility, maturing in 2020 but no amounts were outstanding at December 31, 2015 and 2014.

The Company through certain of its direct and indirect subsidiaries is involved in various regulatory and legal matters. The Company's direct and indirect subsidiaries have made certain related accruals as further described in "Note 15 Commitments and contingencies" to the Consolidated Financial Statements of ABB Ltd. As described in the note, there could be material adverse outcomes beyond the accrued liabilities.

The Company is part of a value added tax Group and therefore is jointly liable to the Swiss Federal Tax Department for the value added tax liabilities of the other members.

**Note 7**  
**Stockholders' equity**

(CHF in thousands)	Share capital	Legal reserves		Free reserves			Own shares	Total
		from capital contribution	from retained earnings	Other reserves	from retained earnings	Net income		
<b>Opening balance</b>								
<b>as of January 1, 2015</b>	<b>2,384,186</b>	<b>1,263,005</b>	<b>1,000,000</b>	<b>535,171</b>	<b>5,077,751</b>	<b>570,107</b>	<b>(1,179,157)</b>	<b>9,651,063</b>
Allocation to retained earnings					570,107	(570,107)		–
Par value reduction	(393,507)			15,988				(377,519)
Release to other reserves		(1,232,575)		1,232,575				–
Dividend payment				(1,232,575)				(1,232,575)
Purchases of own shares							(1,441,493)	(1,441,493)
Delivery of own shares							125,202	125,202
Loss on delivery of own shares				(11,087)				(11,087)
Net income for the year						2,973,717		2,973,717
<b>Closing balance</b>								
<b>as of December 31, 2015</b>	<b>1,990,679</b>	<b>30,430</b>	<b>1,000,000</b>	<b>540,072</b>	<b>5,647,858</b>	<b>2,973,717</b>	<b>(2,495,448)</b>	<b>9,687,308</b>

As a result of the Swiss corporate tax reform II that became effective on January 1, 2011, qualifying contributions from the shareholders exceeding the nominal share capital can be distributed without deduction of Swiss withholding tax. Accordingly, such contributions have been recorded in a specific account (legal reserves from capital contribution) within the legal reserves in order to benefit from the favorable tax treatment.

Share capital as of December 31, 2015	Number of registered shares	Par value (CHF)	Total (CHF in thousands)
Issued shares	2,314,743,264	0.86	1,990,679
Contingent shares	304,038,800	0.86	261,473
Authorized shares	200,000,000	0.86	172,000

Share capital as of December 31, 2014	Number of registered shares	Par value (CHF)	Total (CHF in thousands)
Issued shares	2,314,743,264	1.03	2,384,186
Contingent shares	304,038,800	1.03	313,160
Authorized shares	200,000,000	1.03	206,000

The own shares are valued at acquisition cost. During 2015, a loss from the delivery of own shares of CHF 11,087 thousand was recorded in other reserves.

During 2015, a bank holding call options related to ABB Group's management incentive plan (MIP) exercised a portion of these options. Such options had been issued in 2009 and 2012 by the Group company that facilitates the MIP at fair value and had a strike price of CHF 19.00 and CHF 15.75, respectively. At issuance, the Group company had entered into an intercompany option agreement with the Company, having the same terms and conditions to enable it to meet its future obligations. As a result of the exercise by the bank, the Company issued 4,569,100 and 714,450 shares at CHF 19.00 and CHF 15.75, respectively, out of own shares.

During 2014, a bank holding call options related to ABB Group's management incentive plan (MIP) exercised a portion of these options. Such options had been issued in 2012 by the Group company that facilitates the MIP at fair value and had a strike price of CHF 15.75. At issuance, the Group company had entered into an intercompany option agreement with the Company, having the same terms and conditions to enable it to meet its future obligations. As a result of the exercise by the bank, the Company issued 1,315,400 shares at CHF 15.75 out of own shares.

The ABB Group has an annual employee share acquisition plan (ESAP) which provides share options to employees globally. To enable the Group company that facilitates the ESAP to deliver shares to employees who have exercised their stock options, the Group company entered into an agreement with the Company to acquire the required number of shares at their then market value from the Company. Consequently in November 2015 and 2014, respectively, the Company issued, out of own shares, to the Group company, 30,003 and 555,161 shares at CHF 20.76 and CHF 21.52, respectively.

In 2015 and 2014, the Company transferred 706,963 and 1,109,760 own shares at an average acquisition price per share of CHF 20.77 and CHF 20.99, respectively, to fulfill its obligations under other share-based arrangements.

On September 9, 2014, the Company announced a share buyback program of up to USD 4 billion which commenced on September 16, 2014. The Company intends to allocate approximately three-quarters of the buyback program to a reduction of share capital and the remainder to support its employee share programs globally.

**Note 7****Stockholders' equity, continued**

The movement in the number of own shares during the year was as follows:

	2015		2014	
	Number of shares	Average acquisition price per share CHF	Number of shares	Average acquisition price per share CHF
<b>Opening balance as of January 1</b>	<b>55,843,639</b>	<b>21.12</b>	<b>14,093,960</b>	<b>21.03</b>
Purchases for employee share programs	13,050,000	19.78	18,750,000	20.82
Purchases for cancellation	60,245,000	19.64	25,980,000	21.36
Delivery	(6,020,516)	20.80	(2,980,321)	20.99
<b>Closing balance as of December 31</b>	<b>123,118,123</b>	<b>20.27</b>	<b>55,843,639</b>	<b>21.12</b>
Thereof pledged for MIP	10,726,465		8,978,986	

**Note 8****Dividend income**

The dividend payment from ABB Asea Brown Boveri Ltd was increased in 2015 to meet the cash needs for the share buyback program and the dividend payment to the Company's shareholders.

**Note 9****Other operating income**

Other operating income includes mainly outgoing charges for division management services and guarantee compensation fees to Group companies.

**Note 10****Significant shareholders**

Investor AB, Sweden, held 232,165,142 and 199,965,142 ABB Ltd shares as of December 31, 2015 and 2014, respectively. This corresponds to 10.03 percent and 8.6 percent of ABB Ltd's total share capital and voting rights as registered in the Commercial Register on December 31, 2015 and 2014, respectively.

Pursuant to its disclosure notice, Cevian Capital II GP Limited, Channel Islands, announced that, as per July 24, 2015, on behalf of its general partners it held 119,377,120 ABB Ltd shares. This corresponds to 5.2 percent of ABB Ltd's total share capital and voting rights as registered in the commercial register on December 31, 2015.

Pursuant to its disclosure notice, BlackRock, Inc., USA, disclosed that, as per July 25, 2011, it, together with its direct and indirect subsidiaries, held 69,702,100 ABB Ltd shares. This corresponds to 3.0 percent of total ABB Ltd's share capital and voting rights as registered in the Commercial Register on December 31, 2015 and 2014, respectively.

To the best of the Company's knowledge, no other shareholder holds 3 percent or more of ABB Ltd's total share capital and voting rights on December 31, 2015 and 2014, respectively.

**Note 11****Shareholdings of Board and Executive Committee**

At December 31, 2015 and 2014, the members of the Board of directors as of that date, held the following numbers of shares (or ADSs representing such shares):

Name	Total number of shares held at December 31	
	2015	2014
Peter Voser <sup>(1)</sup> , <sup>(2)</sup>	45,559	N/A
Hubertus von Grünberg <sup>(3)</sup>	N/A	253,264
Jacob Wallenberg <sup>(4)</sup>	193,659	185,708
Roger Agnelli	176,820	170,671
Matti Alahuhta	24,788	17,912
David Constable <sup>(1)</sup>	3,229	N/A
Louis R. Hughes	80,562	72,742
Michel de Rosen	146,646	139,602
Michael Treschow <sup>(3)</sup>	N/A	108,787
Ying Yeh	25,016	18,970
<b>Total</b>	<b>696,279</b>	<b>967,656</b>

<sup>(1)</sup> Peter Voser and David Constable were elected to the Board at the ABB Ltd AGM in 2015.

<sup>(2)</sup> Includes 2000 shares held by his spouse.

<sup>(3)</sup> Hubertus von Grünberg and Michael Treschow left the Board at the end of the 2014/2015 term of office.

<sup>(4)</sup> Share amounts provided in this section do not include the shares beneficially owned by Investor ABB, of which Mr. Wallenberg is chairman.

**Note 11**  
**Shareholdings of Board**  
**and Executive Committee,**  
**continued**

At December 31, 2015, the members of the Executive Committee, as of that date, held the following number of shares (or ADSs representing such shares), the conditional rights to receive ABB shares under the LTIP and options (either vested or unvested as indicated) under the MIP and unvested shares in respect of other compensation arrangements.

Name	Total number of shares held	Vested		Unvested at December 31, 2015			
		at December 31, 2015		Retention shares deliverable under the 2013 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2014 retention component of the LTIP <sup>(2)</sup>	Reference number of shares deliverable under the 2015 performance components (P1 and P2) of the LTIP <sup>(2)</sup>	Replacement share grant for foregone benefits from former employer <sup>(3)</sup>
		Number of vested options held under the MIP <sup>(1)</sup>	(vesting 2016)	(vesting 2017)	(vesting 2018)	(vesting 2016 and 2018)	
Ulrich Spiesshofer	289,048	–	78,395	93,846	172,465	–	
Eric Elzvik	23,768	710,125	27,071	30,549	44,562	–	
Jean-Christophe Deslarzes	–	–	27,071	30,549	51,413	144,802	
Diane de Saint Victor	475,446	–	31,848	35,940	45,873	–	
Frank Duggan	132,896	–	25,632	27,548	46,390	–	
Greg Scheu <sup>(4)</sup>	83,901	221,375	24,830	26,159	45,896	–	
Pekka Tiitinen	21,000	221,375	22,294	25,158	42,845	–	
Tarak Mehta	115,977	–	25,632	34,677	42,780	–	
Veli-Matti Reinikkala	202,175	–	9,810	27,674	36,010	–	
Bernhard Jucker	267,848	–	37,033	40,750	51,902	–	
Claudio Facchin	41,501	–	22,294	31,083	42,845	–	
Peter Terwiesch	30,393	250,000	15,919	16,457	36,698	–	
<b>Total Executive Committee members as of December 31, 2015</b>	<b>1,683,953</b>	<b>1,402,875</b>	<b>347,829</b>	<b>420,390</b>	<b>659,679</b>	<b>144,802</b>	

<sup>(1)</sup> Options may be sold or exercised/converted into shares at the ratio of 5 options for 1 share.

<sup>(2)</sup> Upon vesting, the LTIP foresees delivering 30 percent of the value of the vested shares under the retention component (LTIP 2013 and 2014) and performance components (P1 and P2 of LTIP 2015) in cash. However, participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(3)</sup> The Replacement share grant foresees delivering 30 percent of the value of the vested shares in cash. However, the participant has the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(4)</sup> Total number of shares held includes 32 shares held by children.

**Note 11**  
**Shareholdings of Board**  
**and Executive Committee,**  
**continued**

At December 31, 2014, the members of the Executive Committee, as of that date, held the following number of shares (or ADSs representing such shares), the conditional rights to receive ABB shares under the LTIP, options (either vested or unvested as indicated) under the MIP and unvested shares in respect of other compensation arrangements.

Name	Total number of shares held	Vested at December 31, 2014	Unvested at December 31, 2014					
		Number of vested options held under the MIP <sup>(1)</sup>	Number of unvested options held under the MIP <sup>(1)</sup>	Retention shares deliverable under the 2012 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2013 retention component of the LTIP <sup>(2)</sup>	Retention shares deliverable under the 2014 retention component of the LTIP <sup>(2)</sup>	Replacement share grant for foregone benefits from former employee <sup>(3)</sup>	Special retention share grant <sup>(3)</sup>
			(vesting 2015)	(vesting 2015)	(vesting 2016)	(vesting 2017)	(vesting 2016 and 2018)	(vesting 2015)
Ulrich Spiesshofer	241,943	–	–	67,293	78,395	93,846	–	–
Eric Elzvik	23,768	422,625	287,500	–	27,071	30,549	–	–
Jean-Christophe Deslarzes	–	–	–	–	27,071	30,549	144,802	–
Diane de Saint Victor	286,773	–	–	38,673	31,848	35,940	–	150,000
Frank Duggan	97,607	212,500	–	35,289	25,632	27,548	–	–
Greg Scheu <sup>(4)</sup>	63,137	221,375	–	29,664	24,830	26,159	–	–
Pekka Tiitinen	8,000	422,625	–	12,041	22,294	25,158	–	–
Tarak Mehta	91,275	–	–	35,289	25,632	34,677	–	–
Veli-Matti Reinikkala	176,119	–	–	37,223	9,810	27,674	–	–
Bernhard Jucker	235,702	–	–	45,924	37,033	40,750	–	–
Claudio Facchin	9,903	–	–	17,598	22,294	31,083	–	–
<b>Total Executive Committee members as of December 31, 2014</b>	<b>1,234,227</b>	<b>1,279,125</b>	<b>287,500</b>	<b>318,994</b>	<b>331,910</b>	<b>403,933</b>	<b>144,802</b>	<b>150,000</b>

<sup>(1)</sup> Options may be sold or exercised/converted into shares at the ratio of 5 options for 1 share.

<sup>(2)</sup> The LTIP foresees delivering 30 percent of the value of the vested retention shares in cash. However, participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(3)</sup> The Replacement share grant and the Special retention share grant foresee delivering 30 percent of the value of the vested shares in cash. However, under both plans participants have the possibility to elect to receive 100 percent of the vested award in shares.

<sup>(4)</sup> Total number of shares held includes 32 shares held by children.

**Note 11**  
**Shareholdings of Board**  
**and Executive Committee,**  
**continued**

At December 31, 2015, the following members of the Executive Committee held vested WARs and conditionally granted ABB shares under the performance component of the LTIP 2015, 2014 and 2013, which at the time of vesting will be settled in cash.

Name	Vested at December 31, 2015	Unvested at December 31, 2015	
	Number of fully vested WARs held under the MIP	Reference number of shares under the performance component of the 2013 launch of the LTIP (vesting 2016)	Reference number of shares under the performance component of the 2014 launch of the LTIP (vesting 2017)
Ulrich Spiesshofer	-	50,024	51,489
Eric Elzvik	-	16,659	17,147
Jean-Christophe Deslarzes	-	16,659	17,147
Diane de Saint Victor	-	19,599	20,173
Frank Duggan	-	15,023	15,463
Greg Scheu	-	14,553	14,684
Pekka Tiitinen	-	13,720	14,122
Tarak Mehta	-	15,023	16,139
Veli-Matti Reinikkala	-	15,091	15,534
Bernhard Jucker	-	18,992	19,548
Claudio Facchin	287,500	13,720	14,122
Peter Terwiesch	-	10,007	10,292
<b>Total Executive Committee members as of December 31, 2015</b>	<b>287,500</b>	<b>219,070</b>	<b>225,860</b>

**Note 11**  
**Shareholdings of Board**  
**and Executive Committee**  
**continued**

At December 31, 2014, the following members of the Executive Committee held vested WARs and conditionally granted ABB shares under the performance component of the LTIP 2014, 2013 and 2012, which at the time of vesting will be settled in cash.

Name	Vested at December 31, 2014	Unvested at December 31, 2014		
	Number of fully vested WARs held under the MIP	Reference number of shares under the performance component of the 2012 launch of the LTIP	Reference number of shares under the performance component of the 2013 launch of the LTIP	Reference number of shares under the performance component of the 2014 launch of the LTIP
		(vesting 2015)	(vesting 2016)	(vesting 2017)
Ulrich Spiesshofer	–	22,588	50,024	51,489
Eric Elzvik	201,250	–	16,659	17,147
Jean-Christophe Deslarzes	–	–	16,659	17,147
Diane de Saint Victor	–	20,652	19,599	20,173
Frank Duggan	–	18,845	15,023	15,463
Greg Scheu	–	17,425	14,553	14,684
Pekka Tiitinen	–	6,950	13,720	14,122
Tarak Mehta	–	18,845	15,023	16,139
Veli-Matti Reinikkala	–	19,878	15,091	15,534
Bernhard Jucker	–	24,524	18,992	19,548
Claudio Facchin	387,500	10,665	13,720	14,122
<b>Total Executive Committee members as of December 31, 2014</b>	<b>588,750</b>	<b>160,372</b>	<b>209,063</b>	<b>215,568</b>

**Note 12**  
**Full time employees**

During 2015 and 2014, the Company employed on average 20 and 18 employees, respectively.

## Proposed appropriation of available earnings

<b>Proposed appropriation of retained earnings</b>		
(CHF in thousands)	<b>2015</b>	<b>2014</b>
Net income for the year	2,973,717	570,107
Carried forward from previous year	5,647,858	5,077,751
<b>Retained earnings available to the Annual General Meeting</b>	<b>8,621,575</b>	<b>5,647,858</b>
Legal reserves from retained earnings	–	–
Legal reserves from capital contribution	–	–
<b>Balance to be carried forward</b>	<b>8,621,575</b>	<b>5,647,858</b>

The Board of directors proposes to carry forward the retained earnings in the amount of CHF 8,621,575 thousand.

On February 3, 2016, the Company announced that the Board of directors will recommend for approval at the April 21, 2016, Annual General Meeting that a dividend be distributed in a tax efficient way in the form of a nominal (par) value reduction in the amount of CHF 0.74 per share, representing a reduction in nominal (par) value from CHF 0.86 to CHF 0.12 per share, to be paid in July 2016.

# Report of the Statutory Auditor on the financial statements

## To the General Meeting of ABB Ltd, Zurich

As statutory auditor, we have audited the accompanying financial statements of ABB Ltd, which comprise the balance sheet, income statement, cash flow statement and notes (pages 165 to 177), for the year ended December 31, 2015.

### Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the company's articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

### Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the financial statements for the year ended December 31, 2015 comply with Swiss law and the company's articles of incorporation.

### Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

## Ernst & Young AG

### Leslie Clifford

Licensed audit expert  
(Auditor in charge)

Zurich, Switzerland  
February 25, 2016

### Robin Errico

Licensed audit expert

**Crystal** – Project Manager, Beijing, China

“I help to coordinate everything from the review of contracts to production, the dispatch of cargo and customer service. This means a lot of responsibility, a lot of contact with different kinds of people and a lot of busy days to make it all happen.”



# Supplemental information

The following are definitions of key financial measures used to evaluate ABB's operating performance. These financial measures are referred to in this Annual Report and are not defined under United States generally accepted accounting principles (U.S. GAAP).

While ABB's management believes that the financial measures defined below are useful in evaluating ABB's operating results, these measures should be considered as supplemental in nature and not as a substitute for the related financial information prepared in accordance with U.S. GAAP.

For a full reconciliation of ABB's non-GAAP measures, please refer to Supplemental Reconciliations and Definitions, ABB Q4 2015 Financial Information at <http://new.abb.com/investorrelations/financial-results-and-presentations/quarterly-results-and-annual-reports-2015>.

## Comparable growth rates (previously 'like-for-like growth rates')

Growth rates for certain key figures may be presented and discussed on a "comparable" basis. The comparable growth rate measures growth on a constant currency basis. Since we are a global company, the comparability of our operating results reported in U.S. dollars is affected by foreign currency exchange rate fluctuations. We calculate the impacts from foreign currency fluctuations by translating the current-year periods' reported key figures into U.S. dollar amounts using the exchange rates in effect for the comparable periods in the previous year.

Comparable growth rates also adjust for changes in our business portfolio. The adjustment for portfolio changes is calculated as follows: where the results of any business acquired or divested have not been consolidated and reported for the entire duration of both the current and comparable periods, the reported key figures of such business are adjusted to exclude the relevant key figures of any corresponding quarters which are not comparable when computing the comparable growth rate. In addition, certain other portfolio changes which do not qualify as divestments are treated in a similar manner to divestments. We do not adjust for portfolio changes where the business acquired or divested has annual revenues of less than \$50 million.

## Operational EBITA margin

Operational EBITA margin is Operational EBITA as a percentage of Operational revenues.

## Operational EBITA

Operational earnings before interest, taxes and acquisition-related amortization (Operational EBITA) represents Income from operations excluding acquisition-related amortization (as defined below), restructuring and restructuring-related expenses, gains and losses from sale of businesses, acquisition-related expenses and certain non-operational items, as well as foreign exchange/commodity timing differences in income from operations consisting of: (i) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables/payables (and related assets/liabilities).

## Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

## Operational revenues

Operational revenues are total revenues adjusted for foreign exchange/commodity timing differences in total revenues of: (i) unrealized gains and losses on derivatives, (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables (and related assets).

## Cash return on invested capital (CROI)

Cash return on invested capital is calculated as Adjusted cash return divided by Capital invested.

## Adjusted cash return

Adjusted cash return is calculated as the sum of (i) net cash provided by operating activities, (ii) interest paid and (iii) estimate to annualize/eliminate the net cash provided by operating activities of certain acquisitions / (divestments).

## Adjusted total fixed assets

Adjusted total fixed assets is the sum of (i) property, plant and equipment, net, (ii) goodwill, (iii) other intangible assets, net, and iv) investments in equity-accounted companies less v) deferred tax liabilities recognized in certain acquisitions.

## Net working capital

Net working capital is the sum of (i) receivables, net, (ii) inventories, net, and (iii) prepaid expenses; less (iv) accounts payable, trade, (v) billings in excess of sales, (vi) advances from customers, and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, and (d) payables under the share buyback program); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale.

## Capital invested

Capital invested is the sum of (i) Adjusted total fixed assets, (ii) Net working capital and (iii) Accumulated depreciation and amortization.

## Free cash flow conversion to net income

Free cash flow conversion to net income is calculated as Free cash flow divided by Net income attributable to ABB.

## Free cash flow (FCF)

Free cash flow is calculated as net cash provided by operating activities adjusted for: (i) purchases of property, plant and equipment and intangible assets, (ii) proceeds from sales of property, plant and equipment, and (iii) changes in financing and other non-current receivables, net (included in other investing activities).

# Investor information

## ABB Ltd share price trend during 2015

During 2015, the price of ABB Ltd shares listed on the SIX Swiss Exchange decreased 15 percent, while the Swiss Performance Index increased 3 percent. The price of ABB Ltd shares on NASDAQ OMX Stockholm decreased 8 percent, compared to the OMX 30 Index, which decreased 1 percent. The price of ABB Ltd American Depositary Shares traded on the New York Stock Exchange decreased 16 percent compared to the Dow Jones Industrial Index, which decreased by 2 percent.

Source: Bloomberg

## Share price (data based on closing prices)

	SIX Swiss Exchange	NASDAQ OMX Stockholm	New York Stock Exchange
2015	(CHF)	(SEK)	(USD)
High	21.77	192.70	23.14
Low	16.72	144.50	17.14
Year-end	17.96	152.80	17.73
Average daily traded number of shares, in millions	8.17	2.18	2.11

Source: Bloomberg

## Market capitalization

On December 31, 2015, ABB Ltd's market capitalization based on outstanding shares (total number of outstanding shares: 2,191,625,141) was approximately CHF 39 billion (\$39 billion, SEK 335 billion).

## Shareholder structure

As of December 31, 2015, the total number of shareholders directly registered with ABB Ltd was approximately 155,000. In addition, another 210,000 shareholders hold shares indirectly through nominees. In total, ABB has approximately 365,000 shareholders.

## Major shareholders

As of December 31, 2015, Investor AB, Stockholm, Sweden, owned 232,165,142 shares of ABB Ltd, corresponding to 10.0 percent of total capital and votes of ABB Ltd as registered in the Commercial Register on December 31, 2015. As of July 24, 2015, Cevian Capital II GP Limited, Channel Islands, on behalf of its general partners held 119,377,120 ABB Ltd shares. This corresponds to 5.2 percent of total ABB Ltd share capital and voting rights as registered in the commercial register on December 31, 2015. As of July 25, 2011, BlackRock Inc., New York, USA, owned 69,702,100 shares of ABB Ltd, corresponding to 3.0 percent of total capital and votes of ABB Ltd as registered in the Commercial Register on December 31, 2015. To the best of ABB's knowledge, no other shareholder held 3 percent or more of the total voting rights as of December 31, 2015.

## Dividend proposal and share buyback

ABB's Board of Directors has proposed to increase the dividend for 2015 by 0.02 Swiss francs to 0.74 Swiss francs per share. The proposal is in line with the company's dividend policy to pay a steadily rising, sustainable dividend over time. If approved by shareholders at the company's annual general meeting on April 21, 2016, the Board proposes that the dividend be paid in a tax efficient way by a reduction in the nominal (par) value of the ABB share from 0.86 Swiss francs to 0.12 Swiss francs.

The ex-dividend and payout dates in Switzerland are expected in July 2016, in line with Swiss regulatory processes. Further information will be made available on ABB's website in due course.

In September 2014, ABB announced a \$4 billion share buyback program. As of December 31, 2015, ABB has purchased under the program a total of approximately 106 million shares for approximately \$2.2 billion. Further information can be found at [www.abb.com/investorrelations](http://www.abb.com/investorrelations).

## Key data

	2015	2014	2013
Dividend per share (CHF)	0.74 <sup>(1)</sup>	0.72	0.70
Par value per share (CHF)	0.86	1.03	1.03
Votes per share	1	1	1
Basic earnings per share (USD) <sup>(2)</sup>	0.87	1.13	1.21
Total ABB stockholders' equity per share (USD) <sup>(3)</sup>	6.61	7.20	8.12
Cash flow from operations per share (USD) <sup>(2)</sup>	1.72	1.68	1.59
Dividend payout ratio (%) <sup>(4)</sup>	85%	64%	65%
Weighted-average number of shares outstanding (in millions)	2,226	2,288	2,297

<sup>(1)</sup> Proposed by the Board of Directors and subject to approval by shareholders at the Annual General Meeting on April 21, 2016, in Zurich, Switzerland

<sup>(2)</sup> Calculation based on weighted-average number of shares outstanding

<sup>(3)</sup> Calculation based on the number of shares outstanding as of December 31, 2015

<sup>(4)</sup> Dividend per share (converted to U.S. dollars at year-end exchange rates) divided by basic earnings per share

## ABB Ltd Annual General Meeting

The 2016 Annual General Meeting of ABB Ltd will be held at 10:00 a.m. on Thursday, April 21, 2016, at the Messe Zurich hall in Zurich-Oerlikon, Switzerland. The Annual General Meeting will be held principally in German and will be simultaneously translated into English. Shareholders entered in the share register, with the right to vote, by April 13, 2016, are entitled to participate in the Annual General Meeting.

## Admission cards

Holders of registered shares of ABB Ltd will receive their admission cards on request using the reply form enclosed with the invitation. The reply form or a corresponding notification must reach the company no later than April 15, 2016. For technical reasons, notifications arriving after that date can no longer be taken into consideration. The full text of the invitation in accordance with Article 700 of the Swiss Code of Obligations will be published in the Schweizerisches Handelsamtsblatt around March 23, 2016.

For shareholders in Sweden an Information Meeting will be held in Västerås, Sweden, on April 25, 2016, at 4:30 p.m.

## ABB shareholders' calendar 2016

First-quarter 2016 results	April 20
ABB Ltd Annual General Meeting, Zurich	April 21
ABB Ltd Information Meeting, Västerås	April 25
Second-quarter 2016 results	July 21
Third-quarter 2016 results	October 27

**Stock exchange listings**

ABB Ltd is listed on the SIX Swiss Exchange, NASDAQ OMX Stockholm and the New York Stock Exchange.

The global ISIN code for the ABB share

CH 001 222 171 6

Ticker symbols for ABB Ltd

SIX Swiss Exchange	ABBN
NASDAQ OMX Stockholm	ABB
New York Stock Exchange (NYSE)	ABB

Ticker symbols for ABB Ltd at Bloomberg

SIX Swiss Exchange	ABBN VX
NASDAQ OMX Stockholm	ABB SS
New York Stock Exchange (NYSE)	ABB US

Ticker symbols for ABB Ltd at Reuters

SIX Swiss Exchange	ABBN.VX
NASDAQ OMX Stockholm	ABB.ST
New York Stock Exchange (NYSE)	ABB.N

**Credit rating for ABB Ltd as of February 24, 2016**

Standard & Poor's

Long-term corporate credit rating	A
Long-term senior unsecured debt	A
Short-term corporate credit rating	A-1
Outlook: Stable	

Moody's

Long-term senior unsecured rating	A2
Short-term debt rating	Prime-1
Outlook: Stable	

These credit ratings are subject to revision at any time. ABB does not have any other agreements with internationally recognized statistical rating organizations to provide long-term and short-term credit ratings.

**Bondholder information**

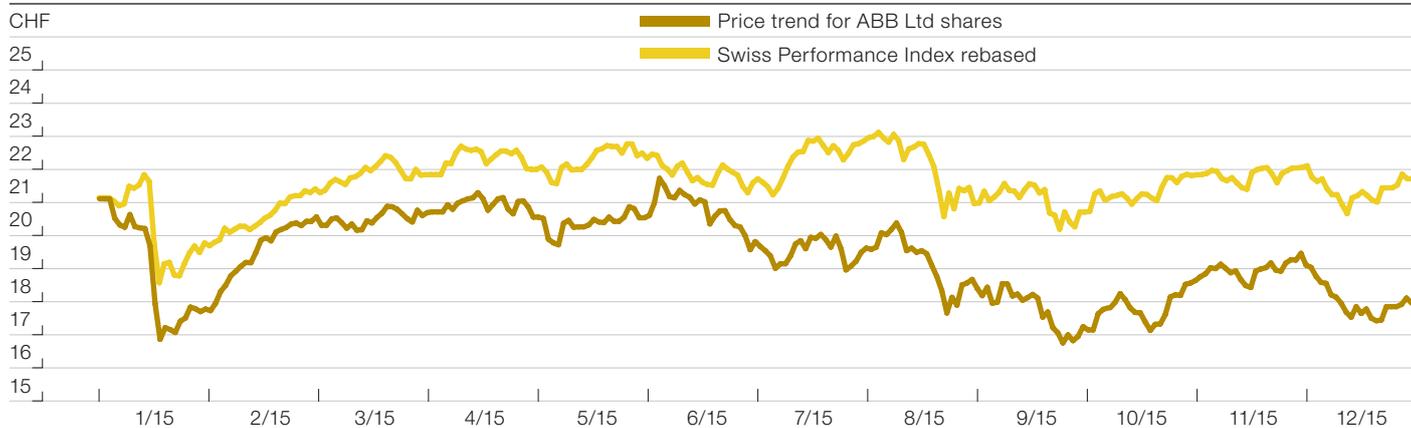
Outstanding public bonds, as of February 24, 2016, are listed in the table below.

**Bondholder Information**

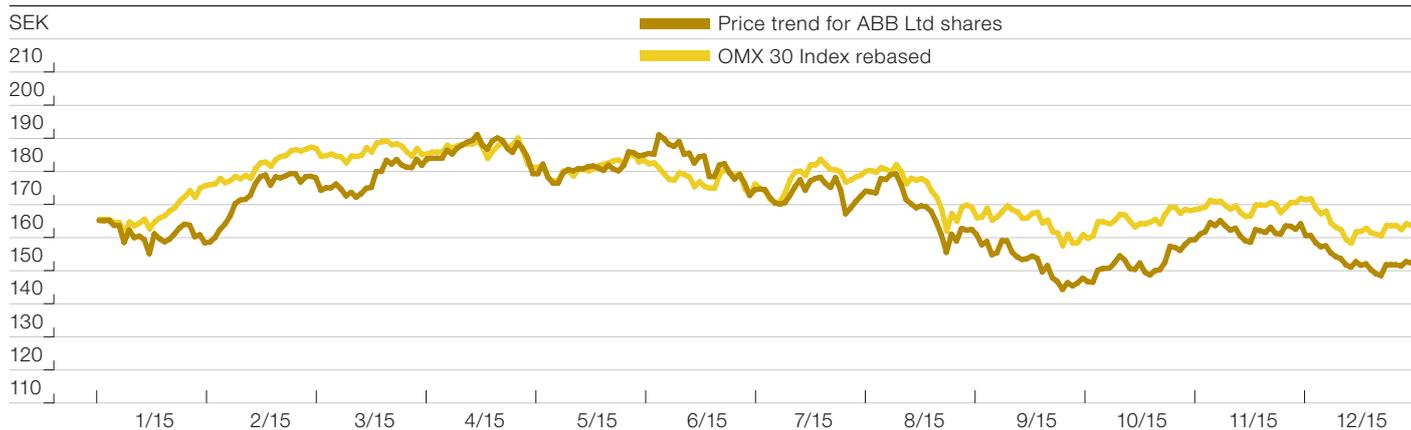
Issuer	Issued Principal Amount	Coupon	Due	ISIN
ABB Ltd	CHF 500 million	1.25%	10/11/2016	CH0139264961
ABB Ltd	CHF 350 million	1.50%	11/23/2018	CH0146696528
ABB Ltd	CHF 350 million	2.25%	10/11/2021	CH0139265000
ABB Finance (Australia) Pty Limited	AUD 400 million	4.25%	11/22/2017	AU3CB0202216
ABB Finance (USA) Inc.	USD 500 million	1.625%	05/08/2017	US00037BAA08
ABB Finance (USA) Inc.	USD 1,250 million	2.875%	05/08/2022	US00037BAB80
ABB Finance (USA) Inc.	USD 750 million	4.375%	08/05/2042	US00037BAC63
ABB Finance B.V.	EUR 1,250 million	2.625%	03/26/2019	XS0763122578
ABB Treasury Center (USA), Inc.	USD 600 million	2.50%	06/15/2016	144A: US00038AAA16 RegS: USU00292AA73
ABB Treasury Center (USA), Inc.	USD 650 million	4.00%	06/15/2021	144A: US00038AAB98 RegS: USU00292AB56
Thomas & Betts Corporation	USD 250 million	5.625%	11/15/2021	US884315AG74

## 2015 price trend for ABB Ltd shares

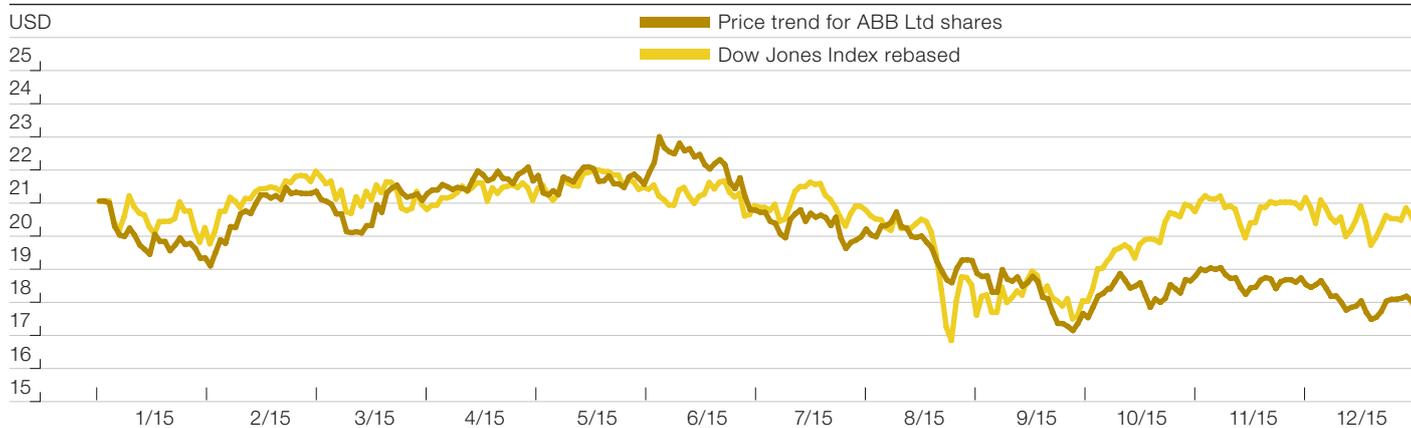
### Zurich



### Stockholm



### New York



Source: Bloomberg



Visit [you.abb.com](http://you.abb.com) to find out more about the work of Paul, Jing, Songlin, Lweendo and Crystal, the ABB employees featured on pages 22, 40, 68, 162, and 180 of our annual report.

For an additional copy of this report, please use the contact information on the back cover or download copies from our website at [www.abb.com/groupreports](http://www.abb.com/groupreports). An interactive version of the report is also available on our website.

Parts of the ABB Annual Report 2015 have been translated into German and/or Swedish. Please note that the English-language version of the ABB Annual Report is the binding version.

#### **Caution concerning forward-looking statements**

The ABB Annual Report 2015 includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. We have based these forward-looking statements largely on current expectations, estimates and projections about the factors that may affect our future performance, including global economic conditions as well as the economic conditions of the regions and the industries that are major markets for ABB. The words “believe,” “may,” “will,” “estimate,” “continue,” “target,” “anticipate,” “intend,” “expect” and similar words and the express or implied discussion of strategy, plans or intentions are intended to identify forward-looking statements. These forward-looking statements are subject to risks, uncertainties and assumptions, including among other things, the following: (i) business risks related to the global volatile economic environment; (ii) costs associated with compliance activities; (iii) difficulties encountered in operating in emerging markets; (iv) risks inherent in large, long-term projects served by parts of our business; (v) the timely development of new products, technologies, and services that are useful for our customers; (vi) our ability to anticipate and react to technological change and evolving industry stan-

dards in the markets in which we operate; (vii) changes in interest rates and fluctuations in currency exchange rates; (viii) changes in raw materials prices or limitations of supplies of raw materials; (ix) the weakening or unavailability of our intellectual property rights; (x) industry consolidation resulting in more powerful competitors and fewer customers; (xi) effects of competition and changes in economic and market conditions in the product markets and geographic areas in which we operate; (xii) effects of, and changes in, laws, regulations, governmental policies, taxation, or accounting standards and practices and (xiii) other factors described in documents that we may furnish from time to time with the US Securities and Exchange Commission, including our Annual Reports on Form 20-F. Although we believe that the expectations reflected in any such forward-looking statements are based on reasonable assumptions, we can give no assurance that they will be achieved. We undertake no obligation to update publicly or revise any forward-looking statements because of new information, future events or otherwise. In light of these risks and uncertainties, the forward-looking information, events and circumstances might not occur. Our actual results and performance could differ substantially from those anticipated in our forward-looking statements.



**ABB Ltd**

Corporate Communications

P.O. Box 8131

8050 Zurich

Switzerland

Tel: +41 (0)43 317 71 11

Fax: +41 (0)43 317 79 58

[www.abb.com](http://www.abb.com)