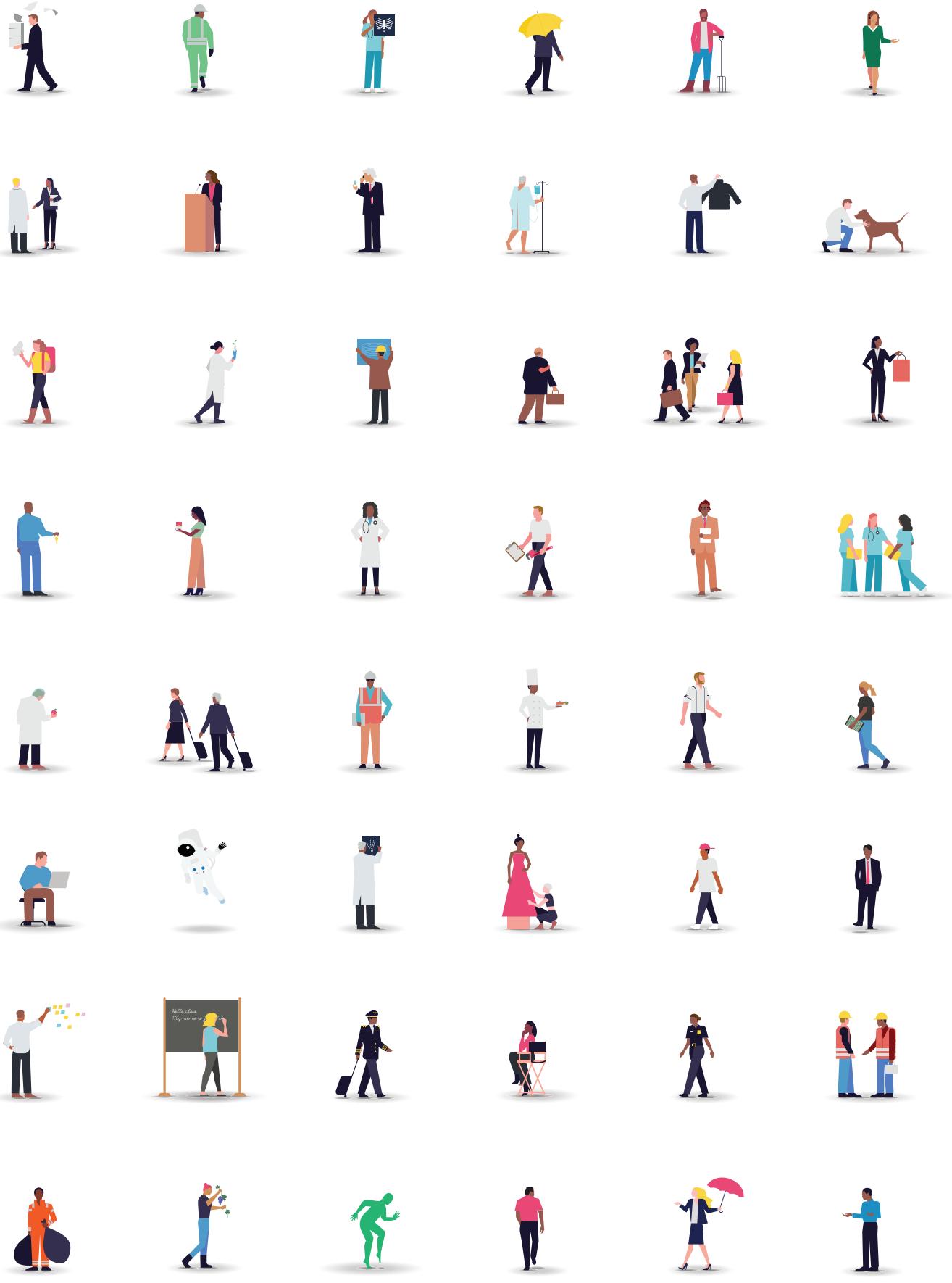


You, *with* IBM.



You who run our financial and energy systems; who design, build and fly our planes, run our trains, manage our cities; who cure us, feed us, clothe us, entertain us and keep us safe; who teach our children.

As a professional, you are driven always to advance, and to make a difference through your work. Which is why this moment is so extraordinary for you.

Every profession in every industry in every part of the world is changing, simultaneously. You are drawing on a wealth of new data, knowledge, insights and tools. You are being equipped to rethink your job, and freed to do your life's work.

We have reinvented IBM for this moment—to fuel your dreams with Watson, with IBM Cloud, with deep expertise, with trust. We believe in your ambition to be the best in your profession. And we believe that you can make our world healthier, safer, more productive, more creative, fairer.

*That is a world we all want to live in. The world you're building, with IBM.*



with IBM:

# Doctors anywhere can know the latest advances everywhere.



Healthcare data is growing 48 percent per year—and will likely exceed 2,300 exabytes by 2020. It pours in from new research, electronic medical records, imaging, wearables and epidemiological monitoring, along with all the environmental factors that affect our health. It can be overwhelming for doctors, but in all that data lie vital clues to the next medical breakthroughs, cures and efficiencies. And now best practices and advanced expertise can go global quickly, changing the very nature of wellness and healthcare.

## Watson Health

100M  
Electronic health records

200M  
Claims

30B  
Medical images



### 1.

#### Oncologists

can find more targeted cancer treatment options.



No doctor can keep up with the onrush of oncology studies published every week, much less determine which apply to each patient. But Watson can. Trained for 15,000 hours by specialists at **Memorial Sloan Kettering Cancer Center** in New York, *Watson has ingested nearly 15 million pages from relevant journals and textbooks and continues to expand its knowledge.*

This expertise is now flowing around the world and informs evidence-based treatment options for clinicians serving patients globally. Sites include six **Manipal Hospitals** in India, **Bumrungrad International Hospital** in Bangkok, **Jupiter Medical Center** in Florida and **Svet zdravia's** network of 16 hospitals in Slovakia and Central and Eastern Europe—and soon across China.

Elsewhere, in trials at the **University of North Carolina's Lineberger Comprehensive Cancer Center**, Watson suggested potential treatment options that the tumor board hadn't considered in one third of cases.

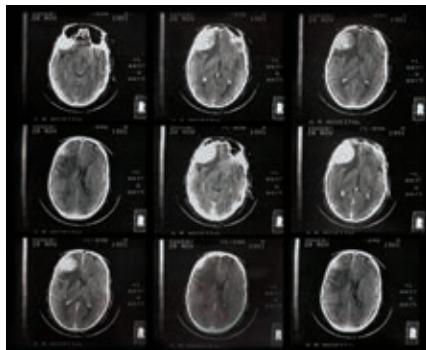
In addition, doctors are better able to understand their patients' unique needs, right down to the genetic level. *Watson for Genomics absorbs 10,000 new medical articles and details from 100 clinical trials every month.* It applies what it learns to suggest highly targeted therapies for each patient's individual cancer based on its understanding of a tumor's molecular profile, allowing doctors to provide more personalized treatment for their patients.

This powerful new tool is helping even those patients who cannot travel to a specialized medical center. Through **Quest Diagnostics**, it is available to any oncologist in the United States, as an end-to-end solution. **Illumina** plans to integrate it with a tumor-sequencing workflow to provide oncologists cognitive information on-site.

## 2.

### Medical Researchers can speed discovery of genes that cause diseases.

Amyotrophic lateral sclerosis, or ALS (also known as Lou Gehrig's disease), has no effective treatment and typically kills within five years. **Barrow Neurological Institute** researchers employed Watson for Drug Discovery to study nearly 1,500 genes in the human genome, and found five that had never before been associated with ALS. Researchers say that such a discovery, which took months with Watson, would have previously taken years and gives them a much clearer idea of what to target for therapy when developing new drugs.



## 3.

### Radiologists can find secrets hidden in every image.

Radiologists review dozens of medical images for every patient they see—often hundreds in a day. Watson never gets eyestrain or momentarily distracted, and has been trained by researchers to rapidly analyze huge numbers of images and rank them for potential anomalies. Radiologists can then focus on the ones that matter and apply their expertise more quickly. Watson can also retrieve similar images from other cases for comparison to help doctors confirm or refine their diagnoses.

## 4.

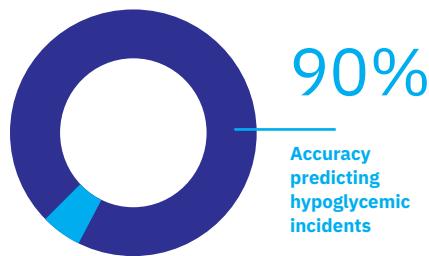
### Hospital Administrators can improve the health of the health system.

The **Central New York Care Collaborative (CNYCC)** is working with Watson Health to create one of the first regional cognitive population health platforms in the United States. It will connect 2,000 care providers in Upstate New York, integrating clinical, social and behavioral data to produce holistic views of patients—helping doctors and clinicians make more-informed decisions and promote healthier behavior. CNYCC's goal is value-based care that reduces emergency room visits and avoidable hospital stays by 25 percent over five years—improving health while lowering Medicaid costs.

## 5.

### Endocrinologists will help people manage their diabetes between visits.

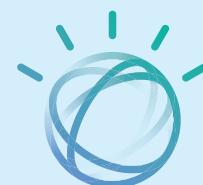
People with diabetes will benefit from an app called Sugar.IQ that draws data from physician-prescribed **Medtronic** devices. The app connects to cognitive analysis in the IBM Cloud to reveal patterns and personalized insights, helping users better understand in real time how their behaviors affect glucose levels. With Watson, a future version is expected to incorporate features that in tests have predicted hypoglycemic incidents within a 2- to 3-hour window with nearly 90 percent accuracy.



## 6.

### Veterinarians can now be expert on every breed.

Medical doctors treat one species: humans. Veterinarians may treat dozens of species and an even greater number of cat and dog breeds. And their patients can't describe their symptoms. That's why IBM has worked with vets to build an online tool that uses Watson. It can scan hundreds of thousands of pages of medical resources, helping vets customize treatment options, stay current with best practices and identify medical differences among even very similar breeds.



↑  
Watson can help  
veterinarians treat  
hundreds of dog  
and cat breeds with  
more confidence.

with IBM:

# Engineers are rebuilding the world.



## 7.

### Pipeline Engineers can anticipate failures before they happen.

With Watson's cognitive abilities, specialists for oil and gas companies can now predict and prevent pipeline failures almost a week in advance. IBM business partner **SparkCognition** is using Watson to analyze thousands of pipeline sensors, and monitor cracks, vibrations, overheating and other factors. Engineers are now able to predict and address pipeline failures *as early as six days in advance, 24x better than before.*

↑

Cognitive technologies help maintain oil and gas pipelines.



## 8.

### Stadium Architects

can create winning experiences for every fan.

With IBM, the NFL's **Atlanta Falcons** and MLS' **Atlanta United** are building the most technologically advanced stadium in the world. Set to open this summer, the new Mercedes-Benz Stadium will deliver personalized experiences for each attendee, while giving the stadium an entirely new feel depending on who's on the field or on stage. And fans will be able to find the refreshment stands and bathrooms with the shortest lines.



↑

The new Mercedes-Benz Stadium will be the world's most advanced.

## 9.

### Chemical Engineers turn social media activity into a test lab.

Scientists at **The Dow Chemical Company** are listening to social media to quickly identify and speed to market new solutions that use the company's advanced polymers. With analytics from IBM, these engineers can anticipate consumer demand for new products. These insights allow them to improve everything from running shoes to seals for car windows.

## 10.

### Automotive Engineers

are building cars that converse with drivers, passengers and each other.

By 2020, an estimated 83 million cars will connect to the Internet—each with hundreds of sensors on board. With this future in mind, **General Motors**, **BMW** and **Local Motors** are now using Watson to build the world's first generation of cognitive driving machines.

GM is expanding its OnStar AtYour-Service offers and deals platform by launching new capabilities supported by OnStar Go with IBM Watson. With customers' consent, Watson will learn drivers' preferences, apply machine learning and sift through data to recognize patterns in their decisions and habits to deliver individualized location-based interactions. These capabilities are expected to be available in millions of vehicles in the United States by the end of 2017.

Olli, a self-driving electric shuttle from Local Motors, holds natural language conversations with passengers, providing a more engaging user experience. Watson learns from more than 30 sensors embedded throughout the vehicle to enhance its understanding of passengers' needs and preferences.

The BMW Group has colocated a team of researchers at the Watson IoT headquarters in Munich to explore future steps and developments in context of the Internet of Things. Researchers, developers and consultants are prototyping advanced cognitive interfaces using the IBM Cloud and showcasing them in the BMW i8 hybrid sports car.



## 11.

### Geoscientists

know where and when to drill.

**Halliburton** uses the IBM Cloud to run sophisticated oil reservoir simulations that help it better understand how complex oil and gas fields might behave under different development scenarios. With insights from hundreds of models, petroleum engineers and geoscientists can optimize drilling decisions to reduce costs and increase production—shaping how billions of dollars may be spent on large oil fields.



↓  
IBM and BMW are joining forces to work on the future of connected cars.

## 12.

### Shipbuilders

can hit the water more quickly.

Italy's **Fincantieri** is speeding the creation of new cruise ships and naval vessels with a hybrid cloud solution from IBM. By connecting 13 private distributed data centers with IBM's Cloud Data Center in Milan, Fincantieri now has an IT infrastructure that supports a compute-intensive design and manufacturing system, allowing designers and engineers to more fluidly manage the process from design to deployment.



↑  
Hybrid cloud is speeding up the design, building and deployment of new vessels.

## 13.

### Railway Engineers

are going the extra 19,000 miles for commuters.

Every day, 13.5 million passengers travel with **SNCF**, France's major railway system. To improve efficiency and customer satisfaction, railway engineers are equipping 30,000 kilometers of track, 15,000 trains and 3,000 stations with sensors, all connected to the Watson IoT Platform. By monitoring data in real time, engineers and operators can improve quality, security and availability of trains.

13.5M

with IBM:



## Artists are finding their muse in the machine.

### 14.

#### Special Effects Artists

make thrill-seekers part  
of the action.

With a new IBM Cloud-based infrastructure that includes more than 1,000 high-performance servers, special effects artists at **Prana Studios** are creating some of the most immersive crowd experiences ever seen or heard at the world's theme parks. At one popular U.S. attraction, Prana's high-tech wizards deliver a 3-D stereo show that projects ultra-high definition imagery and animation from 12 projectors simultaneously across a massive 400-foot-wide U-shaped screen, pulling park-goers closer to the action than ever before.



↑  
Alex Da Kid used  
data visualization for  
lyrical inspiration.

→  
Three million people  
watched the *Morgan*  
cognitive trailer on  
YouTube.

### 15.

#### Music Producers

compose songs in  
the key of AI.

Grammy Award-winning **Alex Da Kid** created the first "cognitive song" to hit the top 10 on a *Billboard* chart. His inspiration came from understanding the emotional state of the world, thanks to Watson's analysis of five years of natural language texts from sources as diverse as social media, *The New York Times* and United States Supreme Court rulings, as well as the lyrics to more than 26,000 *Billboard* Hot 100 hits.



### 16.

#### Filmmakers

create buzz with cognitive  
movie trailers.

In fall 2016, **20th Century Fox** released the first-ever AI-generated movie trailer. Traditionally, it can take film editors and marketers up to a month to create trailers for an upcoming film. With Watson, they did it in days for the horror movie *Morgan*. Watson "watched" trailers from 100 of the scariest horror films of the past few decades and then the final cut of *Morgan* to choose the 10 most relevant scenes for promoting the movie.



## 17.

### Chefs

have a new recipe for delighting diners.

Watson helps great chefs unleash their creativity through its deep understanding of the science of food chemistry and the psychology of taste. *Cognitive Cooking with Chef Watson*, written with the **Institute of Culinary Education**, contains more than 65 recipes and was named by Gourmand International as one of the “most innovative” cookbooks in the United States.



→  
Watson reviewed images of 200 Marchesa dresses to suggest materials and colors for the world's first cognitive dress.



## 18.

### Bartenders

can mix drinks with a cognitive twist.

**Virgin Holidays** created a custom rum blend designed to “taste like a vacation feels.” With IBM Chef Watson Twist, bartenders can bring together flavors that complement one another at the molecular level. Watson also analyzed social posts from more than 15 million people on holiday, helping a master blender match their sentiments to corresponding flavors.



## 19.

### Fashion Designers

create dresses with emotional intelligence.

For the 2016 Met Gala in New York City, high-fashion design house **Marchesa** literally lit up the red carpet with a cognitive dress that applied color psychology to match emotions. The resulting piece, created with Watson’s Cognitive Color Tool and worn by supermodel Karolína Kurková, had 150 connected LED flowers that lit up in different colors based on real-time sentiment in the room and on Twitter.

with IBM:



**Professionals**  
everywhere can  
reimagine the  
ways they work...

**20.**

### **Astronauts**

are sharing their view of the world.

Ustream video technology, delivered on the IBM Cloud, enables **NASA TV** to air live and prerecorded programming to space enthusiasts 24 hours a day, including space walks, repair missions and other out-of-this-world experiences. Stargazers can ask astronauts questions via social channels, giving viewers real-time, personal connections with the men and women of NASA during their missions.

**21.**

### **Winemakers**

can optimize yields from every vine.

The **E. & J. Gallo Winery** developed a precision irrigation system to grow better grapes and conserve H<sub>2</sub>O in the process. With IBM Research, the winemakers are using a cognitive irrigation system that can identify and deliver the specific amount of water needed to plots as small as 40 vines. *Gallo's crop yield increased by 26 percent—and water consumption was cut by a quarter.*

## 22.

### Meteorologists inform the world from their backyards.

Hobbyists can now contribute readings from backyard personal weather stations to improve global forecasts. More than 250,000 people worldwide monitor their own weather stations and participate in a Personal Weather Station Network run by **Weather Underground**, a subsidiary of **The Weather Company**, an IBM company. *These amateurs—and the data that they collect—now help inform the up to 45 billion weather inquiries that The Weather Company handles every day.* Their contributions complement more than 400 terabytes of data drawn daily from 800+ diverse data sources, including pollen counts, turbulence, radar, satellite imagery, traffic and smartphone pressure sensors. More than a quarter billion people use The Weather Company's app and website each month, and thanks in part to these amateur meteorologists, the forecasts the world sees are now hyper-accurate and hyper-local, updated every 15 minutes for 2.2 billion locations.

### The Weather Company

**45B**

Weather  
inquiries  
daily

**2.2B**

Location  
forecasts

**250M**

Users  
monthly

**800+**

Different  
types of data  
analyzed

## 23.

### Cyclists can race faster—and rise higher on the podium.

In competitive cycling, a tenth of a second is everything. Ahead of the Rio Olympics, the **U.S. Women's Cycling Team** tapped IBM Analytics and Watson IoT to study every pedal stroke and heartbeat. By analyzing data streaming in from sensors installed in the bikes, IBM helped the team calculate the optimal energy output of each rider at certain points in the race. The team ended up beating their own American record, *shaving two full seconds off their time from the 2016 London World Championships* and ascending the podium in Rio with the 2016 silver medal.

## 25.

### Steelworkers balance safety and efficiency.

**North Star BlueScope Steel** recently partnered with Watson IoT on wearable safety technology that helps employees stay safe in dangerous environments. By analyzing data collected from IoT sensors worn by users and embedded in their personal protective equipment, supervisors can continuously monitor workers' skin temperatures, heart rates and levels of activity to correlate health conditions with sensor data on ambient temperature and humidity. The data can then be used to provide personalized safety guidelines, advising workers when to take a break if temperatures rise to unsafe levels.



## 24.

### Store Managers are fighting back against online competitors.

With Watson Customer Engagement and MobileFirst for iOS, shoppers get a unique blend of virtual and physical service. **Macy's On-Call**, developed with IBM partner **Satisfi Labs**, is an in-store, Watson-powered shopping assistant that enables smartphone users to find real-time information about product availability, store layouts and items on sale. **Boots** will be launching Sales Assist, another MobileFirst for iOS app, across its 2,500 U.K. stores in an effort to make it easier and simpler for customers to find the products they need.

## 26.

### Flight Attendants help passengers find their connecting gates.

With IBM's MobileFirst for iOS, **United Airlines** is deploying a new set of apps for more than 50,000 iOS devices now in the hands of its front-line employees, including flight attendants, who will be better able to advise connecting passengers about their gates upon arrival. Customer service representatives are no longer tethered to gate podiums, allowing them to move freely about the concourse to assist customers.

with IBM:



...and how they  
make a difference  
in the world.

27.

### Pilots

can outmaneuver  
the wind.

Not only is turbulence unpleasant to sit through, it costs airlines more than \$100 million every year due to crew and passenger injuries, operational delays and unscheduled aircraft maintenance. Now **American Airlines, Alaska Airlines, Cathay Dragon** and **United Airlines** are using Total Turbulence from **The Weather Company** to analyze sensor data from more than 3,000 flights daily. It identifies patches of rough air and delivers real-time alerts to operation centers and pilots, enabling them to react quicker and take appropriate action to minimize bumpy rides.

**28.**

## College Professors

can respond to students  
24 hours a day.

The newest digital learning tools are helping students and professors work smarter in the classroom. One professor at **Georgia Tech** deployed Jill Watson, the world's "first AI teaching assistant," to join 30 human teaching assistants in answering questions and providing guidance to nearly 1,000 graduate students. Available at any hour of the day, Jill was so good that students couldn't tell the difference between her counsel and that of human counterparts. Students also will be able to ask questions and engage in dialogue about courses with **Pearson**'s new digital learning products, just as they would their professors. Instructors will receive real-time insights on student progress, allowing them to better manage courses and flag students who need additional help.

**29.**

## Digital Merchandisers

can satisfy the most demanding shoppers.

With XPS and Watson Customer Engagement, **1-800-Flowers.com** built GWYN (Gifts When You Need), a virtual gift concierge that can look through 1-800-Flowers.com's 75,000+ products and find the best choices for each shopper. Shoppers explain what they're looking for in their own words. GWYN then sifts through structured and unstructured data on product descriptions, prices, varieties, categories, delivery options and more to identify the most appropriate gifts to feature. Eighty percent of the shoppers who have used the service say they would use it again, and 65 percent click through to the products offered.

**30.**

## Farmers

are harvesting data for bumper crops.

Farmers in established growing regions have traditionally relied on static climate datasets collected by existing government, city or airport weather stations. Now, with a global network of distributed weather stations in the field, and with hyper-local forecasts from The Weather Company, **Farmers Edge** is providing real-time data and highly precise predictive models that enable growers to make more accurate decisions on how to manage their time, resources and costs.



**31.**

## Copywriters

can turn advertising into personal conversations.

The world's first cognitive ads listen and react to individual consumer needs, giving relevant, context-sensitive responses tailored just for them. With Watson machine learning and natural language, the **Campbell Soup Company** and **Toyota** are pioneering Watson Ads on weather.com and **The Weather Channel** apps.

**32.**

## Lawyers

spend less time on research and more time with clients.

One of the major impediments to affordable, quality legal representation is the high cost of legal research. A recent study found that new associates spend a third of their time poring over laws, prior cases and legal journals to support arguments on behalf of a plaintiff or defendant. **ROSS Intelligence** is a digital research adviser that uses Watson's natural language query capabilities to enable law firms to sift through *more than one million legal documents per second* and return relevant passages and citations for a case.

# 1,000,000

legal documents  
per second

**33.**

## Sanitation Workers

can nearly double their input.

In fast-growing **Nairobi**, potholes and traffic jams hinder delivery of public services. IBM researchers equipped the city's fleet of garbage trucks with mobile phone trackers to monitor truck movements and allow fleet supervisors to track data on location and speed in real time. Department supervisors could identify problems on roadways as soon as drivers experienced them and suggest more efficient routes on the spot. *As a result, garbage collection nearly doubled, from 800 to 1,400 metric tons per day.*

*with IBM:*

**IT Specialists**  
are embracing a  
cognitive future.



**34.**

## Chief Information Security Officers

are calling in cognitive reinforcements.

IBM Security serves 12,000 clients in 133 countries, employing a global network of 8,000 security professionals that monitor more than 35 billion events per day. Now the team has Watson for Cyber Security to help clients analyze quickly and at scale vast amounts of unstructured data previously inaccessible to traditional security tools, including *an estimated 10,000 security research papers published per year and 60,000 monthly security blogs*. IBM X-Force Exchange, launched in 2016, allows companies to contribute to and draw from a shared pool of security information, with 700 terabytes of data captured on cyber threats. And in Massachusetts, IBM just built the first commercial “cyber range,” a state-of-the-art, immersive training facility that enables companies to prepare for cyberattacks by mimicking the way the military prepares—simulating every likely scenario in advance.

### IBM Security

**12,000+**

Clients

**35B+**

Security events monitored daily

**133**

Countries

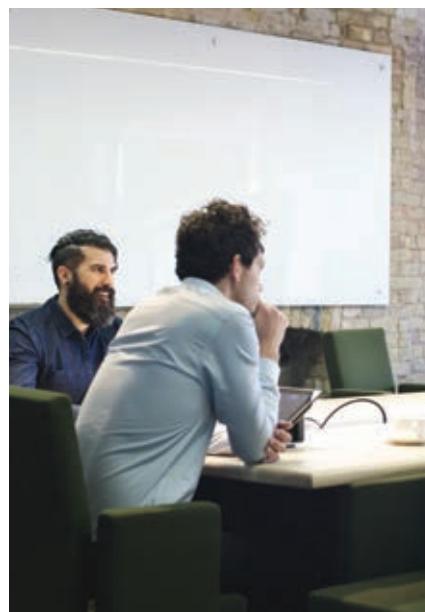


**35.**

## IT Managers

can easily integrate public and private clouds.

The partnership between IBM and **VMware** now enables IT managers to more quickly and seamlessly extend their on-premises VMware workloads from private data centers to the IBM Cloud. A unique and flexible hybrid approach allows enterprise CIOs to customize their cloud adoption, maintaining investments while modernizing their technology strategy to compete in today's transforming landscape.



**36.**

## Developers

can build applications that think.

The world is being rewritten in code, and its new builders—21 million software developers—are transforming entire industries. Already, 8.2 million of them are using cognitive computing, tapping IBM's cloud, data analytics and Watson capabilities to create whatever they can envision. By 2018, it is expected that more than half of developers will embed cognitive services into their applications.

A Stanford University student's **DoNotPay** app identified legal precedents to help overturn parking tickets and save motorists \$5 million in fines. **Bitly** moved 25 billion links to the IBM Cloud to give developers faster, more responsive ways to understand online behavior and consumer interactions with their brands. **Staples'** Easy System allows business customers to order supplies via voice, text or email.

Cognitive developers are transforming industries and shifting decision-making power within organizations. Only IBM provides all the services, tools, training and certifications necessary to help developers become next-generation builders. With Watson, IBM Cloud and data, developers are bringing together a set of tools that can infuse intelligence into all digital solutions.



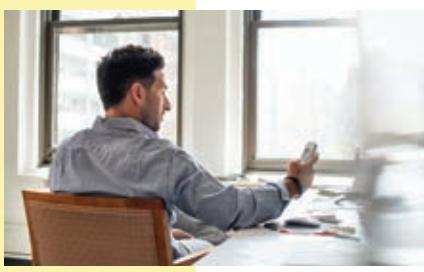
with IBM:

# Financial Professionals are making the smart money smarter.

37.

## Tax Preparers can find hidden credits.

Weighing in at 74,000 pages—with thousands of new changes each year—the United States tax code is complex and voluminous, even for the savviest tax preparer. With Watson, **H&R Block's** 70,000 professionals can now draw connections between tax laws, insights from the company's deep database of 720 million tax returns over the past 60 years, and personal financial documents to maximize outcomes for customers. More than 10 million tax filers are expected to benefit this year.



38.

## Compliance Officers can save billions on regulatory costs.

By 2020, there may be more than 300 million pages of banking regulations worldwide. Keeping pace is daunting and expensive: Banks spend about \$100 billion per year on compliance efforts, and \$150 billion more on fines and penalties.

**Promontory Financial Group**, an IBM company, is training Watson on these complex financial compliance laws, giving it the ability to provide decision support on everything from reporting requirements for derivatives to consumer protection for mortgages—helping to safeguard banks, their customers and the global economy.

\$250B

Annual expenses related to compliance for global banks

39.

## Insurers

can prevent damage rather than pay for it.

Hailstorms cost car insurers more than \$1 billion every year. Meteorologists are now teaming up with leading insurance companies to help car owners avoid damage and reduce claims. **The Weather Company's** hyper-local prediction system can *pinpoint the path of an imminent hailstorm down to 500 square meters*, an area slightly larger than a basketball court. Policyholders are sent smartphone alerts to notify them when they are in harm's way, urging them to move their vehicles under cover.



40.

## Customer Service Professionals

can handle more questions.

No matter how simple a customer's question, if an agent at one of **Banco Bradesco's** 5,000 branches had a query about any of the bank's 59 products, the agent needed to call the company's contact center. But now Watson Engagement Advisor can answer these agents' written or spoken questions in Portuguese, mining structured and unstructured data on everything from customer accounts to internal bank documents.

*Watson has improved response accuracy by 85 percent*, leading to more satisfied clients and freeing up branch agents to focus on more complex customer issues.



41, 42, 43.

## Bankers, Diamond Brokers and Shippers can transact with trust.

The global digital economy depends on trust, not faith. Transactions—from real estate and securities to supply chains and logistics—often have dozens of participants, multiplying the chances for error, delay and fraud. Fortunately, a new technology has arrived that will do for trusted transactions what the Internet did for information.

Blockchain brings together shared ledgers with smart contracts, enabling the secure transfer across any network of any asset—whether physical (like a shipping container), financial (like a bond) or digital (like music).

With blockchain, researchers, retailers and traders around the world are ensuring that all parties can transact with trust.

With IBM, **Maersk** is creating solutions to digitize global trade, including a collaboration on blockchain to build trust and transparency into global supply chains.

Thanks to an application that startup **Everledger** runs on IBM's z Systems Cloud, blockchain can track a diamond's provenance from mine to finger.

For **Walmart China**, a blockchain pilot is following the journey of pork from farm to table, enabling tracking of details such as farm origins, factory data, expiration dates, storage temperatures and shipping information to better ensure food traceability, transparency and safety.

**CLS** is partnering with IBM to build distributed ledger technology to reduce risk and improve liquidity across the \$5-trillion-per-day global foreign exchange market. The **Depository Trust and Clearing Corporation** is using the technology to permanently record and automate the sharing of secured data records of financial agreements.

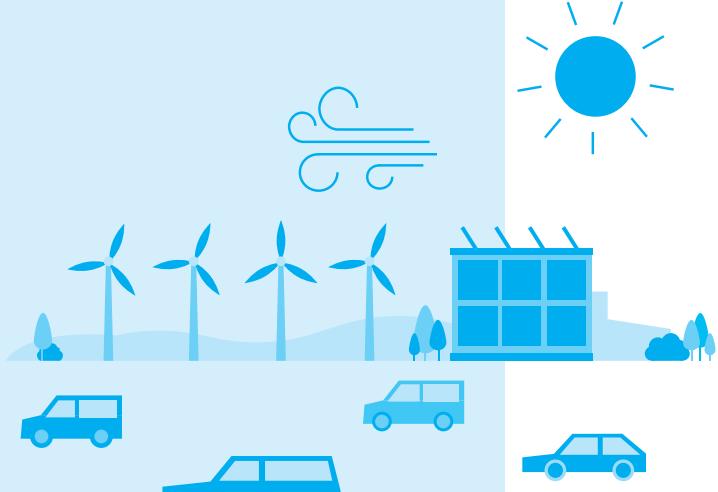
The **U.S. Food and Drug Administration** is exploring the use of blockchain for the secure exchange of sensitive medical data such as electronic patient records, clinical trial data and health data from mobile devices.

Blockchain  
100+

Companies, including IBM, support the [Hyperledger Project](#) to accelerate open development and commercial adoption.

with IBM:

# Civic Leaders are ushering in a new urban age.



↑  
**Green Horizons** is  
helping to improve air  
quality in Beijing,  
Delhi and Johannesburg.



↑  
**Sesame Workshop** is  
looking to once again  
transform early  
learning, this time  
with Watson.

## 44.

### Educators

can adapt to every  
student's learning  
style and need.

With Watson, learning can be personalized to allow students to learn at their own pace and in the ways that best suit them. **Sesame Workshop** is creating a new educational platform that will adapt learning programs to each preschooler's individual learning preferences and aptitude. Teachers in Texas' **Coppell Independent School District** are using a holistic view of an individual child's data to *personalize the ways in which they approach each of the district's 12,300 students*. Hundreds of third-grade teachers in the United States are piloting Teacher Advisor with Watson, created with the **American Federation of Teachers** and other partners, to provide customized math lessons and expert teaching strategies that strengthen instruction.



## 45.

### Environmental Scientists

are improving the quality of life through air quality.

With IBM Research, environmental scientists in **Beijing** have built Green Horizons, a cognitive system that can accurately determine where air pollution is coming from, where it will go and what effect it might have on citizens. Drawing from myriad sources—including industrial production, coal shipments, transportation patterns and weather forecasts—Beijing can make adjustments such as closing factories or limiting traffic during risk periods. *Ultra-fine particulate matter was reduced by 20 percent in 2015*. Environmental agencies in **Delhi** and **Johannesburg** also adopted these technologies in 2016 to address clean air initiatives.

**46.**

## **Building Managers**

are listening to their structures—and saving millions.

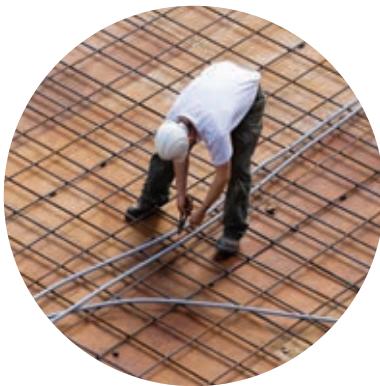
With Watson IoT, building managers and operators can make smarter decisions.

### **Siemens Building Technologies**

**Division's** cloud-based solution captures data generated by more than 70,000 connected buildings to spot energy usage and equipment problems in advance, *saving millions of dollars and reducing carbon emissions by two million tons every year.*

**KONE** enables one billion people to move on more than one million elevators and escalators worldwide. The Watson IoT Cloud lets KONE connect sensors in these conveyances to improve people flow and performance. With this data, KONE can predict potential outages, follow performance in real time, run tests remotely and dispatch technicians with better customer insight.

Clean, well-stocked restrooms make good impressions with customers, employees and tenants of any building. Delivered through the IBM Cloud, new technology from **Kimberly-Clark Professional** allows restroom attendants to monitor conditions remotely from any device or location, alerting them to potential issues before complaints come in. Sensors embedded into towel, tissue and soap dispensers, as well as door counters, send real-time alerts to managers regarding supply usage levels, jams and overall traffic. Cleaning staff can then be assigned to those areas that most need service. Supplies are better managed, costs are lowered and tenants are happier.



**47.**

## **Helpline Operators**

can give answers in a New York minute.

With Watson, **New York's** 311 citizen helpline will use artificial intelligence to help people navigate life in the city. The system will help provide more user-friendly, up-to-the-minute and practical responses to 100,000 daily complaints, inquiries and calls for service—nearly 36 million a year.



**48.**

## **Principals**

are preparing “new collar workers” for high-tech jobs.

A four-year college degree is no longer the only route to a good job. High school students from diverse backgrounds are getting a great education, building their skills and landing the “new collar” jobs of the emerging cognitive era. **Pathways in Technology Early College High School (P-TECH)**, created by IBM with leading educational partners, offers a unique six-year curriculum (grades 9–14) resulting in an associate degree. Dozens have already graduated ahead of schedule, prepared for jobs in high demand at IBM and many other companies. P-TECH will soon be available in 100 schools across six U.S. states and Australia.

**49.**

## **Police Officers**

can stay one step ahead of criminals.

Police work is shifting from reactive crime-fighting to proactively managing public safety—working across boundaries to analyze data, spot patterns and avert crimes before they happen. *With IBM, 6,000 police departments around the world can now access more than a billion shareable documents from the cloud.* They apply intelligent analytics to predict and prevent crime in ways never before possible, leading to reductions in violent crime of up to 40 percent in some U.S. cities.



**50.**

## **Food Inspectors**

can thwart epidemics using supermarket scanners.

From Salmonella to norovirus, foodborne illnesses afflict almost 1 in 10 people every year. The only way to prevent more from getting sick is to trace the problem back to the source of the contaminated food, which normally can take months. With IBM Research, public health officials can now use the data from simple supermarket scanners to analyze grocery receipts connected with as few as 10 reported cases of illness to find tainted sources within 12 hours or less.



**Virginia M. Rometty**  
Chairman, President and  
Chief Executive Officer

# Dear IBM Investor:

It can be hard to assess the progress of a major transformation from a single year's results. And yet, when you look back after a few years, it becomes clear just how much has changed.

Before I offer a broader perspective, let me describe how your company performed in 2016. We made substantial progress last year:

- We achieved operating earnings per share of \$13.59 and free cash flow of \$11.6 billion.
- We invested heavily for our long-term competitiveness—nearly \$6 billion in research and development, nearly \$4 billion in capital expenditures and nearly \$6 billion to make 15 acquisitions, adding to our capabilities in the high-growth areas of cognitive, cloud and security.
- We returned \$8.8 billion to you, our shareholders, including dividends of \$5.3 billion and \$3.5 billion in gross share repurchases. We raised our dividend for the 21st consecutive year—and it was IBM's 101st straight year of providing one. We are proud of both milestones.
- IBM's technical community outdid itself. For the 24th year in a row, IBM led in U.S. patents earned, becoming the first company to break the 8,000 mark in one year.
- All of this and more is due to the work and passion of 380,000 IBMers. They are our greatest competitive advantage and the most important reason for confidence in IBM's prospects in the years ahead.

This is why it's so encouraging that employee engagement scores continue to rise year after year.

But understanding IBM at the start of 2017 requires a longer view—in particular, remembering why we embarked on this journey of transformation. It had nothing to do with economic downturn or fixing something broken. Rather, our experience over more than a century has trained us to be vigilant. We began to see that the IT industry would radically reorder, driven by the phenomenon of data, the maturation of cloud computing and the emergence of what many call artificial intelligence or AI. We were convinced that the source of value—for our clients and for our owners—would shift, and that the convergence of these innovations would usher in a new era in both technology and business.

We didn't wait. We got out of commoditizing businesses—trimming \$8 billion from our top line (and nothing from our bottom line) over the past five years. We redoubled our efforts to reinvent our core hardware, software and services franchises, while investing to create new ones—in cloud, data, cognitive, security and the other businesses that comprise our strategic imperatives. We did this not simply to manage a portfolio of businesses, but to build the integrated capability that our clients would need for the new era.

While our transformation continues, a strong foundation is now in place.

Our strategic imperatives have reached critical mass. At \$33 billion, they now contribute 41 percent of IBM's revenue. With double-digit growth, we're on pace to achieve our goal of growing these businesses to \$40 billion by 2018. Most importantly, within these businesses we have built unique and powerful platforms with Watson and the IBM Cloud:

- Watson has become the AI platform for business. I will have much more to say about Watson, but just consider that, through our clients and ecosystem partners, we expect Watson to touch one billion people this year.
- IBM is now the global leader in cloud for the enterprise. In 2016, our cloud business grew an outstanding 35 percent, to \$13.7 billion (adjusted for the effects of currency, as are all revenue growth numbers in this letter). Cloud by itself is now more than 17 percent of our total revenues. Our as-a-Service exit run rate was \$8.6 billion, up 63 percent.

I am so proud of the teams who have incubated and scaled these businesses. They are the IBM investor's "unicorns." At the same time, we have transformed much of IBM's core—the other 59 percent of our company.

Global Technology Services (GTS) is the market leader in IT services. The next time you use your credit or debit card, take out an insurance policy, board a plane or drive your car, chances are you are being

# “Watson has become the AI platform for business.”

touched by GTS. Their services run the infrastructure that powers 60 percent of the banking industry’s daily card transactions, 61 percent of the automobile industry’s production of passenger vehicles and nearly half of mobile connections worldwide. And while our GTS team is superb at managing infrastructure, they are innovators at heart. In recent years, they have built strong capabilities in hybrid cloud and are applying automation and Watson wherever and as fast as they can. This unique combination of innovation and trust enables GTS to grow signings and revenue, and win new clients.

Global Business Services continues to reinvent itself and is growing robustly where we have created new practices. Last year, our cloud practice was up more than 60 percent, mobile more than 40 percent and analytics 10 percent. That’s good—though not enough yet to offset declines in some traditional practices, such as enterprise resource planning. But I remain confident in our ability to transform this business, and we will continue to invest in these new areas. For example, we created a new Watson IoT (Internet of Things) consulting practice that will include 1,500 consultants, data scientists and security experts.

When it comes to our ability to reinvent large, significant businesses, I must say a word about the mainframe. Installed mainframe capacity has increased 20-fold in the past 20 years—and is still growing, as you saw in our fourth-quarter 2016 results. Why do clients love the mainframe? Because no other system can do what it can do, and

because our mainframe team continues to create new capabilities for new workloads. Our latest mainframe runs Linux, processes mobile payments instantly, supports hybrid clouds and is becoming preferred as the most secure platform for the important new technology blockchain. This is why I call this part of IBM our youngest oldest business.

## Leading a new era

With Watson’s victory on *Jeopardy!* in 2011, IBM ended the latest so-called “AI winter” and led our industry and the world into the cognitive era. Today, we’re no longer alone: The land rush into AI is on—including a lot of hype. But we expect to maintain and extend our lead in cognitive business, because we uniquely serve the needs of the enterprise.

Enterprises need cognitive solutions that turn vast amounts of data into insights and competitive advantage. They need access to a cloud platform not only for IT capability, but for speed and agility. Its architecture must be hybrid, spanning both public and private clouds, because businesses will want to leverage their existing investments in applications, IT infrastructure and, most of all, their data. And they need a partner they trust, who understands their industry and process flows, and whose platform is secure, scalable, global in scope and local in presence.

IBM provides this powerful AI cloud platform, and we are using it to build industry-based solutions to real-world

problems. We are creating domain-specific datasets that we either own or partner to access, and we’re applying our deep industry expertise to build vertical solutions and to train Watson in specific professional fields.

In short, to win in the cognitive era, data matters. Client control of their data and insights matters. Public, hybrid and enterprise-strength cloud matters. Industry expertise matters. Trust and security matter. That is what sets apart Watson on the IBM Cloud—and why thousands of clients, partners and IBM itself are building powerful solutions and businesses on it:

- IBM Watson Health leverages broad datasets, including 100 million electronic health records, 200 million healthcare claims records and millions of images. You also need clinical data, payer data and images, all of which are created and owned by clients. (Consider that an estimated 80 percent of the world’s data cannot be accessed by search engines.) We capture and integrate all this data, because publicly available data alone is not sufficient for work like transforming healthcare or making advances in cancer. What’s more, you need deep domain expertise. Watson Health’s 7,000 employees include doctors, nurses, health policy experts and data scientists. Finally, we provide a quality management system that is HIPAA-compliant. Only IBM Watson Health offers all of this capability.

**IBM is already essential to global business...**

IBM has helped design, build and run the systems that underpin global business.



**97%**

of the world's **largest banks** use IBM products to run their systems



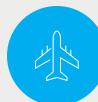
**90%**

of **global credit card transactions** are processed on IBM mainframes



**80%**

of **global retailers** are powered by IBM retail solutions



**80%**

of the world's **travel reservations** are processed on IBM systems



**83%**

of the world's largest **communications service providers** are IBM clients

**As we build what modern**

**business requires...**

We have invested in and built the capabilities—cloud, analytics, cognitive, mobile, security—to power the emerging needs of modern business. Our strategic imperatives grew by 14 percent adjusting for currency, generating \$33 billion in revenue last year, representing 41 percent of our total revenue.

**Strategic Imperatives Revenue**



**Our growth is fueled by innovation...**

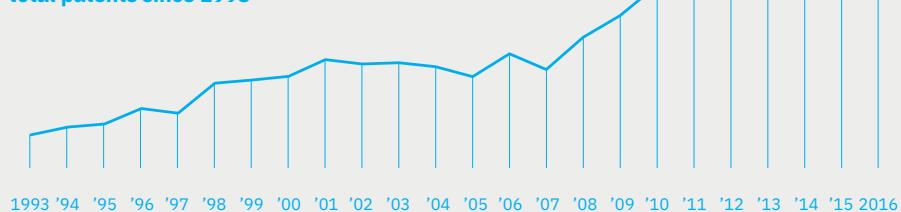
Our ability to create high value is powered by the prolific inventors of IBM. For the 24th year in a row, IBM led in U.S. patents earned. In 2016, we were the first company ever to be granted more than 8,000 U.S. patents in one year.

**8,088**

patents in 2016

**97,040**

total patents since 1993



**Enabling us to generate high returns.**

Our model allows us to continuously invest in our growth while simultaneously returning value to our shareholders.

**\$15B  
invested  
in 2016**

**\$8.8B  
returned  
in 2016**

**Across research and development, capital expenditures, and acquisitions**

**Dividends: \$5.3B  
Gross Share Repurchase: \$3.5B**

- IBM Watson IoT has similar unique advantages. The number of new clients and developers using our platform more than doubled last year. Our new global Watson IoT center in Munich opened in 2017, including the first-ever Cognitive IoT Collaboratories, where clients and IBMers work together to drive innovation in automotive, electronics, manufacturing, healthcare and insurance.
- Late last year, we launched Watson Financial Services. And because top industry specialists are needed to train Watson in the risk management requirements of financial services, we acquired Promontory Financial Group, a leader in regulatory compliance and risk management consulting.

IBM is changing industries around the world. Watson on the IBM Cloud is available to more than 200 million consumers to answer questions, find what they need online and make recommendations. Half a million students can choose courses and master a subject with Watson, which also helps teachers address each student's unique learning needs. IBM Security—which monitors 35 billion security events a day for 12,000 clients spanning 133 countries—launched the world's first commercial "cyber range," where clients can simulate and prepare for real-world attacks and draw on the power of Watson to fight cybercrime. With Watson, buildings are reducing CO<sub>2</sub> emissions by 10 million tons a year; businesses are accelerating hiring cycles by 75 percent; and airlines are improving maintenance efficiency by 80 percent.

It is also becoming clear that as IT moves to the cloud, transactions must be trusted by all parties involved. That is why we are building a complete blockchain platform. Blockchain brings together shared ledgers with smart contracts to allow the secure transfer of any asset—whether a physical asset like a shipping container, a financial asset like a bond or a digital asset like music—across any business network. Blockchain will do for trusted transactions what the Internet did for information.

IBM is already working with more than 400 clients to pioneer blockchain for business. They include clients who manage foreign exchange settlements, smart contracts, identity management and trade finance—but the potential goes well beyond financial services. For instance, we are collaborating with Walmart to ensure transparency in the way food is tracked, transported and sold to consumers across China and the United States. And Everledger is using a cloud-based blockchain to track the provenance of diamonds and other high-value goods as they move through the supply chain.

This is the real world of cognitive business. Unlike the AI we see in movies and pop culture—which depict machines achieving consciousness or independent agency—the true promise of this revolutionary technology comes not from replacing but from augmenting human intelligence. It comes from embedding cognitive capability in the processes, systems, products and services that permeate business, society and our daily lives.

### **New roads and new rules for a cognitive future**

As 2017 begins, our industry stands at an inflection point. The next few years will be critical for information technology providers, as businesses and institutions around the world will make key architectural decisions—about cloud, about data, about AI.

IBM is well positioned to help clients make wise choices—and to lead our competition. We take seriously our responsibility to ensure that new technology is adopted in ways that are both ethical and enduring—never more essential than in times of rapid economic and societal change. We will continue to engage across our industry and society, and to advocate for a business and policy environment that is open, inclusive, global and equitable. And we will do more than advocate. We will innovate.

An example of such innovation is IBM's "Principles for Transparency and Trust in the Cognitive Era," which we issued in January of this year. Its main tenets:

- We believe AI's purpose is to augment human intelligence.
- We will be transparent about when and where AI is being applied, and about the data and training that went into its recommendations.
- We believe our clients' data and insights are theirs.
- We are committed to helping students, workers and citizens acquire the skills to

# “IBM is now the global leader in cloud for the enterprise.”

engage safely, securely and effectively with cognitive systems, and to do the new kinds of work that will emerge in a cognitive economy.

These principles will be our touchstone for everything we do to build this new world. We will practice them with our clients, and we believe they can form an important foundation for business and society at large.

## A world with Watson

Last October, IBM hosted more than 15,000 entrepreneurs, innovators and other leaders from business, government, healthcare and civil society who are working with Watson to transform their industries and sectors. Their work showed that Watson has, indeed, entered the world at scale.

But this signature gathering did something more than showcase the reality and reach of Watson. It also presented a vision of the world with Watson. In example after example, we saw a world that is healthier, more secure, less wasteful, more productive, more personalized, more sustainable.

That is a world my colleagues and I want to live in. Indeed, this is, in the end, why we are IBMers—and why we remain so deeply committed to the hopeful future that is now within our grasp.

As IBM has done throughout its history, we remain dedicated to leading the world into a more prosperous and progressive future; to

creating a world that is fairer, more diverse, more tolerant, more just; and to creating long-term value for you. Our strategy to reinvent our company is being validated by our clients around the world, and has the support of our Board of Directors. I'm grateful to them and to you, our owners, for your continued support. Most of all, I am deeply proud of the IBM team for bringing us here and for what they do every day for our great company.



Virginia M. Rometty  
Chairman, President and  
Chief Executive Officer

In an effort to provide additional and useful information regarding the company's financial results and other financial information, as determined by generally accepted accounting principles (GAAP), these materials contain certain non-GAAP financial measures on a continuing operations basis, including revenue at constant currency, strategic imperatives revenue at constant currency, as-a-Service run rate at constant currency, operating earnings per share and free cash flow. The rationale for management's use of this non-GAAP information is included on pages 26, 27 and 69 of the company's 2016 Annual Report, which is Exhibit 13 to the Form 10-K submitted with the SEC on February 28, 2017. For reconciliation of these non-GAAP financial measures to GAAP and other information, please refer to pages 28, 48, 50 and 69 of the company's 2016 Annual Report.

**Financial Highlights**

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

| <b>For the year ended December 31:</b>                     | <b>2016</b> | <b>2015</b> |
|--|-------------|-------------|
| Revenue  | \$ 79,919   | \$ 81,741   |
| Net Income   | \$ 11,872   | \$ 13,190   |
| Income from continuing operations                          | \$ 11,881   | \$ 13,364   |
| Operating (non-GAAP) earnings*                             | \$ 13,031   | \$ 14,659   |
| Earnings per share of common stock (continuing operations) |             |             |
| Assuming dilution  | \$ 12.39    | \$ 13.60    |
| Basic  | \$ 12.44    | \$ 13.66    |
| Diluted operating (non-GAAP)*                              | \$ 13.59    | \$ 14.92    |
|  |             |             |
| Net cash provided by operating activities                  | \$ 16,958   | \$ 17,008   |
| Capital expenditures, net                                  | 3,726       | 3,780       |
| Share repurchases  | 3,502       | 4,609       |
| Cash dividends paid on common stock                        | 5,256       | 4,897       |
| Per share of common stock                                  | \$ 5.50     | \$ 5.00     |
|  |             |             |
| <b>At December 31:</b>                                     | <b>2016</b> | <b>2015</b> |
| Cash, cash equivalents and marketable securities           | \$ 8,527    | \$ 8,195    |
| Total assets   | \$ 117,470  | \$ 110,495  |
| Working capital  | \$ 7,613    | \$ 8,235    |
| Total debt   | \$ 42,169   | \$ 39,890   |
| Total equity   | \$ 18,392   | \$ 14,424   |
| Common shares outstanding (in millions)                    | 946         | 966         |
| Market capitalization                                      | \$ 157,832  | \$ 133,507  |
| Stock price per common share                               | \$ 165.99   | \$ 137.62   |

\* See pages 48 and 49 for a reconciliation of net income to operating earnings.

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## **OVERVIEW**

The financial section of the International Business Machines Corporation (IBM or the company) 2016 Annual Report includes the Management Discussion, the Consolidated Financial Statements and the Notes to Consolidated Financial Statements. This Overview is designed to provide the reader with some perspective regarding the information contained in the financial section.

## **Organization of Information**

- The Management Discussion is designed to provide readers with an overview of the business and a narrative on the company's financial results and certain factors that may affect its future prospects from the perspective of the company's management. The "Management Discussion Snapshot," beginning on page 27, presents an overview of the key performance drivers in 2016.
  - Beginning with the "Year in Review" on page 36, the Management Discussion contains the results of operations for each reportable segment of the business and a discussion of the company's financial position and cash flows. Other key sections within the Management Discussion include: "Looking Forward" on page 67, and "Liquidity and Capital Resources" on page 68, which includes a description of management's definition and use of free cash flow.
  - Global Financing is a reportable segment that is measured as a stand-alone entity. A separate "Global Financing" section is included in the Management Discussion beginning on page 76.
  - The Consolidated Financial Statements are presented on pages 84 through 89. These statements provide an overview of the company's income and cash flow performance and its financial position.
  - Subsequent to the company's press release and Form 8-K filing on January 19, 2017, announcing 2016 fourth-quarter and full-year financial results, the company revised the classification of certain financing receivables on a full-year basis increasing net cash provided by operating activities and net cash used in investing activities in the amount of \$441 million. As adjusted, net cash provided by operating activities for the three months and twelve months ended December 31, 2016 is \$3,968 million and \$16,958 million, respectively, and, net cash used in investing activities is \$3,687 million and \$10,976 million for the same periods. There was no impact to total GAAP cash flows or free cash flow.
  - The Notes follow the Consolidated Financial Statements. Among other items, the Notes contain the company's accounting policies (pages 90 to 99), acquisitions and divestitures (pages 101 to 106), detailed information on specific items within the financial statements, certain contingencies and commitments (pages 127 to 129) and retirement-related plans information (pages 136 to 150).
  - The Consolidated Financial Statements and the Notes have been prepared in accordance with accounting principles generally accepted in the United States (GAAP).
- In October 2014, the company announced a definitive agreement to divest its Microelectronics business. The assets and liabilities of the Microelectronics business were reported as held for sale at December 31, 2014 and the operating results of the Microelectronics business have been reported as discontinued operations. The transaction closed on July 1, 2015.
  - In January 2016, the company made a number of changes to its organizational structure and management system. These changes impacted the company's reportable segments, but did not impact the company's Consolidated Financial Statements. Refer to Note T, "Segment Information," on pages 150 to 154 for additional information on the changes in reportable segments. The company's reportable segments are: Cognitive Solutions, Global Business Services, Technology Services & Cloud Platforms, Systems, and Global Financing. The company filed a recast 2015 Annual Report in a Form 8-K on June 13, 2016 to recast its historical segment information to reflect these changes.
  - The references to "adjusted for currency" or "at constant currency" in the Management Discussion do not include operational impacts that could result from fluctuations in foreign currency rates. When the company refers to growth rates at constant currency or adjusts such growth rates for currency, it is done so that certain financial results can be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons of its business performance. Financial results adjusted for currency are calculated by translating current period activity in local currency using the comparable prior year period's currency conversion rate. This approach is used for countries where the functional currency is the local currency. Generally, when the dollar either strengthens or weakens against other currencies, the growth at constant currency rates or adjusting for currency will be higher or lower than growth reported at actual exchange rates. See "Currency Rate Fluctuations" on page 74 for additional information.
  - Within the financial statements and tables in this Annual Report, certain columns and rows may not add due to the use of rounded numbers for disclosure purposes. Percentages reported are calculated from the underlying whole-dollar numbers.

## **Operating (non-GAAP) Earnings**

In an effort to provide better transparency into the operational results of the business, the company separates business results into operating and non-operating categories. Operating earnings from continuing operations is a non-GAAP measure that excludes the effects of certain acquisition-related charges, retirement-related costs, discontinued operations and related tax impacts. For acquisitions, operating earnings exclude the amortization of purchased intangible assets and acquisition-related charges such as in-process research and development, transaction costs, applicable restructuring and related expenses and tax charges related to acquisition integration. These charges are excluded as they may be inconsistent in amount and timing from period to period and are dependent on the size, type and

frequency of the company's acquisitions. For retirement-related costs, the company characterizes certain items as operating and others as non-operating. The company includes defined benefit plan and nonpension postretirement benefit plan service cost, amortization of prior service cost and the cost of defined contribution plans in operating earnings. Non-operating retirement-related cost includes defined benefit plan and nonpension postretirement benefit plan interest cost, expected return on plan assets, amortized actuarial gains/losses, the impacts of any plan curtailments/settlements and multi-employer plan costs, pension insolvency costs and other costs. Non-operating retirement-related costs are primarily related to changes in pension plan assets and liabilities which are tied to financial market performance and the company considers these costs to be outside of the operational performance of the business.

Overall, the company believes that providing investors with a view of operating earnings as described above provides increased transparency and clarity into both the operational results of the business and the performance of the company's pension plans; improves visibility to management decisions and their impacts on operational performance; enables better comparison to peer companies; and allows the company to provide a long-term strategic view of the business going forward. The company's reportable segment financial results reflect operating earnings from continuing operations, consistent with the company's management and measurement system.

#### FORWARD-LOOKING AND CAUTIONARY STATEMENTS

Certain statements contained in this Annual Report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any forward-looking statement in this Annual Report speaks only as of the date on which it is made; the company assumes no obligation to update or revise any such statements. Forward-looking statements are based on the company's current assumptions regarding future business and financial performance; these statements, by their nature, address matters that are uncertain to different degrees. Forward-looking statements involve a number of risks, uncertainties and other factors that could cause actual results to be materially different, as discussed more fully elsewhere in this Annual Report and in the company's filings with the Securities and Exchange Commission (SEC), including the company's 2016 Form 10-K filed on February 28, 2017.

#### MANAGEMENT DISCUSSION SNAPSHOT

(\$ and shares in millions except per share amounts)

|   | 2016       | 2015       | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|---|------------|------------|--|
| <b>For the year ended December 31:</b>                |            |            |  |
| Revenue   | \$ 79,919  | \$ 81,741  | (2.2)%*                                    |
| Gross profit margin                                   | 47.9%      | 49.8%      | (1.9)pts.                                  |
| Total expense and other (income)                      | \$ 25,964  | \$ 24,740  | 4.9%                                       |
| Total expense and other (income)-to-revenue ratio     | 32.5%      | 30.3%      | 2.2 pts.                                   |
| Income from continuing operations before income taxes | \$ 12,330  | \$ 15,945  | (22.7)%                                    |
| Provision for income taxes from continuing operations | \$ 449     | \$ 2,581   | (82.6)%                                    |
| Income from continuing operations                     | \$ 11,881  | \$ 13,364  | (11.1)%                                    |
| Income from continuing operations margin              | 14.9%      | 16.3%      | (1.5) pts.                                 |
| Loss from discontinued operations, net of tax         | \$ (9)     | \$ (174)   | (95.1)%                                    |
| Net income  | \$ 11,872  | \$ 13,190  | (10.0)%                                    |
| Earnings per share from continuing operations:        |            |            |  |
| Assuming dilution                                     | \$ 12.39   | \$ 13.60   | (8.9)%                                     |
| Consolidated earnings per share—assuming dilution     | \$ 12.38   | \$ 13.42   | (7.7)%                                     |
| Weighted-average shares outstanding                   |            |            |  |
| Assuming dilution                                     | 958.7      | 982.7      | (2.4)%                                     |
| Assets**  | \$ 117,470 | \$ 110,495 | 6.3%                                       |
| Liabilities**   | \$ 99,078  | \$ 96,071  | 3.1%                                       |
| Equity**  | \$ 18,392  | \$ 14,424  | 27.5%                                      |

\* (1.6) percent adjusted for currency

\*\*At December 31

The following table provides the company's (non-GAAP) operating earnings for 2016 and 2015

(\$ in millions except per share amounts)

| <b>For the year ended December 31:</b>          | <b>2016</b> | <b>2015</b> | <b>Yr.-to-Yr.<br/>Percent<br/>Change</b> |
|---|-------------|-------------|--|
| Net income as reported                          | \$11,872    | \$13,190    | (10.0)%                                  |
| Loss from discontinued operations, net of tax   | (9)         | (174)       | (95.1)                                   |
| Income from continuing operations               | \$11,881    | \$13,364    | (11.1)%                                  |
| Non-operating adjustments (net of tax)          |             |             |  |
| Acquisition-related charges                     | 735         | 562         | 30.9                                     |
| Non-operating retirement-related costs/(income) | 415         | 734         | (43.5)                                   |
| Operating (non-GAAP) earnings*                  | \$13,031    | \$14,659    | (11.1)%                                  |
| Diluted operating (non-GAAP) earnings per share | \$ 13.59    | \$ 14.92    | (8.9)%                                   |

\* See pages 48 and 49 for a more detailed reconciliation of net income to operating earnings.

In 2016, the company reported \$79.9 billion in revenue, \$11.9 billion in income from continuing operations and \$13.0 billion in operating (non-GAAP) earnings, resulting in diluted earnings per share from continuing operations of \$12.39 as reported and \$13.59 on an operating (non-GAAP) basis. The results of continuing operations exclude a net loss from discontinued operations of \$9 million in 2016 and \$174 million in 2015 related to the divestiture of the Microelectronics business. On a consolidated basis, net income in 2016 was \$11.9 billion, with diluted earnings per share of \$12.38. The company generated \$17.0 billion in cash from operations and \$11.6 billion in free cash flow and shareholder returns of \$8.8 billion in gross common stock repurchases and dividends.

There are significant opportunities and shifts occurring in the IT industry, and the company believes that to be successful with enterprise clients, it needs to bring together cognitive technologies on cloud platforms that create industry-based solutions to solve real-world problems. In 2016, the company continued to:

- Deliver strong results in the strategic imperatives;
- Make progress in building new businesses and creating new markets;
- Deliver innovation in the more traditional businesses and monetize core technologies; and
- Return capital to shareholders.

Total consolidated revenue in 2016 decreased 2.2 percent as reported and 1.6 percent year to year adjusted for currency. Annuity revenue increased as reported and adjusted for currency while transactional revenue declined year to year. In addition, acquisitions completed in the past 12 months contributed to revenue growth.

The 2016 results reflect the success the company is having in its strategic imperatives and the investments made to drive that shift. The company had continued strong revenue growth in cloud, analytics and engagement, which together grew 13 percent year to year as reported and 14 percent adjusted for currency. In 2016, the strategic imperatives generated \$32.8 billion in revenue, which represented 41 percent of the company's revenue, an increase of 6 points from 2015. Total Cloud revenue of \$13.7 billion increased 35 percent both as reported and adjusted for currency, with cloud as-a-Service revenue up 55 percent as reported and 57 percent adjusted for currency. The company exited 2016 with an annual run rate for cloud as-a-Service revenue of \$8.6 billion, up from \$5.3 billion at the end of 2015. Analytics revenue of \$19.5 billion increased 9 percent as reported and adjusted for currency. Mobile revenue increased 34 percent year to year as reported (35 percent adjusted for currency) and Security revenue increased 13 percent as reported (14 percent adjusted for currency).

From a segment perspective, Cognitive Solutions revenue increased 1.9 percent as reported and 3 percent adjusted for currency with growth in Solutions Software, led by an increase in Analytics and Security revenue; partially offset by a decline in Transaction Processing Software. Global Business Services (GBS) revenue decreased 2.7 percent as reported and 3 percent adjusted for currency primarily driven by a decline in Consulting revenue. Revenue performance continued to be impacted by the company's shift away from traditional businesses, such as ERP implementations. GBS strategic imperatives revenue had double-digit growth year to year as reported and adjusted for currency. Technology Services & Cloud Platforms revenue increased 0.6 percent as reported and 1 percent adjusted for currency led by growth in Infrastructure Services as the company assists clients in modernizing and transforming their infrastructures. Technology Services & Cloud Platforms strategic imperatives revenue was up 39 percent (40 percent adjusted for currency) year to year. Systems revenue decreased 19.2 percent (19 percent adjusted for currency) with z Systems down 27.1 percent (27 percent adjusted for currency) and Power Systems down 27.1 percent (27 percent adjusted for currency).

From a geographic perspective, Americas revenue decreased 2.5 percent as reported (1 percent adjusted for currency) with the U.S. down 0.9 percent. Europe/Middle East/Africa (EMEA) revenue decreased 5.0 percent as reported (2 percent adjusted for currency). Asia Pacific revenue increased 2.6 percent as reported, but decreased 1 percent adjusted for currency with Japan up 10.5 percent as reported, but down 1 percent adjusted for currency.

The consolidated gross profit margin of 47.9 percent decreased 1.9 points year to year and reflects the impact of the company's investments, including acquisitions, and mix in as-a-Service which is not yet at scale. The operating (non-GAAP) gross margin of 48.9 percent decreased 1.9 points compared to 2015 driven primarily by the same factors.

Total expense and other (income) increased 4.9 percent in 2016 compared to the prior year. Total operating (non-GAAP) expense and other (income) increased 5.6 percent compared to 2015. The key year-to-year drivers were:

|                  | Total<br>Consolidated | Operating<br>(non-GAAP) |
|------------------|-----------------------|-------------------------|
| • Currency*      | 2 points              | 2 points                |
| • Acquisitions** | 5 points              | 4 points                |
| • Base           | (2) points            | 0 points                |

\* Reflects impacts of translation and hedging programs

\*\*Includes acquisitions completed in prior 12-month period; operating (non-GAAP) is net of non-operating acquisition-related charges.

The increase in expense was driven primarily by the impact of acquisitions completed in the prior 12 months and an impact from currency. Base expense performance reflects a higher level of intellectual property (IP) income (\$950 million) year to year driven primarily by the company's software licensing arrangements. Base expense also includes charges in 2016 for actions taken to accelerate the transformation of the company's workforce and shift its skill base, as well as increased investments in the strategic areas of cognitive, security and cloud. This included a higher level of workforce rebalancing charges (\$451 million) year to year and real estate capacity charges (\$291 million) related to the workforce transformation. The company continued to invest at a high level in 2016 and remixed skills in support of the strategic imperatives.

Pre-tax income from continuing operations of \$12.3 billion decreased 22.7 percent year to year and the pre-tax margin was 15.4 percent, a decrease of 4.1 points versus 2015. The continuing operations effective tax rate for 2016 was 3.6 percent, a decrease of 12.5 points versus 2015. The tax rate in 2016 was primarily the result of a refund (\$1.0 billion) of previously paid non-U.S. taxes plus interest in the first quarter of 2016. Income from continuing operations of \$11.9 billion decreased 11.1 percent and the net income margin was 14.9 percent, a decrease of 1.5 points versus 2015. Losses from discontinued operations, net of tax, were \$9 million in 2016 compared to \$174 million in 2015. Net income of \$11.9 billion decreased 10.0 percent year to year. Operating (non-GAAP)

pre-tax income from continuing operations of \$13.9 billion decreased 21.3 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations decreased 4.2 points to 17.4 percent. Operating (non-GAAP) income from continuing operations of \$13.0 billion decreased 11.1 percent and the operating (non-GAAP) income margin from continuing operations of 16.3 percent decreased 1.6 points. The operating (non-GAAP) effective tax rate from continuing operations in 2016 was 6.5 percent versus 17.2 percent in 2015.

Diluted earnings per share from continuing operations of \$12.39 in 2016 decreased 8.9 percent year to year. In 2016, the company repurchased 23.3 million shares of its common stock at a cost of \$3.5 billion and had \$5.1 billion remaining in the share repurchase authorization at December 31, 2016. Operating (non-GAAP) diluted earnings per share of \$13.59 decreased 8.9 percent versus 2015. Diluted earnings per share from discontinued operations was (\$0.01) in 2016 compared to (\$0.18) in 2015.

At December 31, 2016, the company continued to have the financial flexibility to support the business over the long term. Cash and marketable securities at December 31, 2016 were \$8.5 billion, an increase of \$0.3 billion from December 31, 2015. Key drivers in the balance sheet and total cash flows were:

Total assets increased \$7.0 billion (\$7.7 billion adjusted for currency) from December 31, 2015 driven by:

- Increases in goodwill (\$4.2 billion), retirement plan assets (\$1.3 billion), net intangible assets (\$1.2 billion), deferred taxes (\$0.4 billion) and cash and marketable securities (\$0.3 billion).

Total liabilities increased \$3.0 billion (\$3.9 billion adjusted for currency) from December 31, 2015 driven by:

- Increases in total debt (\$2.3 billion), retirement-related liabilities (\$0.6 billion) and taxes (\$0.4 billion).

Total equity of \$18.4 billion increased \$4.0 billion from December 31, 2015 as a result of:

- Increases from net income (\$11.9 billion) and stock-based compensation (\$0.5 billion); partially offset by
- Decreases from dividends (\$5.3 billion) and share repurchases (\$3.5 billion).

The company generated \$17.0 billion in cash flow provided by operating activities, essentially flat compared to 2015, driven primarily by operational performance; offset by lower income tax payments. Net cash used in investing activities of \$11.0 billion was \$2.8 billion higher than 2015, primarily driven by an increase in cash used related to acquisitions (\$2.3 billion). Net cash used in financing activities of \$5.8 billion decreased \$3.4 billion compared to the prior year, driven primarily by higher net debt issuances (\$2.7 billion) and a decline in cash used for common share repurchases (\$1.1 billion).

In January 2017, the company disclosed that it is expecting GAAP earnings per share from continuing operations of at least \$11.95 and operating (non-GAAP) earnings of at least \$13.80 per diluted share for 2017. The company expects 2017 free cash flow realization to be in excess of 90 percent of GAAP net income and free cash flow to be essentially flat year to year. Refer to page 69 in the Liquidity and Capital Resources section for additional information on this non-GAAP measure. Refer to the Looking Forward section on pages 67 and 68 for additional information on the company's expectations.

#### **DESCRIPTION OF BUSINESS**

Please refer to IBM's Annual Report on Form 10-K filed with the SEC on February 28, 2017 for Item 1A. entitled "Risk Factors."

The company creates value for clients through integrated solutions and products that leverage: data, information technology, deep expertise in industries and business processes, and a broad ecosystem of partners and alliances. IBM solutions typically create value by enabling new capabilities for clients that transform their businesses and help them engage with their customers and employees in new ways. These solutions draw from an industry-leading portfolio of consulting and IT implementation services, cloud and cognitive offerings, and enterprise systems and software; all bolstered by one of the world's leading research organizations.

#### **Strategy**

IBM has a history of continuous re-invention, transforming itself throughout its 100-plus year history. In the past five decades alone, IBM has ushered in the eras of the mainframe, the personal computer, IT services and enterprise software. In its current transformation, IBM is once again leading the reordering of the technology industry.

A number of years ago, the company declared its focus on the strategic forces behind the "digital" revolution; data, cloud and engagement, driven by mobile and social, and underpinned by security. Since 2010, IBM has invested approximately \$40 billion in these areas, built out the IBM Cloud on a global scale and extended cognitive systems to numerous enterprises and industries. The company made 55 acquisitions and has formed partnerships with organizations that are leading players in key industries.

Because of this transformation, IBM today is much more than a hardware, software and services company; IBM is a cognitive solutions and cloud platform company, with a focus on industry capabilities and expertise:

**Cognitive Solutions:** With the highest level of intelligence that exists in technology systems, these solutions tackle challenges ranging from answering client inquiries to helping physicians fight cancer.

**Cloud Platform:** IBM Cloud is the leading cloud platform for the enterprise, providing what enterprises need for speed, agility and, combined with Watson, for cognitive capability.

**Industry Focus:** As IBM brings higher levels of value to its clients, as its offerings are being built for the needs of individual industries. Healthcare and Financial Services are two examples of the company's initial cognitive focus.

#### **Cognitive Solutions**

Since IBM's Watson was introduced in 2011, the company has been developing a new generation of cognitive systems that can see and analyze the massive amounts of data that have previously been invisible to computers and enterprises. IBM's cognitive systems have the capability to inject a kind of thinking ability into every digitized object, process and service, and learn from interactions. IBM is on the forefront of deploying these systems and helping clients to embrace the cognitive era.

Cognitive systems are not programmed; like humans, they learn from experts and from every interaction, and they are uniquely able to find patterns in big data. They learn by using advanced algorithms to sense, predict and infer. Doing so, they augment human intelligence, allowing individuals to make faster and more informed decisions.

Since Watson's debut, many technologies have entered the market under the banner of artificial intelligence. However, IBM's approach to cognitive systems is quite unique:

- **Highly adaptable intelligence systems:** Watson has broad applicability and can help clients tackle challenges ranging from oncology to customer support.
- **Protect and respect client data:** Watson learns through data, both public data as well as clients' private data. Clients choose whether their data or insights are shared. IBM respects the clients' ownership and control of their own data.
- **Easy entry points:** Watson's open APIs offer easy on-ramps to experiment with speech, vision and other data.
- **Trained in domain depth:** Watson is trained to be an expert in industries and functional specialties. It augments the knowledge of professionals, giving them access to the insights of their best colleagues and the world's leading experts.
- **Transformational services:** IBM's Cognitive Solutions and Watson Internet of Things (IoT) practices help clients build their cognitive strategies. GBS provides outcome-focused methodologies, domain skills and deep industry expertise.

### **Cloud Platform**

Cloud represents more than a new architecture for delivering infrastructure and applications as services; it is also a catalyst for innovation, speed and agility. Cloud enables companies to focus on differentiating their strategies, capabilities and business models rather than on the underlying technology.

The IBM Cloud brings a unique set of characteristics to clients:

- It is a world-class cloud platform designed for enterprises, where security, reliability, scalability and performance are critical.
- It is the industry-leading hybrid cloud, enabling clients to extend their existing IT investments, connecting valuable data and applications across public and private clouds.
- It is a world-class cognitive cloud platform with IBM Watson services that developers can embed into their applications to create differentiating customer experiences and powerful insights.

The IBM Cloud has a strong global presence, with more than 50 cloud data centers around the world giving clients the flexibility to optimize the deployment of data and application, for performance, security and compliance.

The IBM Cloud is also continually expanding its base of advanced capabilities including cloud data services, cloud object storage, cloud video services, as well as Internet of Things, blockchain and analytics services. In 2016, IBM brought new cognitive solutions to professionals in marketing, commerce, supply chain and human resources, extending industry clouds to further differentiate its cloud offerings.

### **Industry Focus**

To bring higher value to clients, IBM is providing solutions that are specific and tailored to challenges clients face in their industry, using the power of IBM's advanced cognitive computing capabilities built on the IBM Cloud. In 2016, IBM deepened its commitment to delivering higher value in several key ways:

- In the healthcare industry, IBM Watson Health combines the power of cloud and cognitive with value-based solutions to optimize performance, engage consumers, enable effective care and manage population health. Significant investment in the healthcare space, including the acquisition of Merge and Truven, has enabled the company to expand the scope of solutions aimed at solving some of the most pressing health challenges.

- IBM continues to partner with financial services clients to build a robust infrastructure addressing increasingly complex and fast-changing demands. From preventing fraud to supporting cybersecurity efforts, IBM is becoming ever-more essential to the financial industry.
- IBM offers analytics to help clients assess their risk and compliance against industry guidelines, and uses a cognitive approach to provide deeper and faster findings. In late 2016, the company acquired Promontory Financial Group, LLC (Promontory), one of the world's leading regulatory consulting firms. Promontory is training Watson to be a market-leading expert in the regulatory field, which will allow the company to deliver services at new levels of efficiency and transparency.
- IBM is committed to blockchain to provide a highly secure method of facilitating multi-step transactions, reducing the number of disputes and points of friction, including its participation in the Hyperledger Project. This cross-industry consortium is working to build the blockchain network in the cloud, doing for trusted transactions what the Internet did for information, and setting industry standards for years to come. Blockchain will enable financial institutions to settle securities in minutes instead of days; manufacturers to reduce product recalls by sharing production logs along their supply chain; and businesses of all types to more closely manage the flow of goods and payments. IBM is working with companies ranging from retailers, banks and shippers to apply this technology to transform their ecosystems through open standards and open platforms.
- IBM's Global Business Services consulting business, with broad expertise across industries and a strong global footprint and scale, provides a unique combination of technologies and services to help clients achieve their business outcomes.

### **Transforming Core Businesses**

While the company is focused on cognitive solutions, cloud platform and industry, it is important to note cognitive, cloud and industry are being embedded across IBM's offerings. These core businesses continue to run clients' most critical business processes. IBM's hardware systems are being designed from the ground up to power the cloud and cognitive systems of the future. The company's technology services help clients move to the cloud, embedding cognitive capabilities tailored for their industry. The company's software offerings are simultaneously being made available for the cloud as well as being connected to the cloud where our clients choose to keep them on premises. Additionally, cognitive capabilities are being added to these offerings to provide new levels of innovation. In short, all of IBM is transforming to support the way its clients are transforming.

### **Summary**

Each transformation of IBM ushers in a new capability to the world. More than 50 years ago, IBM introduced the programmable era and transformed the world's transactions through the mainframe. In the decades that followed, IBM commercialized the personal computer, created an industry around IT services and a software market around middleware. Each of these innovations remains essential to business and the world today.

The company's current chapter is ushering in an entirely new era of human-computer interaction, embodied in cognitive solutions and the cloud platform for the needs of industries. The company is embarking on an era where it will create new capabilities at speeds and depth never previously witnessed.

### **Business Model**

The company's business model is built to support two principal goals: helping enterprise clients to become more innovative, efficient and competitive through the application of business insight and IT solutions; and providing long-term value to shareholders. The business model has been developed over time through strategic investments in capabilities and technologies that have superior long-term growth and profitability prospects based on the value they deliver to clients.

The company's global capabilities as a cognitive solutions and cloud platform company include services, software, systems, fundamental research and related financing. The broad mix of businesses and capabilities are combined to provide integrated solutions and platforms to the company's clients.

The business model is dynamic, adapting to the continuously changing industry and economic environment, including the company's transformation into cloud and as-a-Service delivery models. The company continues to strengthen its position through strategic organic investments and acquisitions in higher-value areas, strengthening its industry expertise and applying advanced analytics across virtually all its offerings. In addition, the company is transforming into a more agile enterprise to drive innovation and speed, as well as helping to drive productivity, which supports investments for participation in markets with significant long-term opportunity.

This business model, supported by the company's financial model, has enabled the company to deliver strong earnings, cash flows and returns to shareholders over the long term.

### **Business Segments and Capabilities**

The company's major operations consist of five business segments: Cognitive Solutions, Global Business Services, Technology Services & Cloud Platforms, Systems and Global Financing.

**Cognitive Solutions** comprises a broad portfolio of capabilities that help IBM's clients to identify actionable new insights and inform decision-making for competitive advantage. Leveraging IBM's research, technology and industry expertise, this business delivers a full spectrum of capabilities, from descriptive, predictive and prescriptive analytics to cognitive systems. Cognitive Solutions includes Watson, the first commercially available cognitive computing platform that has the ability to interact in natural language, process vast amounts of big data, and learn from interactions with people and computers. These solutions are provided through the most contemporary delivery methods including through cloud environments and "as-a-Service" models. Cognitive Solutions consists of Solutions Software and Transaction Processing Software.

#### **Cognitive Solutions Capabilities**

**Solutions Software:** provides the basis for many of the company's strategic areas including analytics, security and social. IBM has established the world's deepest portfolio of data and analytics solutions, including analytics and data management platforms, cloud data services, enterprise social software, talent management solutions, and solutions tailored by industry. Watson Platform, Watson Health and Watson Internet of Things capabilities are included in Solutions Software. IBM's world-class security platform delivers integrated security intelligence across clients' entire operations, including their cloud, applications, networks and data, helping them to prevent, detect and remediate potential threats.

**Transaction Processing Software:** includes software that primarily runs mission-critical systems in industries such as banking, airlines and retail. Most of this software is on-premise and annuity in nature.

**Global Business Services (GBS)** provides clients with consulting, application management services and global process services. These professional services deliver business value and innovation to clients through solutions which leverage industry, technology and business process expertise. GBS is the digital reinvention partner for IBM clients, combining industry knowledge, functional expertise, and applications with the power of design, cognitive and cloud. The full portfolio of GBS services is backed by its globally integrated delivery network and integration with IBM solutions and services including Watson, cloud, blockchain, and Technology Services. To deepen its capabilities, in 2016 IBM acquired four consulting and design firms to enhance the GBS global network of 35 digital experience design studios. IBM also announced Watson IoT Consulting Solutions, a new practice that brings together IBM's industry and technical expertise to help clients introduce IoT innovation into their businesses.

#### **GBS Capabilities**

**Consulting:** provides business consulting services focused on bringing to market solutions that help clients shape their digital blueprints and customer experiences, define their cognitive operating models, set their next-generation talent strategies and create new technology visions and architectures in a cloud-centric world.

**Application Management:** delivers system integration, application management, maintenance and support services for packaged software, as well as custom and legacy applications. Value is delivered through advanced capabilities in areas such as security and privacy, application testing and modernization, cloud application migration and automation.

**Global Process Services:** GBS' business process outsourcing service line, delivers finance, procurement, HR, and industry-specific business processes. These services deliver improved business results to clients through the strategic change and/or operation of the client's business processes, applications and infrastructure. GBS is redefining the efficiency and cost profiles of clients' core processes through the application of the power of Watson, cognitive and deep analytics.

**Technology Services & Cloud Platforms** provides comprehensive IT infrastructure services creating business value for clients through integrated services that incorporate unique intellectual property within its global delivery model. By leveraging insights and experience drawn from IBM's global scale, skills and technology, with applied innovation from IBM Research, clients gain access to leading edge, high-quality services with improved productivity, flexibility, cost and outcomes.

#### **Technology Services & Cloud Platforms Capabilities**

**Infrastructure Services:** delivers a portfolio of cloud, project-based, outsourcing and other managed services focused on clients' enterprise IT infrastructure environments to enable digital transformation and deliver improved quality, flexibility, risk management and financial value. The portfolio includes a comprehensive set of hybrid cloud services and solutions to assist clients in building and running enterprise IT environments that utilize public and private clouds and traditional IT. The IBM Cloud Platform offers leading edge services to developers and IBM's Cloud Infrastructure-as-a-Service covers a wide variety of workloads with unprecedented performance. These offerings integrate long-standing expertise in service management and technology with the ability to utilize the power of new technologies, including those from other IBM business segments. The portfolio is built around a key set of predictive and proactive solutions addressing systems, mobility, resiliency, networking, cloud and security. The company's capabilities, including IBM Cloud, cognitive computing and hybrid cloud implementation, can help to deliver high-performance, end-to-end innovation and an improved ability to achieve business objectives.

**Technical Support Services:** delivers a comprehensive line of support services to maintain and improve the availability of clients' IT infrastructures. These offerings include maintenance for IBM products and other technology platforms, as well as software and solution support.

**Integration Software:** delivers industry-leading hybrid cloud solutions that empower clients to achieve rapid innovation, hybrid integration, and process transformation with choice and consistency across public, dedicated and local cloud environments, leveraging IBM's Bluemix Platform-as-a-Service solution. Integration Software offerings and capabilities help clients address the digital imperatives to create, connect and optimize their applications, data and infrastructure on their journey to become cognitive businesses.

**Systems** provides clients with innovative infrastructure technologies to help meet the new requirements of hybrid cloud and cognitive workloads—from deploying advanced analytics, to moving to digital service delivery with the cloud, and securing mobile transaction processing. Approximately half of Systems Hardware's server and storage sales transactions are through the company's business partners, with the balance direct to end-user clients. IBM Systems also designs advanced semiconductor and systems technology in collaboration with IBM Research, primarily for use in the company's systems.

#### **Systems Capabilities**

**Servers:** a range of high-performance systems designed to address computing capacity, security and performance needs of businesses, hyperscale cloud service providers and scientific computing organizations. The portfolio includes z Systems, a trusted enterprise platform for integrating data, transactions and insight, and Power Systems, a system designed from the ground up for big data and analytics, optimized for scale-out cloud and Linux, and delivering open innovation with OpenPOWER.

The company is a founding member of the OpenPOWER foundation, a group of industry-leading companies developing high-performance compute technologies and solutions based on the IBM POWER architecture.

**Storage:** data storage products and solutions that allow clients to retain and manage rapidly growing, complex volumes of digital information and to fuel data-centric cognitive applications. These solutions address critical client requirements for information retention and archiving, security, compliance and storage optimization including data deduplication, availability and virtualization. The portfolio consists of a broad range of software-defined storage solutions, flash storage, disk and tape storage solutions.

**Operating Systems Software:** The company's z/OS is a security-rich, scalable, high-performance enterprise operating system for z Systems. Power Systems offers a choice of AIX or Linux operating systems. These operating systems leverage POWER architecture to deliver secure, reliable and high- performing enterprise-class workloads across a breadth of server offerings.

**Global Financing** facilitates IBM clients' acquisition of information technology systems, software and services by providing financing solutions in the areas where the company has the expertise. The financing arrangements are predominantly for products or services that are critical to the end users' business operations. These financing contracts are entered into after a comprehensive credit evaluation and are secured by legal contracts. As a captive financier, Global Financing has the benefit of both deep knowledge of its client base and a clear insight into the products and services financed. These factors allow the business to effectively manage two of the major risks, credit and residual value, associated with financing while generating strong returns on equity. Global Financing also maintains a long-term partnership with the companies' clients through various stages of IT asset life cycle—from initial purchase and technology upgrades to asset disposition decisions.

#### **Global Financing Capabilities**

**Client Financing:** lease, installment payment plan and loan financing to end users and internal clients for terms up to seven years. Assets financed are primarily new and used IT hardware, software and services where the company has expertise. Internal financing is predominantly in support of Technology Services & Cloud Platforms' long-term client service contracts. All internal financing arrangements are at arm's-length rates and are based upon market conditions.

**Commercial Financing:** short-term inventory and accounts receivable financing to suppliers, distributors and remarketers of IBM and OEM products. This includes internal activity where Global Financing factors a selected portion of the company's accounts receivable primarily for cash management purposes, at arm's-length rates.

**Remanufacturing and Remarketing:** assets include used equipment returned from lease transactions, or used and surplus equipment acquired internally or externally. These assets may be refurbished or upgraded and sold or leased to new or existing clients both externally or internally. Externally remarketed equipment revenue represents sales or leases to clients and resellers. Internally remarketed equipment revenue primarily represents used equipment that is sold internally to Systems and Technology Services & Cloud Platforms. Systems may also sell the equipment that it purchases from Global Financing to external clients.

### IBM Worldwide Organizations

The following worldwide organizations play key roles in IBM's delivery of value to its clients:

- Global Markets (formerly Sales and Distribution)
- Research, Development and Intellectual Property
- Integrated Supply Chain

### Global Markets

IBM has a global presence, operating in more than 175 countries with a broad-based geographic distribution of revenue. The company's Global Markets organization manages IBM's global footprint, working closely with dedicated country-based operating units to serve clients locally. These country teams have client relationship managers who lead integrated teams of consultants, solution specialists and delivery professionals to enable clients' growth and innovation. These local teams develop deep relationships with their clients to bring together capabilities from IBM and its network of Business Partners to develop and implement solutions.

By complementing local expertise with global experience and digital capabilities, IBM builds broad-based client relationships. This local management focus fosters speed in addressing new markets and making investments in emerging opportunities. The Global Markets organization serves clients with expertise in their industry as well as through the products and services that IBM and partners supply. IBM is also expanding its reach to smaller clients through digital marketing, digital marketplaces, inside sales and local Business Partner resources.

IBM continues to invest to capture opportunities in key growth markets around the world—India, China and Southeast Asia; Eastern Europe; the Middle East and Africa; and Latin America. Major IBM markets include the G7 countries of Canada, France, Germany, Italy, Japan, the United States (U.S.) and the United Kingdom (U.K.), as well as Austria, the Bahamas, Belgium, the Caribbean, Cyprus, Denmark, Finland, Greece, Iceland, Ireland, Israel, Malta, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland.

### Research, Development and Intellectual Property

IBM's research and development (R&D) operations differentiate the company from its competitors. IBM annually invests 6 to 7 percent of total revenue for R&D, focusing on high-growth, high-value opportunities. IBM Research works with clients and the company's business units through global labs on near-term and midterm innovations. It contributes many new technologies to IBM's portfolio every year and helps clients address their most difficult challenges. IBM Research scientists are conducting pioneering work in artificial intelligence, analytics, security, nanotechnology, cloud computing, blockchain, quantum computing, silicon and post-silicon computing architectures,

data-centric systems and more—applying these technologies across industries including healthcare, Internet of Things, education and financial services.

In 2016, IBM was awarded more U.S. patents than any other company for the 24th consecutive year. IBM's 8,088 patents awarded in 2016 represent a diverse range of inventions in artificial intelligence and cognitive computing, cognitive health, cloud, cybersecurity and other strategic growth areas for the company.

The company continues to actively seek intellectual property (IP) protection for its innovations, while increasing emphasis on other initiatives designed to leverage its IP leadership. Some of IBM's technological breakthroughs are used exclusively in IBM products, while others are licensed and may be used in IBM products and/or the products of the licensee. As part of its business model, the company licenses certain of its intellectual property, which is high-value technology, but may be in more mature markets. The licensee drives the future development of the IP and ultimately expands the customer base. This generates IP income for the company both upon licensing, and with ongoing royalty arrangements between it and the licensee. While the company's various proprietary IP rights are important to its success, IBM believes its business as a whole is not materially dependent on any particular patent or license, or any particular group of patents or licenses. IBM owns or is licensed under a number of patents, which vary in duration, relating to its products.

### Integrated Supply Chain

IBM has an extensive integrated supply chain, procuring materials and services globally. Additionally, growth in client spend managed by IBM's procurement organization continues to demonstrate clients' faith that IBM can reduce clients' cost through the transformation of source-to-pay operations. The supply, manufacturing and logistics operations are seamlessly integrated and have optimized inventories over time. Simplifying and streamlining internal processes has improved sales force productivity and operational effectiveness and efficiency. Supply chain resiliency enables IBM to reduce its risk during marketplace changes.

The company continues to derive business value from its own globally integrated supply chain providing a strategic advantage for the company to create value for clients. IBM leverages its supply chain expertise for clients through its supply chain business transformation outsourcing service to optimize and help operate clients' end-to-end supply chain processes, from procurement to logistics. Utilizing analytics, mobile, cloud and social—with numerous projects, has allowed the integrated supply chain to drive positive business outcomes for the company and its clients.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**YEAR IN REVIEW****Results of Continuing Operations****Segment Details**

The following is an analysis of the 2016 versus 2015 reportable segment results. The table below presents each reportable segment's external revenue and gross margin results. Segment pre-tax income includes transactions between segments that are intended to reflect an arm's-length transfer price and excludes certain unallocated corporate items.

(\$ in millions)

| For the year ended December 31:            | 2016             | 2015             | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|--|------------------|------------------|--|---|
| <b>Revenue</b>                             |                  |                  |  |   |
| Cognitive Solutions                        | \$18,187         | \$17,841         | 1.9%                                       | 2.7%  |
| Gross margin                               | 81.9%            | 85.1%            | (3.3) pts.                                 |   |
| Global Business Services                   | 16,700           | 17,166           | (2.7)%                                     | (2.5)%  |
| Gross margin                               | 27.0%            | 28.2%            | (1.2) pts.                                 |   |
| Technology Services & Cloud Platforms      | 35,337           | 35,142           | 0.6%                                       | 1.4%  |
| Gross margin                               | 41.9%            | 42.7%            | (0.8) pts.                                 |   |
| Systems                                    | 7,714            | 9,547            | (19.2)%                                    | (18.9)%   |
| Gross margin                               | 55.7%            | 55.8%            | (0.1) pts.                                 |   |
| Global Financing                           | 1,692            | 1,840            | (8.0)%                                     | (6.9)%  |
| Gross margin                               | 38.7%            | 45.6%            | (6.9) pts.                                 |   |
| Other                                      | 289              | 206              | 40.4%                                      | 41.3%   |
| Gross margin                               | (293.9)%         | (253.0)%         | (41.0) pts.                                |   |
| <b>Total consolidated revenue</b>          | <b>\$ 79,919</b> | <b>\$ 81,741</b> | <b>(2.2)%</b>                              | <b>(1.6)%</b>   |
| <b>Total consolidated gross profit</b>     |                  |                  |  |   |
| Total consolidated gross margin            | 47.9%            | 49.8%            | (1.9) pts.                                 |   |
| <b>Non-operating adjustments</b>           |                  |                  |  |   |
| Amortization of acquired intangible assets | 494              | 373              | 32.6%                                      |   |
| Retirement-related costs/(income)          | 316              | 469              | (32.7)%                                    |   |
| <b>Operating (non-GAAP) gross profit</b>   | <b>\$ 39,104</b> | <b>\$ 41,526</b> | <b>(5.8)%</b>                              |   |
| Operating (non-GAAP) gross margin          | 48.9%            | 50.8%            | (1.9) pts.                                 |   |

**Cognitive Solutions**

(\$ in millions)

| For the year ended December 31:             | 2016     | 2015     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|---|----------|----------|---------------------------------|---|
| <b>Cognitive Solutions external revenue</b> |          |          |                                 |   |
| Solutions Software                          | \$12,589 | \$12,021 | 4.7%                            | 5.5%  |
| Transaction Processing Software             | 5,598    | 5,819    | (3.8)                           | (3.1)   |

Cognitive Solutions revenue of \$18,187 million grew 1.9 percent as reported and 3 percent adjusted for currency in 2016 compared to the prior year. On an as reported and constant currency basis, growth in Solutions Software, which addresses many of the company's strategic areas, was partially offset by declines in Transaction Processing Software.

Solutions Software revenue of \$12,589 million grew 4.7 percent as reported (6 percent adjusted for currency) compared to the prior year. This growth was led by analytics and security offerings. Analytics, which is the largest portion of the Solutions Software portfolio, continued to grow in key areas including

Watson offerings such as Watson Health. Security also contributed to year-to-year growth, as the company continues to invest to build its security platform. There was strong Software-as-a-Service (SaaS) performance during the year with double-digit growth in revenue as reported and adjusted for currency. In 2016, five acquisitions, including The Weather Company and Truvén, added substantial new capabilities to the Solutions Software portfolio.

Throughout the year, the Watson platform, which underpins the company's cognitive strategy, continued to gain momentum, as the company expanded cognitive capabilities in the IBM Cloud.

The company broadened the reach of Watson, with new capabilities, partnerships and engagement to accelerate adoption. Focus continues on scaling Watson Health and bringing real world benefits to researchers and clinicians. Watson IoT is growing and clients are using the power of Watson across the immense data pool created by the Internet of Things. The company is expanding its industry differentiation and focus on building industry verticals including the acquisition of Promontory in the fourth quarter.

Transaction Processing Software revenue of \$5,598 million declined 3.8 percent as reported (3 percent adjusted for currency) compared to the prior year. Most of this software is on-premise and annuity in nature which is not a growing part of the software opportunity.

Within Cognitive Solutions, total 2016 strategic imperatives revenue of \$11.7 billion grew 7 percent as reported (8 percent adjusted for currency) year to year. Cloud revenue of \$2.1 billion grew 53 percent as reported (54 percent adjusted for currency), with an as-a-Service exit run rate of \$1.8 billion.

(\$ in millions)

| For the year ended December 31: | 2016     | 2015     | Yr.-to-Yr. Percent/ Margin Change |
|---------------------------------|----------|----------|-----------------------------------|
| <b>Cognitive Solutions</b>      |          |          |                                   |
| External gross profit           | \$14,890 | \$15,189 | (2.0)%                            |
| External gross profit margin    | 81.9%    | 85.1%    | (3.3) pts.                        |
| Pre-tax income                  | \$ 6,352 | \$ 7,245 | (12.3)%                           |
| Pre-tax margin                  | 30.5%    | 36.1%    | (5.6) pts.                        |

Cognitive Solutions gross profit margin decreased 3.3 points to 81.9 percent in 2016. Pre-tax income of \$6,352 million decreased 12.3 percent compared to the prior year with a pre-tax margin decline of 5.6 points to 30.5 percent. This overall margin performance for the year reflects impacts of the company's continued investment into strategic areas, including acquisition content, and the mix toward the SaaS business which is not yet at scale, partially offset by the impact of IP partnership agreements entered into during the year.

#### Global Business Services

(\$ in millions)

| For the year ended December 31:                  | 2016     | 2015     | Yr.-to-Yr. Percent Change | Yr.-to-Yr. Percent Change Adjusted for Currency |
|--|----------|----------|---------------------------|---|
| <b>Global Business Services external revenue</b> |          |          |                           |   |
| Consulting                                       | \$ 7,332 | \$ 7,678 | (4.5)%                    | (4.8)%  |
| Global Process Services                          | 1,388    | 1,435    | (3.3)                     | (2.0)   |
| Application Management                           | 7,980    | 8,053    | (0.9)                     | (0.5)   |

Global Business Services revenue of \$16,700 million decreased 2.7 percent as reported and 3 percent adjusted for currency in 2016 compared to the prior year. Digital practices, which made up more than half of GBS revenue in 2016, grew strong double digits as reported and adjusted for currency including double-digit growth in cloud, analytics and mobile. This growth was more than offset by declines in the more traditional areas that the company is shifting away from, such as large ERP implementations.

Consulting revenue of \$7,332 million declined 4.5 percent as reported (5 percent adjusted for currency). Global Process Services (GPS) revenue of \$1,388 million decreased 3.3 percent as reported (2 percent adjusted for currency) compared to the prior year. Application Management revenue of \$7,980 million decreased 0.9 percent as reported (flat adjusted for currency).

Within GBS, total 2016 strategic imperatives revenue of \$8.9 billion grew 16 percent as reported and adjusted for currency year to year. Cloud revenue of \$3.0 billion grew 68 percent as reported (66 percent adjusted for currency), with an as-a-Service exit run rate of \$1.1 billion.

The company continues to aggressively shift the business to the strategic imperatives, or digital practices in GBS. The IBM Interactive Experience, the largest global digital agency, now has more than 30 studios worldwide. The company continues

to respond to clients looking to create new business models with cognitive technologies. There was continued revenue growth in 2016, both as reported and adjusted for currency, in enterprise mobility solutions that are helping clients redesign workflows with specific industry content. The company's growing collection of MobileFirst for iOS applications can now be integrated with a broad set of Watson technologies to increase productivity. The company is scaling the industry's first cognitive consulting practice which draws on the expertise of consulting professionals spanning machine learning, advanced analytics, data science and development. During 2016, six acquisitions added substantial new capabilities in digital design, cloud consulting and other skill areas.

(\$ in millions)

| For the year ended December 31: | 2016    | 2015    | Yr.-to-Yr. Percent/ Margin Change |
|---------------------------------|---------|---------|-----------------------------------|
| <b>Global Business Services</b> |         |         |                                   |
| External gross profit           | \$4,501 | \$4,837 | (6.9)%                            |
| External gross profit margin    | 27.0%   | 28.2%   | (1.2) pts.                        |
| Pre-tax income                  | \$1,732 | \$2,602 | (33.4)%                           |
| Pre-tax margin                  | 10.1%   | 14.7%   | (4.6) pts.                        |

GBS gross profit margin decreased 1.2 points to 27.0 percent compared to the prior year, with declines in Consulting and GPS. Overall, this reflects the company's investments to grow the digital practices, additional spending in certain accounts to deliver on client commitments, and price and profit pressure in more traditional engagements. These dynamics are also reflected in the pre-tax margin for the year. In 2016, pre-tax income of \$1,732 million decreased 33.4 percent and the pre-tax margin declined 4.6 points to 10.1 percent.

The company continues to invest and shift resources to higher value services around digital and cognitive. The company is investing in enablement, hiring top talent and bringing in new skills through acquisitions and focusing on integrating and scaling these new skills. While this impacts near-term profit, this investment has added important capabilities as the company continues to expand the digital practices.

#### **Technology Services & Cloud Platforms**

(\$ in millions)

| For the year ended December 31:                                   | 2016            | 2015     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|---|-----------------|----------|---------------------------------|---|
| <b>Technology Services &amp; Cloud Platforms external revenue</b> | <b>\$35,337</b> | \$35,142 | 0.6%                            | 1.4%  |
| Infrastructure Services   | \$23,543        | \$23,075 | 2.0%                            | 2.7%  |
| Technical Support Services  | 7,272           | 7,426    | (2.1)                           | (1.0)   |
| Integration Software  | 4,521           | 4,641    | (2.6)                           | (1.5)   |

Technology Services & Cloud Platforms revenue of \$35,337 million grew 0.6 percent as reported and 1 percent adjusted for currency in 2016 compared to the prior year. As the business shifts from systems integration to services integration, there is continuing momentum in new offerings. Infrastructure Services revenue grew as reported and adjusted for currency, partially offset by declines in Technical Support Services and Integration Software. In 2016, four acquisitions have expanded capabilities and strengthened the company's portfolio.

Infrastructure Services revenue of \$23,543 million grew 2.0 percent as reported (3 percent adjusted for currency) compared to the prior year. Technical Support Services revenue of \$7,272 million decreased 2.1 percent as reported (1 percent adjusted for currency). Integration Software revenue of \$4,521 million decreased 2.6 percent as reported (1 percent adjusted for currency) in 2016 compared to the prior year.

In Infrastructure Services, clients continue to turn to the company as the trusted partner to modernize and transform their most critical IT systems and navigate the complexities of the hybrid cloud environment. The company's hybrid cloud strategy is resonating with clients as they move to enterprise-grade cloud solutions that are secure, agile and leverage the data and investments in their core systems. Enterprise workloads on the company's public cloud continue to scale,

contributing to growth in as-a-Service content. The company continues to expand its cloud infrastructure and now has 50 cloud centers around the world, enabling low latency connectivity to cloud infrastructure.

Although revenue declined year to year, Technical Support Services continues to generate substantial revenue and profit. There was year-to-year revenue growth as reported and adjusted for currency in multi-vendor services, which is leveraging the company's global scale and deep technical skills.

In Integration Software, there was revenue growth in Connect products that integrate applications, data and processes for on-premise and cloud environments. There was also a continued shift of the portfolio to an as-a-Service model through IBM's Bluemix cloud platform which continues to scale across a broad catalog of high value services.

Within Technology Services & Cloud Platforms, total 2016 strategic imperatives revenue of \$8.7 billion grew 39 percent as reported (40 percent adjusted for currency) year to year. Cloud revenue of \$5.9 billion grew 49 percent as reported (50 percent adjusted for currency), with an as-a-Service exit run rate of \$5.8 billion.

|   |           | (\$ in millions) |            | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|---|-----------|------------------|------------|--|
| For the year ended<br>December 31:                | 2016      | 2015*            |            |  |
| <b>Technology Services &amp; Cloud Platforms</b>  |           |                  |            |  |
| External Technology Services gross profit         | \$ 10,969 | \$ 11,008        | (0.4)%     |  |
| External Technology Services gross profit margin  | 35.6%     | 36.1%            | (0.5) pts. |  |
| External Integration Software gross profit        | \$ 3,830  | \$ 4,005         | (4.4)%     |  |
| External Integration Software gross profit margin | 84.7%     | 86.3%            | (1.6) pts. |  |
| External total gross profit                       | \$ 14,800 | \$ 15,014        | (1.4)%     |  |
| External total gross profit margin                | 41.9%     | 42.7%            | (0.8) pts. |  |
| Pre-tax income                                    | \$ 4,707  | \$ 5,669         | (17.0)%    |  |
| Pre-tax margin                                    | 13.1%     | 15.8%            | (2.8) pts. |  |

\* Recast to conform with 2016 presentation

Technology Services & Cloud Platforms gross profit margin decreased 0.8 points to 41.9 percent in 2016 compared to the prior year. While partially due to mix within the segment, there was improvement in the Infrastructure Services margin offset by declines in Technical Support Services and Integration Software. The margin improvement in Infrastructure Services reflects the benefits from delivery transformation and ongoing productivity actions related to automation, process optimization and leveraging the company's scale, technology and talent. The company is investing in cognitive capabilities to further improve its delivery model and drive efficiencies. The Technical Support Services margin decline reflects the mix to multi-vendor support offerings. The Integration Software margin declined as the shift of the portfolio to an as-a-Service model continues.

Pre-tax income of \$4,707 million decreased 17.0 percent and pre-tax margin declined 2.8 points year to year to 13.1 percent. The pre-tax margin reflects the dynamics impacting gross profit and the continued investments to build out the cloud platform, partially offset by the impact of IP partnership agreements entered into during the year.

### Services Backlog and Signings

|                      |  | (\$ in billions) |          | Yr.-to-Yr.<br>Percent<br>Change | Adjusted for<br>Currency |
|----------------------|--|------------------|----------|---------------------------------|--------------------------|
| At December 31:      |  | 2016             | 2015     |                                 |                          |
| <b>Total backlog</b> |  | \$ 118.7         | \$ 122.6 | (3.2)%                          | (1.8)%                   |

The estimated total services backlog at December 31, 2016 was \$119 billion, a decrease of 3.2 percent as reported, and 2 percent adjusted for currency, with an increase in GTS more than offset by a decline in GBS as reported and adjusted for currency, compared to the December 31, 2015 balance.

Total services backlog includes Infrastructure Services, Consulting, Global Process Services, Application Management and Technical Support Services. Total backlog is intended to be a statement of overall work under contract for these businesses and therefore includes Technical Support Services. It does not include as-a-Service offerings that have flexibility in contractual commitment terms. Backlog estimates are subject to change and are affected by several factors, including terminations, changes in the scope of contracts, periodic revalidations, adjustments for revenue not materialized and adjustments for currency.

Services signings are management's initial estimate of the value of a client's commitment under a services contract. There are

no third-party standards or requirements governing the calculation of signings. The calculation used by management involves estimates and judgments to gauge the extent of a client's commitment, including the type and duration of the agreement, and the presence of termination charges or wind-down costs.

Signings include Infrastructure Services, Consulting, Global Process Services and Application Management contracts. Contract extensions and increases in scope are treated as signings only to the extent of the incremental new value. Technical Support Services is not included in signings as the maintenance contracts tend to be more steady state, where revenues equal renewals.

Contract portfolios purchased in an acquisition are treated as positive backlog adjustments provided those contracts meet the company's requirements for initial signings. A new signing will be recognized if a new services agreement is signed incidental or coincidental to an acquisition or divestiture.

|                                 |  | (\$ in millions) |           | Yr.-to-Yr.<br>Percent<br>Change | Adjusted for<br>Currency |
|---------------------------------|--|------------------|-----------|---------------------------------|--------------------------|
| For the year ended December 31: |  | 2016             | 2015      |                                 |                          |
| <b>Total signings</b>           |  | \$ 44,645        | \$ 46,432 | (3.8)%                          | (2.7)%                   |

**Systems**

(\$ in millions)

| For the year ended December 31: | 2016           | 2015           | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|---------------------------------|----------------|----------------|---------------------------------|---|
| <b>Systems external revenue</b> | <b>\$7,714</b> | <b>\$9,547</b> | (19.2)%                         | (18.9)%   |
| Systems Hardware                | \$5,926        | \$7,574        | (21.8)%                         | (21.6)%   |
| z Systems                       |                |                | (27.1)                          | (26.8)  |
| Power Systems                   |                |                | (27.1)                          | (26.8)  |
| Storage Systems                 |                |                | (10.0)                          | (10.0)  |
| Operating Systems Software      | 1,788          | 1,973          | (9.4)                           | (8.7)   |

Systems revenue of \$7,714 million decreased 19.2 percent as reported (19 percent adjusted for currency) in 2016 compared to the prior year reflecting market shifts and product cycle dynamics. Systems Hardware revenue of \$5,926 million decreased 21.8 percent as reported (22 percent adjusted for currency) year to year. Operating Systems Software revenue of \$1,788 million decreased 9.4 percent as reported (9 percent adjusted for currency) compared to the prior year.

Within Systems Hardware, z Systems revenue decreased 27.1 percent as reported (27 percent adjusted for currency) year to year reflecting product cycle dynamics. However, eight quarters into the z13 cycle at the end of 2016, the company continues to add new clients to the platform, drive innovation and introduce new technologies. During 2016, 29 new clients were added, with a total of 80 since introduction of the z13, validating its value and ongoing commitment to the company's platform. Throughout the year, the company continued to optimize z Systems to drive new workloads such as blockchain and instant payments. The acquisition of EZSource, which helps clients modify applications for their digital transformation while supporting agility and hybrid cloud, also drove innovation in the z Systems platform.

Power Systems revenue decreased 27.1 percent as reported (27 percent adjusted for currency) year to year reflecting the underlying dynamics of a declining market for UNIX, where IBM

continues to be the market leader, partially offset by growth in the expanding Linux market. During the year, there was success with HANA where the company is bringing in new clients. The UNIX market remains a high-value space for clients, and in 2016 new midrange and high-end systems were introduced. These systems are designed for hybrid cloud computing and flexible consumption models to transform on-premise IT to the cloud. In Power, the company is shifting to Linux while continuing to serve the UNIX space, but this is a long transition.

Storage Systems revenue decreased by 10.0 percent as reported and adjusted for currency year to year reflecting the weakness in the traditional disk storage market. In 2016, the company introduced new products and transitioned to a full suite of flash array offerings to improve its competitive position, and this portfolio grew revenue in the fourth quarter of the year as reported and adjusted for currency. While not reported within the Systems segment, Software-Defined Storage had revenue growth as reported and adjusted for currency in 2016.

Within Systems, total 2016 strategic imperatives revenue of \$3.4 billion decreased 15 percent as reported and adjusted for currency year to year. Cloud revenue of \$2.7 billion decreased 11 percent as reported and adjusted for currency as a result of a strong 2015 with the mainframe cycle.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

| (\$ in millions)  |                | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |            |
|---|----------------|--|------------|
| For the year ended<br>December 31:                            | 2016           | 2015*                                      |            |
| <b>Systems</b>  |                |  |            |
| External Systems<br>Hardware gross<br>profit                  | <b>\$2,720</b> | \$3,536                                    | (23.1)%    |
| External Systems<br>Hardware gross<br>profit margin           | <b>45.9%</b>   | 46.7%                                      | (0.8) pts. |
| External Operating<br>Systems Software<br>gross profit        | <b>\$1,577</b> | \$1,790                                    | (11.9)%    |
| External Operating<br>Systems Software<br>gross profit margin | <b>88.2%</b>   | 90.7%                                      | (2.5) pts. |
| External total gross<br>profit                                | <b>\$4,298</b> | \$5,326                                    | (19.3)%    |
| External total gross<br>profit margin                         | <b>55.7%</b>   | 55.8%                                      | (0.1) pts. |
| Pre-tax income  | <b>\$ 933</b>  | \$1,722                                    | (45.8)%    |
| Pre-tax margin  | <b>11.0%</b>   | 16.7%                                      | (5.7) pts. |

\* Recast to conform with 2016 presentation

The Systems gross profit margin decreased 0.1 points to 55.7 percent in 2016 compared to the prior year with declines in Power and Storage partially offset by expansion in z Systems margins. Pre-tax income of \$933 million decreased 45.8 percent and the pre-tax margin declined 5.7 points year to year to 11.0 percent, consistent with the product cycle and portfolio transition dynamics impacting revenue and profit.

The company has reinvented its core systems for work in a new era of computing. It has optimized systems to drive new types of workloads and is expanding its footprint, building new capabilities and solving new types of problems for its clients. While facing some shifting market dynamics and product transitions, the Systems portfolio remains optimized to address the demands of the cognitive era and cloud computing.

**Global Financing**

See pages 76 through 81 for an analysis of Global Financing's segment results.

**Total Software**

Under the company's new segment structure, total software no longer exists as a segment. Given the focus on IBM's software revenue performance, the company continued to report total software revenue performance through 2016. The company's software revenue is reported discretely within the Cognitive Solutions, Technology Services & Cloud Platforms and Systems segments and can be added together to calculate total software. The company has a broad software portfolio, from solutions that provide cognitive, analytics and security solutions, to core transaction processing, to connecting on-premises data and processes to private and public cloud environments. This software is open, running on IBM and non-IBM environments.

Total software revenue, which includes Cognitive Solutions, Integration Software and Operating Systems Software, of \$24,496 million increased 0.2 percent as reported and 1 percent adjusted for currency in 2016 compared to 2015. From a business area perspective, there was growth in Cognitive Solutions as reported and adjusted for currency, while Integration Software and Operating Systems Software were down year to year as reported and adjusted for currency. Across software, annuity revenue grew year to year as reported and adjusted for currency led by SaaS offerings. Transactional revenue declined as reported and adjusted for currency.

**Geographic Revenue**

In addition to the revenue presentation by reportable segment, the company also measures revenue performance on a geographic basis. The following geographic, regional and country-specific revenue performance excludes OEM revenue.

| (\$ in millions)                |  |                 |          | Yr.-to-Yr.<br>Percent<br>Change | Adjusted for<br>Currency |
|---------------------------------|--|-----------------|----------|---------------------------------|--------------------------|
| For the year ended December 31: |  | 2016            | 2015     |                                 |                          |
| <b>Total revenue</b>            |  | <b>\$79,919</b> | \$81,741 | (2.2)%                          | (1.6)%                   |
| Geographies                     |  | <b>\$79,594</b> | \$81,430 | (2.3)%                          | (1.6)%                   |
| Americas                        |  | <b>37,513</b>   | 38,486   | (2.5)                           | (1.4)                    |
| Europe/Middle East/Africa       |  | <b>24,769</b>   | 26,073   | (5.0)                           | (2.1)                    |
| Asia Pacific                    |  | <b>17,313</b>   | 16,871   | 2.6                             | (1.2)                    |

**Management Discussion**

## International Business Machines Corporation and Subsidiary Companies

Total geographic revenue of \$79,594 million in 2016 decreased 2.3 percent as reported and 2 percent adjusted for currency compared to the prior year.

Americas revenue of \$37,513 million decreased 2.5 percent as reported and 1 percent adjusted for currency with declines in North America and Latin America as reported and adjusted for currency. Within North America, the U.S. decreased 0.9 percent and Canada decreased 6.2 percent (3 percent adjusted for currency). In Latin America, Brazil decreased 10.5 percent (7 percent adjusted for currency) and Mexico decreased 14.5 percent (7 percent adjusted for currency).

EMEA revenue of \$24,769 million decreased 5.0 percent as reported and 2 percent adjusted for currency. Within EMEA, revenue declined in the UK, Germany and France, as reported and adjusted for currency, while revenue grew in Italy as reported and adjusted for currency. The UK decreased 12.8 percent (1 percent adjusted for currency). Germany decreased 5.1 percent (5 percent adjusted for currency). Revenue declined in France 3.4 percent (3 percent adjusted for currency). Italy increased 4.0 percent (4 percent adjusted for currency) year to year. The Middle East and Africa region grew 0.6 percent (3 percent adjusted for currency), while there was a decline in the Central and Eastern European region as reported and adjusted for currency including a year-to-year decline in Russia of 27.1 percent.

Asia Pacific revenue of \$17,313 million grew 2.6 percent as reported, but declined 1 percent adjusted for currency. Japan grew 10.5 percent as reported, but declined 1 percent adjusted for currency. India grew 5.2 percent as reported and 10 percent adjusted for currency. China decreased 2.4 percent as reported, but was flat on an adjusted for currency basis. Australia decreased 9.7 percent (8 percent adjusted for currency).

**Total Expense and Other (Income)**

(\$ in millions)

| <b>For the year ended<br/>December 31:</b>                     | <b>2016</b>     | <b>2015</b> | <b>Yr.-to-Yr.<br/>Percent/<br/>Margin<br/>Change</b> |
|--|-----------------|-------------|--|
| <b>Total consolidated expense<br/>and other (income)</b>       | <b>\$25,964</b> | \$24,740    | 4.9%   |
| Non-operating adjustments                                      |                 |             |  |
| Amortization of acquired<br>intangible assets                  | (503)           | (304)       | 65.7   |
| Acquisition-related charges                                    | (5)             | (26)        | (81.0)   |
| Non-operating retirement-<br>related<br>(costs)/income         | (282)           | (581)       | (51.4)   |
| <b>Operating (non-GAAP)<br/>expense and other<br/>(income)</b> | <b>\$25,174</b> | \$23,830    | 5.6%   |
| Total consolidated<br>expense-to-revenue ratio                 | 32.5%           | 30.3%       | 2.2 pts.   |
| Operating (non-GAAP)<br>expense-to-revenue ratio               | 31.5%           | 29.2%       | 2.3 pts.   |

The key drivers of the year-to-year change in total expense and other (income) were approximately:

|                  | <b>Total<br/>Consolidated</b> | <b>Operating<br/>(non-GAAP)</b> |
|------------------|-------------------------------|---------------------------------|
| • Currency*      | 2 points                      | 2 points                        |
| • Acquisitions** | 5 points                      | 4 points                        |
| • Base           | (2) points                    | 0 points                        |

\* Reflects impacts of translation and hedging programs

\*\*Includes acquisitions completed in prior 12-month period; operating (non-GAAP) is net of non-operating acquisition-related charges.

For additional information regarding total expense and other (income) for both expense presentations, see the following analyses by category.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Selling, General and Administrative**

| (\$ in millions)  |                 |                 |                           |
|---|-----------------|-----------------|---------------------------|
| For the year ended December 31:   | 2016            | 2015            | Yr.-to-Yr. Percent Change |
| <b>Selling, general and administrative expense</b>                      |                 |                 |                           |
| Selling, general and administrative—other                               | \$16,971        | \$16,643        | 2.0%                      |
| Advertising and promotional expense                                     | 1,327           | 1,290           | 2.8                       |
| Workforce rebalancing charges   | 1,038           | 587             | 76.7                      |
| Retirement-related costs  | 742             | 1,052           | (29.5)                    |
| Amortization of acquired intangible assets                              | 503             | 304             | 65.7                      |
| Stock-based compensation  | 401             | 322             | 24.3                      |
| Bad debt expense  | 87              | 231             | (62.3)                    |
| <b>Total consolidated selling, general and administrative expense</b>   | <b>\$21,069</b> | <b>\$20,430</b> | <b>3.1%</b>               |
| Non-operating adjustments   |                 |                 |                           |
| Amortization of acquired intangible assets                              | (503)           | (304)           | 65.7                      |
| Acquisition-related charges   | 2               | (21)            | NM                        |
| Non-operating retirement-related (costs)/income                         | (253)           | (533)           | (52.6)                    |
| <b>Operating (non-GAAP) selling, general and administrative expense</b> | <b>\$20,315</b> | <b>\$19,573</b> | <b>3.8%</b>               |

NM—Not meaningful

Total selling, general and administrative (SG&A) expense increased 3.1 percent in 2016 versus 2015, driven primarily by the following factors:

- Acquisition-related spending (4 points); and
- Higher workforce rebalancing charges (2 points); partially offset by
- The effects of currency (1 point); and
- A year-to-year decrease in charges for pension obligations related to litigation in Spain (1 point).

Operating (non-GAAP) expense increased 3.8 percent year to year driven primarily by the same factors excluding the year-to-year decrease in charges for pension obligations related to litigation which is not reflected in operating (non-GAAP) expense.

Bad debt expense decreased \$144 million in 2016 compared to 2015. The receivables provision coverage was 2.0 percent at December 31, 2016, a decrease of 60 basis points from December 31, 2015 due to write-offs of previously reserved receivables in 2016.

**Research, Development and Engineering**

| (\$ in millions)  |                |                |                           |
|---|----------------|----------------|---------------------------|
| For the year ended December 31:                                   | 2016           | 2015           | Yr.-to-Yr. Percent Change |
| <b>Total consolidated research, development and engineering</b>   |                |                |                           |
|   | <b>\$5,751</b> | <b>\$5,247</b> | <b>9.6%</b>               |
| Non-operating adjustment  |                |                |                           |
| Non-operating retirement-related (costs)/income                   | (29)           | (48)           | (38.6)                    |
| <b>Operating (non-GAAP) research, development and engineering</b> | <b>\$5,722</b> | <b>\$5,200</b> | <b>10.1%</b>              |

Research, development and engineering (RD&E) expense was 7.2 percent of revenue in 2016 and 6.4 percent of revenue in 2015.

RD&E expense increased 9.6 percent in 2016 versus 2015 primarily driven by:

- Higher expense due to acquisitions (7 points); and
- Increased base spending (4 points); partially offset by
- The effects of currency (1 point).

Operating (non-GAAP) RD&E expense increased 10.1 percent in 2016 compared to the prior year, driven primarily by the same factors.

**Intellectual Property and Custom Development Income**

| (\$ in millions)  |                |              |                           |
|---|----------------|--------------|---------------------------|
| For the year ended December 31:                                 | 2016           | 2015*        | Yr.-to-Yr. Percent Change |
| Licensing of intellectual property including royalty-based fees | \$1,390        | \$407        | 241.8%                    |
| Custom development income                                       | 214            | 262          | (18.4)                    |
| Sales/other transfers of intellectual property                  | 27             | 13           | 113.4                     |
| <b>Total</b>  | <b>\$1,631</b> | <b>\$682</b> | <b>139.3%</b>             |

\* Reclassified to conform to 2016 presentation

Licensing of intellectual property including royalty-based fees increased in 2016 compared to the prior-year period, primarily due to licensing of certain intellectual property in 2016 within the company's Integration Software and Cognitive Solutions software portfolio, which included four transactions each with period income greater than \$100 million. The company is licensing IP to partners who are allocating their skills to extend the value of assets that are high value, but may be in mature markets. There were no significant individual IP transactions in 2015. The

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timing and amount of licensing, sales or other transfers of IP may vary significantly from period to period depending upon the timing of licensing agreements, economic conditions, industry consolidation and the timing of new patents and know-how development.

**Other (Income) and Expense**

(\$ in millions)

| <b>For the year ended December 31:</b>                   | <b>2016</b>   | <b>2015</b>    | <b>Yr.-to-Yr. Percent Change</b> |
|--|---------------|----------------|----------------------------------|
| <b>Other (income) and expense</b>                        |               |                |                                  |
| Foreign currency transaction losses/(gains)              | \$ (116)      | \$ 414         | NM                               |
| (Gains)/losses on derivative instruments                 | 260           | (853)          | NM                               |
| Interest income  | (108)         | (72)           | 49.1%                            |
| Net (gains)/losses from securities and investment assets | 23            | 47             | (50.5)                           |
| Other  | 85            | (260)          | NM                               |
| <b>Total consolidated other (income) and expense</b>     | <b>\$ 145</b> | <b>\$(724)</b> | <b>NM</b>                        |
| Non-operating adjustment                                 |               |                |                                  |
| Acquisition-related charges                              | (7)           | (5)            | 35.2                             |
| <b>Operating (non-GAAP) other (income) and expense</b>   | <b>\$ 138</b> | <b>\$(729)</b> | <b>NM</b>                        |

NM—Not meaningful

Total consolidated other (income) and expense was expense of \$145 million in 2016 compared to income of \$724 million in 2015. The decrease in income of \$869 million year over year was primarily driven by:

- Lower net exchange gains (\$593 million); and
- Real estate capacity charges related to the first-quarter 2016 workforce transformation (\$291 million).

**Interest Expense**

(\$ in millions)

| <b>For the year ended December 31:</b> | <b>2016</b>  | <b>2015</b>  | <b>Yr.-to-Yr. Percent Change</b> |
|--|--------------|--------------|----------------------------------|
| Interest expense                       |              |              |                                  |
| <b>Total</b>                           | <b>\$630</b> | <b>\$468</b> | <b>34.4%</b>                     |

The increase in interest expense in 2016 versus 2015 was primarily driven by higher average debt levels and higher average interest rates. Interest expense is presented in cost of financing in the Consolidated Statement of Earnings only if the related external borrowings are to support the Global Financing external business. Overall interest expense (excluding capitalized interest) in 2016 was \$1,206 million, an increase of \$197 million year to year.

**Stock-Based Compensation**

Pre-tax stock-based compensation cost of \$544 million increased \$76 million compared to 2015. This was due primarily to increases related to performance share units (\$72 million) and the conversion of stock-based awards previously issued by acquired entities (\$15 million); partially offset by decreases related to restricted stock units (\$15 million). Stock-based compensation cost, and the year-to-year change, was reflected in the following categories: Cost: \$88 million, down \$13 million; SG&A expense: \$401 million, up \$78 million and RD&E expense: \$55 million, up \$5 million.

**Retirement-Related Plans**

The following table provides the total pre-tax cost for all retirement-related plans. These amounts are included in the Consolidated Statement of Earnings within the caption (e.g., Cost, SG&A, RD&E) relating to the job function of the plan participants.

| <b>For the year ended December 31:</b>         | <b>2016</b>    | <b>2015</b>    | <b>Yr.-to-Yr. Percent Change</b> |
|--|----------------|----------------|----------------------------------|
| <b>Retirement-related plans—cost</b>           |                |                |                                  |
| Service cost                                   | \$ 443         | \$ 484         | (8.6)%                           |
| Amortization of prior service costs/ (credits) | (107)          | (100)          | 7.0                              |
| Cost of defined contribution plans             | 1,070          | 1,138          | (6.0)                            |
| <b>Total operating costs/ (income)</b>         | <b>\$1,405</b> | <b>\$1,522</b> | <b>(7.7)%</b>                    |
| Interest cost                                  | \$3,300        | \$3,316        | (0.5)%                           |
| Expected return on plan assets                 | (5,563)        | (5,879)        | (5.4)                            |
| Recognized actuarial losses                    | 2,751          | 3,283          | (16.2)                           |
| Curtailments/ settlements                      | (16)           | 36             | NM                               |
| Multi-employer plan/ other costs               | 126            | 293            | (57.0)                           |
| <b>Total non-operating costs/(income)</b>      | <b>\$ 598</b>  | <b>\$1,050</b> | <b>(43.0)%</b>                   |
| <b>Total retirement-related plans—cost</b>     | <b>\$2,003</b> | <b>\$2,572</b> | <b>(22.1)%</b>                   |

NM—Not meaningful

In 2016, total pre-tax retirement-related plan cost decreased by \$569 million compared to 2015, primarily driven by a decrease in recognized actuarial losses (\$532 million), a decrease in pension obligations related to litigation in Spain (\$177 million) and lower defined contribution plans cost (\$68 million); partially offset by lower expected return on plan assets (\$316 million).

As discussed in the “Operating (non-GAAP) Earnings” section on pages 26 and 27, the company characterizes certain retirement-related costs as operating and others as non-operating. Utilizing this characterization, operating retirement-related costs in 2016 were \$1,405 million, a decrease of \$117 million compared to 2015, primarily driven by lower defined contribution plans cost (\$68 million) and lower service cost (\$42 million). Non-operating costs of \$598 million decreased \$452 million in 2016 compared to the prior year, driven primarily by a decrease in recognized actuarial losses (\$532 million) and a decrease in pension obligations related to litigation in Spain (\$177 million); partially offset by lower expected return on plan assets (\$316 million).

#### Income Taxes

The continuing operations effective tax rate for 2016 was 3.6 percent, a decrease of 12.5 points versus the prior year. The benefit resulting from the favorable resolution of a long standing tax matter related to the determination of certain foreign tax losses incurred by the company in Japan drove a 9.5 point reduction in the rate. Without that discrete item, the continuing operations effective tax rate for 2016 would have been 13.1 percent, with the remaining change in the rate year to year driven by the following factors:

- A benefit due to the year-to-year decrease in tax charges related to intercompany payments made by foreign subsidiaries and the intercompany licensing of certain IP of 5.7 points; and
- A benefit due to the geographic mix of pre-tax earnings in 2016 of 0.3 points; partially offset by
- A reduced benefit year to year related to audit settlements of 2.3 points; and
- The decreased benefit year to year in the utilization of foreign tax credits of 0.6 points.

The continuing operations operating (non-GAAP) effective tax rate was 6.5 percent, a decrease of 10.7 points versus 2015 principally driven by the same factors described above. Without the Japan benefit, the continuing operations (non-GAAP) effective tax rate would have been 14.9 percent.

#### Earnings Per Share

Basic earnings per share is computed on the basis of the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per share is computed on the basis of the weighted-average number of shares of common stock outstanding plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. Dilutive potential common shares include outstanding stock options and stock awards.

| For the year ended<br>December 31:   | 2016    | 2015    | Yr.-to-Yr.<br>Percent<br>Change |
|--|---------|---------|---------------------------------|
| <b>Earnings per share of<br/>common stock from<br/>continuing operations</b> |         |         |                                 |
| Assuming dilution  | \$12.39 | \$13.60 | (8.9)%                          |
| Basic  | \$12.44 | \$13.66 | (8.9)%                          |
| Diluted operating<br>(non-GAAP)  | \$13.59 | \$14.92 | (8.9)%                          |
| <b>Weighted-average shares<br/>outstanding (in millions)</b>                 |         |         |                                 |
| Assuming dilution  | 958.7   | 982.7   | (2.4)%                          |
| Basic  | 955.4   | 978.7   | (2.4)%                          |

Actual shares outstanding at December 31, 2016 and 2015 were 945.9 million and 965.7 million, respectively. The average number of common shares outstanding assuming dilution was 24.0 million shares lower in 2016 versus 2015. The decrease was primarily the result of the common stock repurchase program.

#### Results of Discontinued Operations

The loss from discontinued operations, net of tax, was \$9 million in 2016 and \$174 million in 2015. The discontinued operations effective tax rate in 2016 was 21.7 percent compared to 40.3 percent in 2015.

**Financial Position****Dynamics**

At December 31, 2016, the company continued to have the financial flexibility to support the business over the long term. Cash and marketable securities at year end were \$8,527 million. During the year, the company continued to manage the investment portfolio to meet its capital preservation and liquidity objectives.

Total debt of \$42,169 million increased \$2,279 million from prior year-end levels. The commercial paper balance at December 31, 2016, was \$899 million, an increase of \$299 million from the prior year end. Within total debt, \$27,859 million was in support of the Global Financing business which is leveraged at a 7.3 to 1 ratio. The company continues to have substantial flexibility in the debt markets. During 2016, the company completed bond issuances totaling \$7,873 million, with terms ranging from 1.5 to 30 years, and interest rates ranging from 0.50 to 4.70 percent depending on maturity. The company has consistently generated strong cash flow from operations and continues to have access to additional sources of liquidity through the capital markets and its \$10.25 billion global credit facility, with 100 percent of the facility available on a same day basis.

Consistent with accounting standards, the company remeasured the funded status of its retirement and postretirement plans at December 31. At December 31, 2016, the overall net underfunded position was \$14,840 million, a decrease of \$674 million from December 31, 2015 driven by asset returns partially offset by a decrease in discount rates. At year end, the company's qualified defined benefit plans were well funded and the cash requirements related to these plans remain stable going forward at approximately \$500 million per year through 2020. In 2016, the return on the U.S. Personal Pension Plan assets was 6.2 percent and the plan was 102 percent funded at December 31. Overall, global asset returns were 8.5 percent and the qualified defined benefit plans worldwide were 98 percent funded at December 31, 2016.

During 2016, the company generated \$16,958 million in cash from operations, a decrease of \$49 million compared to 2015. In addition, the company generated \$11,574 million in free cash flow, a decrease of \$1,501 million versus the prior year. See page 69 for additional information on free cash flow. The company returned \$8,758 million to shareholders in 2016, with \$5,256 million in dividends and \$3,502 million in gross share repurchases. In 2016, the company repurchased 23.3 million shares and had \$5.1 billion remaining in share repurchase authorization at year end. The company's cash generation permits the company to invest and deploy capital to areas with the most attractive long-term opportunities.

The assets and debt associated with the Global Financing business are a significant part of the company's financial position. The financial position amounts appearing on page 86 are the consolidated amounts including Global Financing. The amounts appearing in the separate Global Financing section, beginning on page 77, are supplementary data presented to facilitate an understanding of the Global Financing business.

**Working Capital**

(\$ in millions)

| <b>At December 31:</b> | <b>2016</b>     | <b>2015</b>     |
|------------------------|-----------------|-----------------|
| Current assets         | \$43,888        | \$42,504        |
| Current liabilities    | 36,275          | 34,269          |
| <b>Working capital</b> | <b>\$ 7,613</b> | <b>\$ 8,235</b> |
| Current ratio          | 1.21:1          | 1.24:1          |

Working capital decreased \$622 million from the year-end 2015 position. The key changes are described below:

Current assets increased \$1,383 million (\$1,920 million adjusted for currency), as a result of:

- An increase of \$690 million (\$1,013 million adjusted for currency) in receivables driven by trade receivables; and
- An increase of \$359 million (\$457 million adjusted for currency) in prepaid expenses and other current assets; and
- An increase of \$332 million (\$427 million adjusted for currency) in cash and marketable securities.

Current liabilities increased \$2,006 million (\$2,471 million adjusted for currency), as a result of:

- An increase in short-term debt of \$1,052 million (\$1,033 million adjusted for currency); and
- An increase in taxes of \$388 million (\$442 million adjusted for currency) primarily driven by the reclassification from non-current liabilities based on the anticipated settlement of various U.S. and non-U.S. tax audits; and
- An increase in other accrued expenses and liabilities of \$352 million (\$571 million adjusted for currency); and
- An increase in accounts payable of \$181 million (\$244 million adjusted for currency).

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**Cash Flow**

The company's cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows on page 87 are summarized in the table below. These amounts include the cash flows associated with the Global Financing business.

| (\$ in millions)   | 2016          | 2015            |
|--|---------------|-----------------|
| <b>For the year ended December 31:</b>                       |               |                 |
| Net cash provided by/(used in) continuing operations         |               |                 |
| Operating activities   | \$ 16,958     | \$ 17,008       |
| Investing activities   | (10,976)      | (8,159)         |
| Financing activities   | (5,791)       | (9,166)         |
| Effect of exchange rate changes on cash and cash equivalents | (51)          | (473)           |
| <b>Net change in cash and cash equivalents</b>               | <b>\$ 140</b> | <b>\$ (790)</b> |

Net cash provided by operating activities decreased by \$49 million in 2016 driven by the following key factors:

- Performance-related declines within net income; offset by
- A decline in cash income tax payments (\$1,579 million).

Net cash used in investing activities increased \$2,817 million driven by:

- An increase in cash used related to acquisitions of \$2,330 million.

Net cash used in financing activities decreased \$3,375 million as compared to the prior year driven by the following factors:

- An increase in net cash sourced from debt transactions of \$2,744 million driven by a higher level of issuances in the current year; and
- A decrease of \$1,107 million of cash used for gross share repurchases; partially offset by
- An increase in dividend payments of \$358 million.

**Noncurrent Assets and Liabilities**

(\$ in millions)

| <b>At December 31:</b>                  | <b>2016</b> | <b>2015</b> |
|---|-------------|-------------|
| Noncurrent assets                       | \$73,582    | \$67,991    |
| Long-term debt                          | \$34,655    | \$33,428    |
| Noncurrent liabilities (excluding debt) | \$28,147    | \$28,374    |

The increase in noncurrent assets of \$5,591 million (\$5,788 million adjusted for currency) was driven by:

- An increase in intangible assets and goodwill of \$5,379 million (\$5,420 million adjusted for currency) resulting from acquisitions during the year; and
- An increase in prepaid pension assets of \$1,301 million (\$1,427 million adjusted for currency) primarily driven by the expected returns on plan assets partially offset by interest costs and plan remeasurements; partially offset by
- A decrease of \$993 million (\$1,054 million adjusted for currency) in long-term financing receivables primarily due to lower volumes.

Long-term debt increased \$1,227 million (\$1,595 million adjusted for currency) driven by:

- Bond issuances of \$7,873 million; partially offset by
- Reclassification of \$6,239 million to short-term debt to reflect upcoming maturities.

Other noncurrent liabilities, excluding debt, decreased \$227 million (\$195 million adjusted for currency) primarily driven by:

- A decrease of \$622 million (\$769 million adjusted for currency) in other liabilities driven by the reclassification to current taxes based on the anticipated settlement of various U.S. and non-U.S. tax audits; partially offset by
- An increase in retirement and nonpension postretirement liabilities of \$567 million (\$706 million adjusted for currency) driven by plan remeasurements.

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**Debt**

The company's funding requirements are continually monitored and strategies are executed to manage the overall asset and liability profile. Additionally, the company maintains sufficient flexibility to access global funding sources as needed.

(\$ in millions)

| <b>At December 31:</b>              | <b>2016</b> | <b>2015</b> |
|-------------------------------------|-------------|-------------|
| Total company debt                  | \$ 42,169   | \$ 39,890   |
| Total Global Financing segment debt | \$ 27,859   | \$ 27,205   |
| Debt to support external clients    | 24,034      | 23,934      |
| Debt to support internal clients    | 3,825       | 3,271       |
| Non-Global Financing debt           | 14,309      | 12,684      |

Global Financing provides financing predominantly for the company's external client assets, as well as for assets under contract by other IBM units. These assets, primarily for Technology Services & Cloud Platforms, generate long-term, stable revenue streams similar to the Global Financing asset portfolio. Based on their attributes, these Technology Services & Cloud Platforms assets are leveraged with the balance of the Global Financing asset base. The debt analysis above is further detailed in the Global Financing section on page 80.

Consolidated debt-to-capitalization ratio at December 31, 2016 was 69.6 percent versus 73.4 percent at December 31, 2015.

Given the significant leverage, the company also presents a debt-to-capitalization ratio which excludes Global Financing debt and equity as management believes this is more representative of the company's core business operations. This ratio can vary from period to period as the company manages its global cash and debt positions. "Core" debt-to-capitalization ratio (excluding Global Financing debt and equity) was 49.5 percent at December 31, 2016 compared to 54.3 percent at December 31, 2015.

**Equity**

Total equity increased by \$3,968 million from December 31, 2015 as a result of an increase in retained earnings of \$6,634 million, an increase in common stock of \$673 million and lower accumulated other comprehensive losses of \$209 million; partially offset by an increase in treasury stock of \$3,532 million mainly due to gross common stock repurchases.

**GAAP Reconciliation**

The tables below provide a reconciliation of the company's income statement results as reported under GAAP to its operating earnings presentation which is a non-GAAP measure. The company's calculation of operating (non-GAAP) earnings, as presented, may differ from similarly titled measures reported by other companies. Please refer to the "Operating (non-GAAP) Earnings" section on pages 26 and 27 for the company's rationale for presenting operating earnings information.

(\$ in millions except per share amount)

| <b>For the year ended December 31, 2016:</b>          | <b>GAAP</b> | <b>Acquisition-Related Adjustments</b> | <b>Retirement-Related Adjustments</b> | <b>Operating (non-GAAP)</b> |
|---|-------------|--|---------------------------------------|-----------------------------|
| Gross profit  | \$ 38,294   | \$ 494                                 | \$ 316                                | \$39,104                    |
| Gross profit margin                                   | 47.9%       | 0.6 pts.                               | 0.4 pts.                              | 48.9%                       |
| SG&A  | \$ 21,069   | \$ (501)                               | \$ (253)                              | \$20,315                    |
| RD&E  | 5,751       | —                                      | (29)                                  | 5,722                       |
| Other (income) and expense                            | 145         | (7)                                    | —                                     | 138                         |
| Total expense and other (income)                      | 25,964      | (508)                                  | (282)                                 | 25,174                      |
| Pre-tax income from continuing operations             | 12,330      | 1,003                                  | 598                                   | 13,931                      |
| Pre-tax margin from continuing operations             | 15.4%       | 1.3 pts.                               | 0.7 pts.                              | 17.4%                       |
| Provision for income taxes*                           | \$ 449      | \$ 268                                 | \$ 183                                | \$ 900                      |
| Effective tax rate                                    | 3.6%        | 1.7 pts.                               | 1.2 pts.                              | 6.5%                        |
| Income from continuing operations                     | \$11,881    | \$ 735                                 | \$ 415                                | \$13,031                    |
| Income margin from continuing operations              | 14.9%       | 0.9 pts.                               | 0.5 pts.                              | 16.3%                       |
| Diluted earnings per share from continuing operations | \$ 12.39    | \$ 0.77                                | \$ 0.43                               | \$ 13.59                    |

\* The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

(\$ in millions except per share amount)

| For the year ended December 31, 2015:                 | GAAP     | Acquisition-Related Adjustments | Retirement-Related Adjustments | Operating (non-GAAP) |
|---|----------|---------------------------------|--------------------------------|----------------------|
| Gross profit  | \$40,684 | \$ 373                          | \$ 469                         | \$41,526             |
| Gross profit margin                                   | 49.8%    | 0.5 pts.                        | 0.6 pts.                       | 50.8%                |
| SG&A  | \$20,430 | \$(324)                         | \$(533)                        | \$19,573             |
| RD&E  | 5,247    | —                               | (48)                           | 5,200                |
| Other (income) and expense                            | (724)    | (5)                             | —                              | (729)                |
| Total expense and other (income)                      | 24,740   | (330)                           | (581)                          | 23,830               |
| Pre-tax income from continuing operations             | 15,945   | 703                             | 1,050                          | 17,697               |
| Pre-tax margin from continuing operations             | 19.5%    | 0.9 pts.                        | 1.3 pts.                       | 21.6%                |
| Provision for income taxes*                           | \$ 2,581 | \$ 141                          | \$ 316                         | \$ 3,037             |
| Effective tax rate                                    | 16.2%    | 0.2 pts.                        | 0.9 pts.                       | 17.2%                |
| Income from continuing operations                     | \$13,364 | \$ 562                          | \$ 734                         | \$14,659             |
| Income margin from continuing operations              | 16.3%    | 0.7 pts.                        | 0.9 pts.                       | 17.9%                |
| Diluted earnings per share from continuing operations | \$ 13.60 | \$ 0.57                         | \$ 0.75                        | \$ 14.92             |

\* The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

#### Consolidated Fourth-Quarter Results

(\$ and shares in millions except per share amounts)

| For the fourth quarter:                                | 2016     | 2015     | Yr-to-Yr Percent/Margin Change |
|--|----------|----------|--------------------------------|
| Revenue  | \$21,770 | \$22,059 | (1.3)%*                        |
| Gross profit margin                                    | 50.0%    | 51.7%    | (1.7) pts.                     |
| Total expense and other (income)                       | \$ 5,907 | \$ 6,308 | (6.4)%                         |
| Total expense and other (income)-to-revenue ratio      | 27.1%    | 28.6%    | (1.5) pts.                     |
| Income from continuing operations before income taxes  | \$ 4,986 | \$ 5,098 | (2.2)%                         |
| Provision for income taxes from continuing operations  | \$ 480   | \$ 638   | (24.7)%                        |
| Income from continuing operations                      | \$ 4,505 | \$ 4,460 | 1.0%                           |
| Income from continuing operations margin               | 20.7%    | 20.2%    | 0.5 pts.                       |
| Income/(loss) from discontinued operations, net of tax | \$ (4)   | \$ 3     | NM                             |
| Net income   | \$ 4,501 | \$ 4,463 | 0.9%                           |
| Earnings per share from continuing operations:         |          |          |                                |
| Assuming dilution                                      | \$ 4.73  | \$ 4.59  | 3.1%                           |
| Consolidated earnings per share—assuming dilution      | \$ 4.72  | \$ 4.59  | 2.8%                           |
| Weighted-average shares outstanding                    |          |          |                                |
| Assuming dilution                                      | 952.7    | 972.8    | (2.1)%                         |

\* (0.7) percent adjusted for currency

NM—Not meaningful

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The following table provides the company's operating (non-GAAP) earnings for the fourth quarter of 2016 and 2015.

(\$ in millions except per share amounts)

| <b>For the fourth quarter:</b>                         | <b>2016</b> | <b>2015</b> | <b>Yr-to-Yr.<br/>Percent<br/>Change</b> |
|--|-------------|-------------|---|
| Net income as reported                                 | \$4,501     | \$4,463     | 0.9%                                    |
| Income/(loss) from discontinued operations, net of tax | (4)         | 3           | NM                                      |
| Income from continuing operations                      | 4,505       | 4,460       | 1.0                                     |
| Non-operating adjustments<br>(net of tax)              |             |             |   |
| Acquisition-related charges                            | 193         | 110         | 75.8                                    |
| Non-operating retirement-related costs/(income)        | 77          | 137         | (43.8)                                  |
| Operating (non-GAAP) earnings*                         | \$4,776     | \$4,707     | 1.5%                                    |
| Diluted operating (non-GAAP)<br>earnings per share     | \$ 5.01     | \$ 4.84     | 3.5%                                    |

\* See page 55 for a more detailed reconciliation of net income to operating (non-GAAP) earnings.

NM=Not meaningful

**Snapshot**

In the fourth quarter of 2016, the company delivered \$21.8 billion in revenue, \$4.5 billion in income from continuing operations and \$4.8 billion in operating (non-GAAP) earnings, resulting in diluted earnings per share from continuing operations of \$4.73 as reported and \$5.01 on an operating (non-GAAP) basis. The company generated \$4.0 billion in cash from operations and \$4.7 billion in free cash flow in the fourth quarter of 2016 with shareholder returns of \$2.2 billion in gross common stock repurchases and dividends. In the quarter, the company continued to deliver strong revenue growth in the strategic imperatives.

Total consolidated revenue decreased 1.3 percent as reported and 1 percent year to year adjusted for currency in the fourth quarter of 2016, with a sequential decline of 1.0 point as reported but flat adjusted for currency from the third quarter growth rates. Clients are focused on becoming cloud-based, cognitive and digital businesses which is reflected in the company's strong revenue growth in the strategic imperatives across cloud, mobile, analytics and security in the fourth quarter 2016 versus 2015. Cloud as-a-Service continues to deliver strong revenue growth across software and services. Annuity revenue grew in the fourth quarter of 2016 compared to 2015. In addition, acquisitions completed over the past 12 months continued to contribute to revenue performance in the quarter.

The fourth quarter results reflect the success the company is having in the strategic areas and the investments it has been making to drive that shift. In the fourth quarter, the strategic imperatives—cloud, analytics and engagement, grew 11.4 percent year to year as reported and 12 percent adjusted for currency. Total Cloud revenue of \$4.2 billion increased 33 percent as reported and adjusted for currency in the fourth quarter, with cloud as-a-Service revenue up 61 percent (63 percent adjusted for currency). The company exited the fourth quarter of 2016 with an annual run rate for cloud as-a-Service revenue of \$8.6 billion, up from \$7.5 billion in the third quarter of 2016. Analytics revenue of \$5.6 billion in the fourth quarter increased 9 percent as reported and adjusted for currency with contribution from the core analytics platform as well as the cognitive offerings including Watson Health, Watson

Platform and Watson IoT. Mobile revenue increased 16 percent as reported (17 percent adjusted for currency) compared to the prior year. Security revenue increased 7 percent as reported (8 percent adjusted for currency).

From a segment perspective, Cognitive Solutions revenue increased 1.4 percent as reported and 2 percent adjusted for currency led by growth in Solutions Software. Technology Services & Cloud Platforms revenue increased 1.7 percent as reported and 2 percent adjusted for currency with growth in Infrastructure Services as clients focus on enabling their digital businesses and building their hybrid cloud environments. Global Business Services revenue decreased 4.1 percent as reported and 4 percent adjusted for currency and continues to reflect a shift in the segment's business away from large ERP implementations towards digital practices. Systems revenue decreased 12.5 percent (12 percent adjusted for currency) reflecting declines in Power Systems and Storage Systems partially offset by growth in z Systems.

From a geographic perspective, Americas revenue was flat year to year as reported and adjusted for currency. There was sequential improvement compared with the third quarter of 2016 on both an as reported and adjusted for currency basis. EMEA revenue decreased 8.0 percent as reported and 3 percent adjusted for currency in the fourth quarter of 2016 compared to 2015. Asia Pacific revenue increased 5.1 percent as reported and 1 percent adjusted for currency.

The consolidated gross profit margin of 50.0 percent decreased 1.7 points year to year. The decline was driven primarily by continued investment in strategic areas, including acquisitions, and the shift toward an as-a-Service business which is not yet at scale. The operating (non-GAAP) gross margin of 51.0 percent decreased 1.8 points compared to the prior year driven primarily by the same factors.

Total expense and other (income) decreased 6.4 percent in the fourth quarter of 2016 compared to the prior year. Total operating (non-GAAP) expense and other (income) decreased 6.8 percent year to year.

The key year-to-year drivers were approximately:

|                  | Total<br>Consolidation | Operating<br>(non-GAAP) |
|------------------|------------------------|-------------------------|
| • Currency*      | 1 point                | 1 point                 |
| • Acquisitions** | 5 points               | 4 points                |
| • Base           | (12) points            | (12) points             |

\* Reflects impacts of translation and hedging programs

\*\*Includes acquisitions completed in prior 12-month period; operating (non-GAAP) is net of non-operating acquisition-related charges.

Base expense performance reflects a higher level of IP income (5 points) in the fourth quarter year to year consistent with the company's revitalized efforts in this area. The base expense decline also reflected the yield from workforce rebalancing actions occurring earlier in the year. The business continued to invest in areas such as cognitive and cloud through acquisitions. The decrease in operating (non-GAAP) expense was driven primarily by the same factors.

Pre-tax income from continuing operations of \$5.0 billion in the fourth quarter of 2016 decreased 2.2 percent year to year and the pre-tax margin was 22.9 percent, a decrease of 0.2 points. The continuing operations effective tax rate for the fourth quarter of 2016 was 9.6 percent compared to an effective tax rate of 12.5 percent in the fourth quarter of 2015, down 2.9 points year to year. While the underlying effective tax rate

was approximately 16 percent, the fourth-quarter 2016 rate reflected benefits from the year-to-year decrease in tax charges related to intercompany payments and the intercompany licensing of certain IP. Income from continuing operations of \$4.5 billion increased 1.0 percent and the net income margin was 20.7 percent, an increase of 0.5 points versus the fourth quarter of 2015. Losses from discontinued operations, net of tax, were \$4 million in the fourth quarter of 2016 compared to \$3 million of income in the fourth quarter of 2015. Net income of \$4.5 billion increased 0.9 percent year to year. Operating (non-GAAP) pre-tax income from continuing operations of \$5.4 billion decreased 2.1 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations of 24.8 percent was essentially flat year to year. Operating (non-GAAP) income from continuing operations of \$4.8 billion increased 1.5 percent. The operating (non-GAAP) income margin from continuing operations of 21.9 percent increased 0.6 points. The operating (non-GAAP) effective tax rate from continuing operations in the fourth quarter of 2016 was 11.5 percent versus 14.7 percent in the prior year.

In the fourth quarter of 2016, the company repurchased 5.5 million shares of its common stock at a cost of \$0.9 billion. Diluted earnings per share from continuing operations of \$4.73 in the fourth quarter of 2016 increased 3.1 percent year to year. Operating (non-GAAP) diluted earnings per share of \$5.01 increased 3.5 percent versus the fourth quarter of 2015.

### Results of Continuing Operations

#### Segment Details

The following is an analysis of the fourth quarter of 2016 versus the fourth quarter of 2015 reportable segment external revenue and gross margin results. Segment pre-tax income includes transactions between the segments that are intended to reflect an arm's-length transfer price and excludes certain unallocated corporate items.

(\$ in millions)

|  | 2016            | 2015            | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|--|-----------------|-----------------|--|---|
| <b>For the fourth quarter:</b>             |                 |                 |  |   |
| <b>Revenue</b>                             |                 |                 |  |   |
| Cognitive Solutions                        | \$ 5,297        | \$ 5,225        | 1.4%                                       | 2.2%  |
| Gross margin                               | 82.7%           | 85.7%           | (3.0) pts.                                 |   |
| Global Business Services                   | 4,121           | 4,297           | (4.1)%                                     | (3.6)%  |
| Gross margin                               | 26.9%           | 28.2%           | (1.3) pts.                                 |   |
| Technology Services & Cloud Platforms      | 9,308           | 9,149           | 1.7%                                       | 2.4%  |
| Gross margin                               | 42.9%           | 44.3%           | (1.4) pts.                                 |   |
| Systems                                    | 2,530           | 2,892           | (12.5)%                                    | (12.1)%   |
| Gross margin                               | 56.9%           | 55.8%           | 1.1 pts.                                   |   |
| Global Financing                           | 447             | 454             | (1.5)%                                     | (2.1)%  |
| Gross margin                               | 36.2%           | 39.9%           | (3.6) pts.                                 |   |
| Other                                      | 66              | 43              | 51.3%                                      | 52.0%   |
| Gross margin                               | (289.7)%        | (312.7)%        | 23.0 pts.                                  |   |
| <b>Total consolidated revenue</b>          | <b>\$21,770</b> | <b>\$22,059</b> | <b>(1.3)%</b>                              | <b>(0.7)%</b>   |
| <b>Total consolidated gross profit</b>     | <b>\$10,893</b> | <b>\$11,407</b> | <b>(4.5)%</b>                              |   |
| Total consolidated gross margin            | 50.0%           | 51.7%           | (1.7) pts.                                 |   |
| <b>Non-operating adjustments</b>           |                 |                 |  |   |
| Amortization of acquired intangible assets | 124             | 105             | 18.3%                                      |   |
| Retirement-related costs/(income)          | 78              | 119             | (34.6)%                                    |   |
| <b>Operating (non-GAAP) gross profit</b>   | <b>\$11,095</b> | <b>\$11,630</b> | <b>(4.6)%</b>                              |   |
| Operating (non-GAAP) gross margin          | 51.0%           | 52.7%           | (1.8) pts.                                 |   |

### Cognitive Solutions

In the fourth quarter of 2016, Cognitive Solutions revenue of \$5,297 million grew 1.4 percent as reported and 2 percent year to year adjusted for currency. On an as reported and constant currency basis, Solutions Software revenue grew, partially offset by declines in Transaction Processing Software.

In the fourth quarter, Solutions Software revenue of \$3,747 million grew 4.0 percent (5 percent adjusted for currency), while Transaction Processing Software revenue of \$1,550 million declined 4.3 percent (4 percent adjusted for currency). Within Solutions Software, growth was driven by Analytics and Security, which both grew as reported and on a constant currency basis. Within the Analytics portfolio, the company continued to innovate the Watson platform and extend cognitive across the solution offerings. The Watson platform, which underpins the company's cognitive strategy, continues to gain momentum in the marketplace. There was strong Software-as-a-Service performance in the quarter with double-digit growth in revenue as reported and adjusted for currency.

Within Cognitive Solutions, total fourth quarter 2016 strategic imperatives revenue of \$3.5 billion grew 6 percent (7 percent adjusted for currency) year to year. Cloud revenue of \$0.6 billion grew 52 percent (53 percent adjusted for currency), with an as-a-Service exit run rate of \$1.8 billion.

The Cognitive Solutions gross profit margin decreased 3.0 points to 82.7 percent in the fourth quarter 2016 versus 2015 primarily due to investments in strategic areas, such as SaaS, and acquisition content. In the fourth quarter, pre-tax income of \$2,313 million increased 0.8 percent year to year, however, pre-tax margin declined 1.4 points to 38.6 percent. Performance continued to reflect the company's higher level of investment in the strategic growth areas, including Watson.

### Global Business Services

In the fourth quarter of 2016, Global Business Services revenue of \$4,121 million decreased 4.1 percent as reported and 4 percent adjusted for currency. Digital practices continued to grow at double digits year to year as reported and adjusted for currency, including strong growth in cloud, mobile and analytics. This growth was more than offset by declines in the traditional areas.

In the fourth quarter of 2016, Application Management revenue of \$1,969 million decreased 2.8 percent (2 percent adjusted for currency), compared to the prior year. Consulting revenue of \$1,813 million declined 5.3 percent (5 percent adjusted for currency) and GPS revenue of \$340 million decreased 4.8 percent (4 percent adjusted for currency). Revenue declines across the businesses reflect the shift away from the traditional large enterprise implementations and the continued investment in digital practices. The company continues to focus on providing the solutions enterprises are demanding to create new business models with cognitive technologies. During the fourth quarter, a new global Watson IoT consulting practice was announced which will help clients introduce IoT innovation into their businesses by leveraging IBM's deep domain and industry expertise.

Within GBS, total fourth quarter strategic imperatives revenue of \$2.4 billion grew 18 percent as reported (19 percent adjusted for currency) year to year. Cloud revenue of \$0.9 billion grew 78 percent as reported (77 percent adjusted for currency), with an as-a-Service exit run rate of \$1.1 billion.

In the fourth quarter, the GBS gross profit margin decreased 1.3 points to 26.9 percent compared to the prior year, with declines in Consulting, Application Management and GPS. Margins declined in Consulting and Application Management as the business shifts to digital platforms and continues to add highly skilled enablement resources, impacting productivity in the near term. In addition, the company continues to incur additional spending to improve delivery efficiency and meet commitments in the more traditional engagements. These dynamics are also reflected in the pre-tax margin for the quarter. In the fourth quarter, pre-tax income of \$522 million decreased 26.1 percent and the pre-tax margin declined 3.6 points to 12.4 percent.

### Technology Services & Cloud Platforms

In the fourth quarter of 2016, Technology Services & Cloud Platforms revenue of \$9,308 million grew 1.7 percent as reported and 2 percent adjusted for currency compared to the prior year. The business continues to invest in hybrid cloud capabilities across services and software to help clients build their cloud infrastructures.

Infrastructure Services revenue of \$6,085 million grew 2.6 percent (3 percent adjusted for currency) in the fourth quarter. The company's enterprise workloads on the public cloud continue to scale, which enables clients to grow their new digital businesses. As a services integrator, the company is a premier partner in hybrid cloud services integration and delivers end-to-end infrastructure services solutions that continue to resonate with clients. Technical Support Services revenue of \$1,827 million increased 0.2 percent (flat adjusted for currency). Integration Software revenue of \$1,396 million declined 0.1 percent as reported, but grew 1 percent adjusted for currency compared to the fourth quarter of 2015. In Integration Software, there was continued strength in WebSphere Application Server and hybrid cloud integration capabilities and Bluemix is now one of the largest open public cloud deployments globally.

Within Technology Services & Cloud Platforms, total fourth quarter strategic imperatives revenue of \$2.6 billion grew 36 percent (37 percent adjusted for currency) year to year. Cloud revenue of \$1.8 billion grew 48 percent as reported (50 percent adjusted for currency), with an as-a-Service exit run rate of \$5.8 billion.

The Technology Services & Cloud Platforms gross profit margin decreased 1.4 points to 42.9 percent in the fourth quarter with declines in Technical Support Services and Integration Software. The margin decline in Technical Support Services was driven by the global investment in technical skills within multi-vendor services. The decline in margin in Integration Software reflects the dynamics of the shift in capabilities to Software-as-a-Service and royalty cost from the growth in intellectual property partnerships.

Fourth-quarter pre-tax income of \$1,882 million increased 4.1 percent and pre-tax margin improved 0.4 points to 19.8 percent. The pre-tax margin reflects licensing income from the intellectual property partnerships offset by the continued investment in strategic areas and innovation to drive productivity in the more traditional business.

#### **Systems**

In the fourth quarter of 2016, Systems revenue of \$2,530 million decreased 12.5 percent as reported (12 percent adjusted for currency) compared to the prior year reflecting shifting market dynamics and product cycle transitions.

Systems Hardware revenue of \$2,074 million decreased 12.5 percent (12 percent adjusted for currency) in the fourth quarter. Operating Systems Software revenue of \$456 million decreased 12.6 percent (12 percent adjusted for currency) compared to the prior year.

Across Systems, product cycle transitions in Power Systems and Storage Systems contributed to the decline in revenue, while the overall portfolio remains optimized to meet client demands in the era of cognitive and cloud computing.

Within Systems Hardware, z Systems revenue increased 3.8 percent as reported (4 percent adjusted for currency) year to year reflecting continued success in driving innovation in the company's core systems. The mainframe continues to deliver a high-value, secure and scalable platform that is constantly being redesigned for new workloads, such as blockchain and instant payment, and is optimized for mobile and security.

Power Systems revenue decreased 34.5 percent (34 percent adjusted for currency) year to year reflecting the company's ongoing shift to a growing Linux market while continuing to serve a high-value, but declining, UNIX market. Workload on the Linux platform continued double-digit growth while the traditional UNIX base declined. The company continued the expansion of new Linux offerings, with Power on Linux now representing over 15 percent of the Power portfolio.

Storage Systems revenue decreased 10.6 percent (10 percent adjusted for currency) year to year, reflecting the continued market shift toward software-defined environments. The year-to-year decline was primarily driven by midrange and high-end disk storage, both of which declined as reported and on an adjusted for currency basis. The company benefited from the performance of its full suite of all flash array offerings which contributed double-digit revenue growth in the fourth quarter. While not within the Systems segment, Software-Defined Storage had continued double-digit revenue growth as reported and adjusted for currency in the fourth quarter.

Within Systems, total fourth quarter strategic imperatives revenue of \$1.1 billion decreased 19 percent (18 percent adjusted for currency) year to year. Cloud revenue of \$0.9 billion decreased 15 percent (15 percent adjusted for currency).

The Systems gross profit margin increased 1.1 points to 56.9 percent in the fourth quarter of 2016 compared to the prior year. This increase was due to mix to z Systems (0.6 points) and margin expansion (0.4 points) driven by improvements in z Systems margin; partially offset by declining margins in Power

Systems and Storage Systems. Pre-tax income of \$579 million decreased 14.1 percent and the pre-tax margin declined 0.2 points to 21.6 percent, consistent with the product cycle and portfolio transition dynamics impacting revenue and gross profit.

#### **Global Financing**

Global Financing revenue of \$447 million was down 1.5 percent as reported and 2 percent adjusted for currency due primarily to decreases in financing revenue partially offset by increases in used equipment sales revenue. The Global Financing fourth quarter pre-tax income decreased 33.5 percent to \$448 million and the pre-tax margin decreased 6.1 points to 49.3 percent. The decrease in pre-tax income was driven by a decrease in gross profit (\$250 million) and an increase in SG&A expenses (\$19 million); partially offset by decreases in financing receivable provisions (\$42 million).

#### **Total Software**

Total software revenue, which includes Cognitive Solutions, Integration Software and Operating Systems Software, of \$7,149 million was flat as reported and increased 1 percent adjusted for currency in the fourth quarter of 2016 compared to the prior-year period. From a business area perspective, there was growth in Cognitive Solutions as reported and adjusted for currency and Integration Software revenue was flat as reported, but grew adjusted for currency. Operating Systems Software revenue declined year to year as reported and adjusted for currency, in line with the longer term secular trend. Across software, annuity revenue grew low-single digits year to year as reported and adjusted for currency. This growth was led by the SaaS offerings which grew both on an organic basis and from acquisitions. Transactional revenue declined mid-single digits as reported and adjusted for currency year to year.

#### **Geographic Revenue**

Total geographic revenue of \$21,662 million decreased 1.5 percent as reported and 1 percent adjusted for currency in the fourth quarter of 2016 compared to the prior year. Americas revenue of \$10,283 million was flat as reported and adjusted for currency compared to the prior year. EMEA fourth quarter revenue of \$6,737 million decreased 8.0 percent as reported and 3 percent adjusted for currency. Asia Pacific revenue of \$4,641 million grew 5.1 percent as reported and 1 percent adjusted for currency. Americas and Asia Pacific revenue growth rates improved sequentially, as reported and adjusted for currency, compared to the third quarter.

Within Americas, U.S. revenue increased 2.1 percent compared to the prior year. Canada was down 5.8 percent as reported (6 percent adjusted for currency). Latin America decreased 5.1 percent (5 percent adjusted for currency) in the fourth quarter compared to the prior year. Within Latin America, Brazil was flat year to year as reported, but declined 10 percent adjusted for currency. Fourth quarter revenue in Mexico decreased 10.7 percent (3 percent adjusted for currency).

In the fourth quarter, within EMEA, revenue in the UK decreased 24.2 percent (7 percent adjusted for currency). Germany decreased 7.4 percent (6 percent adjusted for currency). France decreased 3.2 percent (1 percent adjusted for currency).

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Partially offsetting these declines, Italy increased 9.9 percent (12 percent adjusted for currency). Fourth quarter revenue performance in Europe declined sequentially from the third quarter driven by the UK, Germany and Russia consistent with macro- and geo-political trends. In the Central and Eastern European region, revenue decreased 21.0 percent (20 percent adjusted for currency) year to year with Russia declining 38.8 percent. The Middle East and Africa region declined 4.3 percent as reported (5 percent adjusted for currency) compared to 2015.

Within Asia Pacific, China revenue grew 19.1 percent (22 percent adjusted for currency), reflecting the strength of the z Systems platform in the banking sector. Japan grew 8.1 percent as reported, but decreased 2 percent adjusted for currency. Fourth quarter revenue in India declined 0.8 percent as reported, but grew 1 percent adjusted for currency. Australia decreased 11.6 percent (15 percent adjusted for currency).

**Total Expense and Other (Income)**

(\$ in millions)

| For the fourth quarter:  | 2016           | 2015           | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|----------------|----------------|--|
| <b>Total consolidated<br/>expense and other<br/>(income)</b>   | <b>\$5,907</b> | <b>\$6,308</b> | <b>(6.4)%</b>                              |
| Non-operating<br>adjustments                                   |                |                |  |
| Amortization of<br>acquired<br>intangible assets               | (132)          | (80)           | 65.4                                       |
| Acquisition-related<br>charges                                 | (4)            | (15)           | (75.1)                                     |
| Non-operating<br>retirement-related<br>(costs)/income          | (76)           | (100)          | (23.8)                                     |
| <b>Operating (non-GAAP)<br/>expense and other<br/>(income)</b> | <b>\$5,696</b> | <b>\$6,114</b> | <b>(6.8)%</b>                              |
| Total consolidated<br>expense-to-revenue<br>ratio              | 27.1%          | 28.6%          | (1.5)pts.                                  |
| Operating (non-GAAP)<br>expense-to-revenue<br>ratio            | 26.2%          | 27.7%          | (1.6)pts.                                  |

Total expense and other (income) decreased 6.4 percent in the fourth quarter with an expense-to-revenue ratio of 27.1 percent compared to 28.6 percent in the fourth quarter of 2015. Total operating (non-GAAP) expense and other (income) decreased 6.8 percent in the fourth quarter. The decrease in total expense and other (income) was primarily driven by shifts within the operational expense base driving productivity and efficiency, the yield from workforce rebalancing actions earlier in the year, and the growth in intellectual property income (12 points). The growth in IP income year to year was a result of the company's revitalized efforts in this area. The fourth-quarter expense dynamics also reflect increased acquisition-related expenses (4 points) and a modest impact from currency (1 point) in the fourth quarter of 2016 compared with the prior year.

**Results of Discontinued Operations**

The loss from discontinued operations, net of tax, was \$4 million in the fourth quarter of 2016 compared to \$3 million of income in the fourth quarter of 2015.

**Cash Flow**

The company generated \$3,968 million in cash flow provided by operating activities, a decrease of \$1,311 million compared to the fourth quarter of 2015 driven by higher income tax payments and an increase in working capital due to the timing and mix of substantial transactions in December 2016. Net cash used in investing activities of \$3,687 million decreased \$1,758 million compared to the prior year, primarily due to higher cash payments for acquisitions in the fourth quarter of the prior year, net changes in marketable securities and other investments, partially offset by a cash payment in the fourth quarter related to the divestiture of the Microelectronics business. Net cash used in financing activities of \$1,287 million decreased \$61 million compared to the prior year, primarily due to a decline in net cash payments to settle debt, partially offset by an increase in cash used for gross common stock repurchases and dividends.

**GAAP Reconciliation**

The tables below provide a reconciliation of the company's income statement results as reported under GAAP to its operating earnings presentation which is a non-GAAP measure. The company's calculation of operating (non-GAAP) earnings, as presented, may differ from similarly titled measures reported by other companies. Please refer to the "Operating (non-GAAP) Earnings" section on pages 26 and 27 for the company's rationale for presenting operating earnings information.

(\$ in millions except per share amount)

| <b>For the fourth quarter 2016:</b>                   | <b>GAAP</b> | <b>Acquisition-Related Adjustments</b> | <b>Retirement-Related Adjustments</b> | <b>Operating (non-GAAP)</b> |
|---|-------------|--|---------------------------------------|-----------------------------|
| Gross profit  | \$10,893    | \$ 124                                 | \$ 78                                 | \$11,095                    |
| Gross profit margin                                   | 50.0%       | 0.6 pts.                               | 0.4 pts.                              | 51.0%                       |
| SG&A  | \$ 4,976    | (\$136)                                | \$ (69)                               | \$ 4,771                    |
| RD&E  | 1,431       | —                                      | (6)                                   | 1,425                       |
| Other (income) and expense                            | (136)       | 0                                      | —                                     | (136)                       |
| Total expense and other (income)                      | 5,907       | (136)                                  | (76)                                  | 5,696                       |
| Pre-tax income from continuing operations             | 4,986       | 260                                    | 154                                   | 5,399                       |
| Pre-tax margin from continuing operations             | 22.9%       | 1.2 pts.                               | 0.7 pts.                              | 24.8%                       |
| Provision for income taxes*                           | \$ 480      | \$ 66                                  | \$ 77                                 | \$ 623                      |
| Effective tax rate                                    | 9.6%        | 0.8 pts.                               | 1.2 pts.                              | 11.5%                       |
| Income from continuing operations                     | \$ 4,505    | \$ 193                                 | \$ 77                                 | \$ 4,776                    |
| Income margin from continuing operations              | 20.7%       | 0.9 pts.                               | 0.4 pts.                              | 21.9%                       |
| Diluted earnings per share from continuing operations | \$ 4.73     | \$0.20                                 | \$0.08                                | \$ 5.01                     |

\* The tax impact on operating (non-GAAP) pre-tax income from continuing operations is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

(\$ in millions except per share amount)

| <b>For the fourth quarter 2015:</b>                   | <b>GAAP</b> | <b>Acquisition-Related Adjustments</b> | <b>Retirement-Related Adjustments</b> | <b>Operating (non-GAAP)</b> |
|---|-------------|--|---------------------------------------|-----------------------------|
| Gross profit  | \$ 11,407   | \$ 105                                 | \$ 119                                | \$11,630                    |
| Gross profit margin                                   | 51.7%       | 0.5 pts.                               | 0.5 pts.                              | 52.7%                       |
| SG&A  | \$ 5,157    | \$ (95)                                | \$ (88)                               | \$ 4,975                    |
| RD&E  | 1,362       | —                                      | (12)                                  | 1,350                       |
| Other (income) and expense                            | (146)       | 0                                      | —                                     | (146)                       |
| Total expense and other (income)                      | 6,308       | (95)                                   | (100)                                 | 6,114                       |
| Pre-tax income from continuing operations             | 5,098       | 199                                    | 218                                   | 5,516                       |
| Pre-tax margin from continuing operations             | 23.1%       | 0.9 pts.                               | 1.0 pts.                              | 25.0%                       |
| Provision for income taxes*                           | \$ 638      | \$ 89                                  | \$ 82                                 | \$ 809                      |
| Effective tax rate                                    | 12.5%       | 1.2 pts.                               | 1.0 pts.                              | 14.7%                       |
| Income from continuing operations                     | \$ 4,460    | \$ 110                                 | \$ 137                                | \$ 4,707                    |
| Income margin from continuing operations              | 20.2%       | 0.5 pts.                               | 0.6 pts.                              | 21.3%                       |
| Diluted earnings per share from continuing operations | \$ 4.59     | \$0.11                                 | \$0.14                                | \$ 4.84                     |

\* The tax impact on operating (non-GAAP) pre-tax income from continuing operations is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

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**PRIOR YEAR IN REVIEW**

The "Prior Year in Review" section provides a summary of the company's financial performance in 2015 as compared to 2014. For additional information, see the company's recast 2015 Annual Report on Form 8-K dated June 13, 2016.

The initial closing dates for the sales of IBM's worldwide customer care outsourcing services business to SYNNEX and

IBM's System x business to Lenovo were January 31, 2014 and October 1, 2014, respectively. Management believes that presenting financial information for years 2015 versus 2014 without either or both of these items is more representative of operational performance and provides more insight into, and clarifies the basis for, historical and/or future performance, which may be more useful to investors.

(\$ and shares in millions except per share amounts)

|   | 2015      | 2014       | <b>Yr.-to-Yr.<br/>Percent/<br/>Margin<br/>Change</b> |
|---|-----------|------------|--|
| <b>For the year ended December 31:</b>                |           |            |  |
| Revenue   | \$ 81,741 | \$ 92,793  | (11.9)%*   |
| Gross profit margin                                   | 49.8%     | 50.0%      | (0.2) pts.   |
| Total expense and other (income)                      | \$ 24,740 | \$ 26,421  | (6.4)%   |
| Total expense and other (income)-to-revenue ratio     | 30.3%     | 28.5%      | 1.8 pts.   |
| Income from continuing operations before income taxes | \$ 15,945 | \$ 19,986  | (20.2)%  |
| Provision for income taxes from continuing operations | \$ 2,581  | \$ 4,234   | (39.1)%  |
| Income from continuing operations                     | \$ 13,364 | \$ 15,751  | (15.2)%  |
| Income from continuing operations margin              | 16.3%     | 17.0%      | (0.6) pts.   |
| Loss from discontinued operations, net of tax         | \$ (174)  | \$ (3,729) | (95.3)%  |
| Net income  | \$ 13,190 | \$ 12,022  | 9.7%   |
| Earnings per share from continuing operations:        |           |            |  |
| Assuming dilution                                     | \$ 13.60  | \$ 15.59   | (12.8)%  |
| Consolidated earnings per share—assuming dilution     | \$ 13.42  | \$ 11.90   | 12.8%  |
| Weighted-average shares outstanding                   |           |            |  |
| Assuming dilution                                     | 982.7     | 1,010.0    | (2.7)%   |
| Assets**  | \$110,495 | \$117,271  | (5.8)%   |
| Liabilities**   | \$ 96,071 | \$105,257  | (8.7)%   |
| Equity**  | \$ 14,424 | \$ 12,014  | 20.1%  |

\* (4.1) percent adjusted for currency; (1.2) percent adjusted for divestitures and currency

\*\*At December 31

The following table provides the company's operating (non-GAAP) earnings for 2015 and 2014.

(\$ in millions except per share amounts)

|   | 2015     | 2014     | <b>Yr.-to-Yr.<br/>Percent/<br/>Change</b> |
|---|----------|----------|---|
| <b>For the year ended December 31:</b>          |          |          |   |
| Net income as reported                          | \$13,190 | \$12,022 | 9.7%                                      |
| Loss from discontinued operations, net of tax   | (174)    | (3,729)  | (95.3)%                                   |
| Income from continuing operations               | \$13,364 | \$15,751 | (15.2)%                                   |
| Non-operating adjustments (net of tax)          |          |          |   |
| Acquisition-related charges                     | 562      | 670      | (16.1)                                    |
| Non-operating retirement-related costs/(income) | 734      | 280      | 161.8                                     |
| Operating (non-GAAP) earnings*                  | \$14,659 | \$16,702 | (12.2)%                                   |
| Diluted operating (non-GAAP) earnings per share | \$ 14.92 | \$ 16.53 | (9.7)%                                    |

\* See page 66 for a more detailed reconciliation of net income to operating (non-GAAP) earnings.

**Snapshot**

In 2015, the company delivered \$81.7 billion in revenue, \$13.4 billion in income from continuing operations and \$14.7 billion in operating (non-GAAP) earnings resulting in diluted earnings per share from continuing operations of \$13.60 as reported and \$14.92 on an operating (non-GAAP) basis. The results of continuing operations exclude a net loss from discontinued operations of \$174 million in 2015 and \$3,729 million in 2014 related to the divestiture of the Microelectronics business. On a consolidated basis, net income in 2015 was \$13.2 billion, with diluted earnings per share of \$13.42. The company generated \$17.0 billion in cash from operations and \$13.1 billion in free cash flow in 2015 driving shareholder returns of \$9.5 billion in gross common stock repurchases and dividends.

Total consolidated revenue decreased 11.9 percent as reported and 1 percent year to year adjusted for currency and the divestitures of the System x and customer care businesses. Currency had an 8 point, or \$7.2 billion, impact on reported revenue in 2015. Revenue was impacted by 3 points in 2015 from the divested businesses. Combined, the impact of currency and divested businesses reduced the reported revenue growth by 11 points.

In 2015, strategic imperatives revenue, which includes analytics, cloud, mobile, social and security, grew 17 percent year to year as reported and 26 percent adjusted for currency and the System x divestiture. In total, the strategic imperatives generated \$28.9 billion in revenue in 2015, which represented approximately 35 percent of the company's total revenue.

Cloud revenue increased 43 percent as reported in 2015 and 57 percent adjusted for currency and the System x divestiture. In 2015, Cloud revenue was \$10.2 billion making the company the largest cloud provider. Cloud revenue spans across many different segments. The company leveraged its extensive relationships in enterprise IT and incumbency in the data center to help clients implement hybrid cloud environments. In addition:

- As-a-Service revenue increased 50 percent (61 percent adjusted for currency) year to year to \$4.5 billion and the company exited 2015 with an annual run rate of \$5.3 billion.
- Cloud revenue included \$5.6 billion of revenue from foundational offerings—where the company provided software, hardware and services for clients to build their own clouds.
- Clients utilized cloud not just to reduce costs, but also to gain agility and to enable innovation. The company has been leading clients in making the move to cloud through consuming as-a-Service, or through their own clouds or the implementation of a hybrid environment.
- The company made seven cloud acquisitions in 2015 including; Cleversafe, Gravitant, and Clearleap. The company also invested nearly \$1 billion in 2015 to expand its global cloud data center footprint to 46.

Business analytics revenue of \$17.9 billion increased 7 percent as reported and 16 percent year to year adjusted for currency making the company the largest analytics provider. The company also moved into new areas including Watson Health and Watson IoT. In Watson Health, the company is integrating its own organic capabilities with acquired content, including the acquisition of Merge Healthcare in 2015.

In the area of engagement (security, mobile and social), revenue increased 64 percent as reported and 77 percent adjusted for currency. Security revenue increased 5 percent as reported (12 percent adjusted for currency), mobile revenue more than tripled year to year as reported and adjusted for currency and social revenue increased 14 percent as reported (21 percent adjusted for currency).

From a segment perspective, Cognitive Solutions revenue declined 9.4 percent as reported (3 percent adjusted for currency) with declines in transactional revenue and annuity revenue. Annuity-based revenue declined as reported, but grew adjusted for currency, including Software-as-a-Service. GBS revenue decreased 12.0 percent as reported and 4 percent adjusted for currency (8 points). Technology Services & Cloud Platforms revenue declined 9.6 percent as reported, but was flat year to year adjusted for currency (9 points) and divestitures with strong growth in the strategic imperatives on both an as-reported and adjusted basis. Systems revenue decreased 22.3 percent as reported, but increased 4 percent adjusted for the System x divestiture (22 points) and currency (4 points), and reflected a successful mainframe cycle in 2015 and the repositioning of Power Systems to address a broader opportunity.

The consolidated gross profit margin of 49.8 percent decreased 0.2 points year to year. The operating (non-GAAP) gross margin of 50.8 percent increased 0.2 points compared to 2014 primarily driven by the shift to higher value through portfolio actions and the relative strength of z Systems, partially offset by margin declines in GBS, Technology Services & Cloud Platforms and Cognitive Solutions.

Total expense and other (income) decreased 6.4 percent in 2015 versus 2014. Total operating (non-GAAP) expense and other (income) decreased 7.8 percent year to year. The key year-to-year drivers were:

|                         | Total Consolidated | Operating (non-GAAP) |
|-------------------------|--------------------|----------------------|
| • Currency*             | (9) points         | (9) points           |
| • System x divestiture  | (2) points         | (2) points           |
| • Divestiture gains     | 6 points           | 6 points             |
| • Workforce rebalancing | (3) points         | (3) points           |

\* Reflects impacts of translation and hedging programs

The reduction in expense was driven primarily by currency impacts, a lower level of workforce rebalancing charges and the impact of the divested System x business. These benefits were partially offset by the impact of lower divestiture gains (\$1.6 billion) year to year. The reduction in operating (non-GAAP) expense was driven primarily by the same factors. The company continued to shift resources and spending within its operational expense base—driving productivity and efficiency in some areas with increased investment in support of the strategic imperatives. In 2015, the company shifted over \$5 billion of spending across cost, expense and capital expenditures, to the strategic imperatives.

Pre-tax income from continuing operations of \$15.9 billion decreased 20.2 percent year to year and the pre-tax margin was 19.5 percent, a decrease of 2.0 points. The continuing operations effective tax rate for 2015 was 16.2 percent, a decrease of 5.0 points versus 2014, primarily driven by benefits from the settlement of the U.S. tax audit and geographic mix of pre-tax profits; partially offset by less utilization of foreign tax credits. Income from continuing operations of \$13.4 billion decreased 15.2 percent and the net income margin was 16.3 percent, a decrease of 0.6 points versus 2014. Losses from discontinued operations, net of tax, were \$174 million compared to \$3,729 million in 2014. Net income of \$13.2 billion increased 9.7 percent year to year. Operating (non-GAAP) pre-tax income from continuing operations decreased 16.3 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations decreased 1.1 points to 21.6 percent. Operating (non-GAAP) income from continuing operations of \$14.7 billion decreased 12.2 percent including an impact of 7 points from the 2014 gains from the System x and customer care divestitures. The operating (non-GAAP) income margin from continuing operations of 17.9 percent decreased 0.1 points. The operating (non-GAAP) effective tax rate from continuing operations was 17.2 percent versus 21.0 percent in 2014. The 2015 profit and margin performance reflected portfolio actions taken as the company continued to shift to higher value, as well as investments made to add capabilities to drive the transformation.

Diluted earnings per share from continuing operations of \$13.60 in 2015 decreased 12.8 percent year to year. In 2015, the company repurchased 30.3 million shares of its common stock at a cost of \$4.7 billion. Operating (non-GAAP) diluted earnings per share of \$14.92 decreased 9.7 percent versus 2014 including an impact of 7 points from the 2014 gains from the System x and customer care divestitures. Diluted earnings per share from discontinued operations was (\$0.18) in 2015 compared to (\$3.69) in 2014.

At December 31, 2015, the company continued to have the financial flexibility to support the business over the long term. Cash and marketable securities at year end were \$8.2 billion, a decrease of \$0.3 billion from December 31, 2014. Key drivers in the balance sheet and total cash flows were:

Total assets decreased \$6.8 billion (\$0.3 billion adjusted for currency) from December 31, 2014 driven by:

- Decreases in total receivables (\$4.4 billion), deferred taxes (\$1.9 billion) and prepaid expenses and sundry assets (\$1.1 billion); partially offset by
- Increased goodwill (\$1.5 billion).

Total liabilities decreased \$9.2 billion (\$4.7 billion adjusted for currency) from December 31, 2014 driven by:

- Decreases in other liabilities (\$2.3 billion), taxes (\$2.2 billion), retirement-related liabilities (\$1.8 billion), deferred income (\$0.8 billion), total debt (\$0.8 billion) and accounts payable (\$0.8 billion).

Total equity of \$14.4 billion increased \$2.4 billion from December 31, 2014 as a result of:

- Higher retained earnings (\$8.3 billion) and higher common stock (\$0.6 billion); partially offset by
- Increased treasury stock (\$4.8 billion) and increased accumulated other comprehensive losses (\$1.7 billion).

The company generated \$17.0 billion in cash flow provided by operating activities, an increase of \$0.1 billion when compared to 2014, driven primarily by lower income tax payments, offset by net income performance. Net cash used in investing activities of \$8.2 billion was \$5.2 billion higher than 2014, primarily due to a decrease in cash provided from divestitures (\$2.8 billion) and an increase in net cash used for acquisitions (\$2.7 billion). Net cash used in financing activities of \$9.2 billion decreased \$6.3 billion compared to 2014, driven primarily by a decrease in cash used for gross common stock repurchases (\$9.1 billion), partially offset by lower net debt issuances (\$1.8 billion) and higher dividend payments (\$0.6 billion).

**Results of Continuing Operations****Segment Details**

The following is an analysis of the 2015 versus 2014 reportable segment results. The table below presents each reportable segment's external revenue and gross margin results. Segment pre-tax income includes transactions between segments that are intended to reflect an arm's-length transfer price and excludes certain unallocated corporate items.

(\$ in millions)

| For the year ended December 31:            | 2015            | 2014            | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|--|-----------------|-----------------|--|---|
| <b>Revenue</b>                             |                 |                 |  |   |
| Cognitive Solutions                        | \$17,841        | \$19,689        | (9.4)%                                     | (3.0)%  |
| Gross margin                               | 85.1%           | 86.8%           | (1.6) pts.                                 |   |
| Global Business Services                   | 17,166          | 19,512          | (12.0)%                                    | (4.1)%*   |
| Gross margin                               | 28.2%           | 30.4%           | (2.2) pts.                                 |   |
| Technology Services & Cloud Platforms      | 35,142          | 38,889          | (9.6)%                                     | 0.1%*   |
| Gross margin                               | 42.7%           | 44.3%           | (1.5) pts.                                 |   |
| Systems                                    | 9,547           | 12,294          | (22.3)%                                    | 3.9%*   |
| Gross margin                               | 55.8%           | 48.7%           | 7.1 pts.                                   |   |
| Global Financing                           | 1,840           | 2,034           | (9.5)%                                     | 1.5%  |
| Gross margin                               | 45.6%           | 49.4%           | (3.7) pts.                                 |   |
| Other                                      | 206             | 374             | (45.0)%                                    | (39.1)%   |
| Gross margin                               | (253.0)%        | (215.0)%        | (38.0) pts.                                |   |
| <b>Total consolidated revenue</b>          | <b>\$81,741</b> | <b>\$92,793</b> | <b>(11.9)%</b>                             | <b>(1.2)%*</b>  |
| <b>Total consolidated gross profit</b>     |                 |                 |  |   |
| Total consolidated gross margin            | 49.8%           | 50.0%           | (0.2) pts.                                 |   |
| <b>Non-operating adjustments</b>           |                 |                 |  |   |
| Amortization of acquired intangible assets | 373             | 416             | (10.5)%                                    |   |
| Retirement-related costs/(income)          | 469             | 173             | 170.7%                                     |   |
| <b>Operating (non-GAAP) gross profit</b>   | <b>\$41,526</b> | <b>\$46,996</b> | <b>(11.6)%</b>                             |   |
| Operating (non-GAAP) gross margin          | 50.8%           | 50.6%           | 0.2 pts.                                   |   |

\* Adjusted for divestitures and currency

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Cognitive Solutions**

(\$ in millions)

|   | 2015     | 2014     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent Change<br>Adjusted for<br>Currency |
|---|----------|----------|---------------------------------|--|
| <b>For the year ended December 31:</b>      |          |          |                                 |  |
| <b>Cognitive Solutions external revenue</b> | \$17,841 | \$19,689 | (9.4)%                          | (3.0)%   |
| Solutions Software                          | \$12,021 | \$12,847 | (6.4)%                          | (0.3)%   |
| Transaction Processing Software             | 5,819    | 6,842    | (14.9)                          | (7.9)  |

In 2015, approximately 75 percent of the Cognitive Solutions business was annuity-like, including Software-as-a-Service and subscription and support. Renewal rates were steady, the SaaS business grew, and overall annuity revenue increased year to year adjusted for currency, but declined as reported. Transactional revenue declined year to year as reported and adjusted for currency as large clients with multi-year contracts continued to utilize the flexibility the company has provided in deployment of their software.

(\$ in millions)

|  | 2015     | 2014     | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|----------|----------|--|
| <b>For the year ended December 31:</b> |          |          |  |
| <b>Cognitive Solutions</b>             |          |          |  |
| External gross profit                  | \$15,189 | \$17,085 | (11.1)%                                    |
| External gross profit margin           | 85.1%    | 86.8%    | (1.6) pts.                                 |
| Pre-tax income                         | \$ 7,245 | \$ 8,215 | (11.8)%                                    |
| Pre-tax margin                         | 36.1%    | 37.5%    | (1.4) pts.                                 |

Profit performance for 2015 reflected the overall revenue trajectory, a higher level of investments in areas such as Watson Platform, Watson Health and Watson IoT, and an impact from currency.

**Global Business Services**

(\$ in millions)

|  | 2015     | 2014     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent Change<br>Adjusted for<br>Currency |
|--|----------|----------|---------------------------------|--|
| <b>For the year ended December 31:</b>           |          |          |                                 |  |
| <b>Global Business Services external revenue</b> | \$17,166 | \$19,512 | (12.0)%                         | (4.1)%*  |
| Consulting                                       | \$ 7,678 | \$ 9,057 | (15.2)%                         | (8.5)%   |
| Global Process Services                          | 1,435    | 1,688    | (15.0)                          | (6.8)*   |
| Application Management                           | 8,053    | 8,767    | (8.2)                           | 1.3  |

\* Adjusted for divestitures and currency

As the company continued to transform the GBS business in 2015, revenue from the strategic imperative practices grew at strong rates. However, overall revenue performance continued to be impacted by the company's shift away from traditional businesses, such as ERP. Clients are moving away from ERP engagements to initiatives that focus on digitizing their business with analytics, cloud and mobile technologies.

(\$ in millions)

|  | 2015    | 2014    | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|---------|---------|--|
| <b>For the year ended December 31:</b> |         |         |  |
| <b>Global Business Services</b>        |         |         |  |
| External gross profit                  | \$4,837 | \$5,923 | (18.3)%                                    |
| External gross profit margin           | 28.2%   | 30.4%   | (2.2) pts.                                 |
| Pre-tax income                         | \$2,602 | \$3,347 | (22.3)%                                    |
| Pre-tax margin                         | 14.7%   | 16.7%   | (2.0) pts.                                 |

This year-to-year profit decline reflected the market shifts in the GBS business. In parts of the portfolio where the market has been declining, there was price and profit pressure. In addition, the company continued to shift and add significant resources to the high-growth analytics, cloud and mobility practices, which impacted productivity and margin.

#### Technology Services & Cloud Platforms

(\$ in millions)

|   | 2015     | 2014     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|---|----------|----------|---------------------------------|---|
| <b>For the year ended December 31:</b>                            |          |          |                                 |   |
| <b>Technology Services &amp; Cloud Platforms external revenue</b> | \$35,142 | \$38,889 | (9.6)%                          | 0.1%*   |
| Infrastructure Services   | \$23,075 | \$25,533 | (9.6)%                          | 0.6%  |
| Technical Support Services  | 7,426    | 8,276    | (10.3)                          | 0.9*  |
| Integration Software  | 4,641    | 5,080    | (8.6)                           | (2.4)   |

\* Adjusted for the System x divestiture and currency

In Technology Services & Cloud Platforms, the company helped clients transition to a hybrid cloud services platform bringing cloud, mobility and security to infrastructure services. In Infrastructure Services, the company continued to reinvent its portfolio, providing the most modern IT services that connect clients to the cloud-based mobile world. The Technical Support Services business continued to contribute revenue by delivering a wide range of support services to maintain and improve clients' IT infrastructure.

Within Technology Services & Cloud Platforms, the strategic imperatives, including hybrid cloud services, grew strong double digits as reported and at constant currency in 2015. The company continued to increase its cloud capacity with 46 cloud data centers opened around the world as of December 31, 2015.

(\$ in millions)

|  | 2015*    | 2014*    | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|----------|----------|--|
| <b>For the year ended December 31:</b>           |          |          |  |
| <b>Technology Services &amp; Cloud Platforms</b> |          |          |  |
| External Technology Services gross profit        | \$11,008 | \$12,793 | (13.9)%                                    |
| External Technology Services gross profit margin | 36.1%    | 37.8%    | (1.7) pts.                                 |
| External Integration Software gross profit       | \$ 4,005 | \$ 4,420 | (9.4)%                                     |
| External Integration Software gross margin       | 86.3%    | 87.0%    | (0.7) pts.                                 |
| External gross profit                            | \$15,014 | \$17,213 | (12.8)%                                    |
| External gross profit margin                     | 42.7%    | 44.3%    | (1.5) pts.                                 |
| Pre-tax income                                   | \$ 5,669 | \$ 7,084 | (20.0)%                                    |
| Pre-tax margin                                   | 15.8%    | 17.8%    | (2.0) pts.                                 |

\* Recast to conform with 2016 presentation

The Technology Services & Cloud Platforms gross profit margin year-to-year decline was driven primarily by margin declines in Infrastructure Services. The pre-tax margin decline was primarily due to investments being made in this business. The company continued to invest to deliver the most contemporary offerings that are built with cloud, analytics, mobile, security and cognitive technologies enabling it to transform clients' enterprises. In addition, currency had a year-to-year impact on profit given the strong dollar currency environment.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Systems**

(\$ in millions)

|  | 2015    | 2014     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent<br>Change<br>Adjusted for<br>Currency |
|--|---------|----------|---------------------------------|---|
| <b>For the year ended December 31:</b> |         |          |                                 |   |
| <b>Systems external revenue</b>        | \$9,547 | \$12,294 | (22.3)%                         | 3.9%*   |
| Systems Hardware                       | \$7,574 | \$ 9,991 | (24.2)%                         | 7.5%*   |
| z Systems                              |         |          | 28.1                            | 34.7  |
| Power Systems                          |         |          | (0.4)                           | 4.5   |
| Storage Systems                        |         |          | (11.9)                          | (7.0)   |
| Operating Systems Software             | 1,973   | 2,303    | (14.3)                          | (7.9)   |

\* Adjusted for the System x divestiture and currency

Systems Hardware revenue included a successful mainframe product cycle in 2015 and continued repositioning in Power Systems. The company continued to deliver innovation to its systems to enable them to run the most contemporary workloads. Approximately half of the Systems Hardware revenue in 2015 was for solutions that address analytics workloads, or hybrid and private clouds. Operating Systems Software declined driven by declines in both z Systems and Power Systems.

z Systems revenue was driven primarily by the launch of the z13 system in the first quarter of 2015. MIPS (millions of instructions

per second) shipments increased 33 percent in 2015. The z13 system was contemporized for the workloads around mobile, hybrid cloud and analytics. Power Systems revenue decreased 0.4 percent as reported, but grew 4 percent adjusted for currency compared to 2014, the first year of revenue growth since 2011. The Power Systems performance reflected the progress being made to transform the platform to align around data and cloud opportunities, while embracing an open ecosystem. Storage revenue declined driven by continued weakness in traditional disk and tape.

(\$ in millions)

|  | 2015*   | 2014*   | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|---------|---------|--|
| <b>For the year ended December 31:</b>           |         |         |  |
| <b>Systems</b>                                   |         |         |  |
| External Systems Hardware gross profit           | \$3,536 | \$3,947 | (10.4)%                                    |
| External Systems Hardware gross profit margin    | 46.7%   | 39.5%   | 7.2 pts.                                   |
| External Operating Systems Software gross profit | \$1,790 | \$2,041 | (12.3)%                                    |
| External Operating Systems Software gross margin | 90.7%   | 88.6%   | 2.1 pts.                                   |
| External total gross profit                      | \$5,326 | \$5,988 | (11.1)%                                    |
| External total gross profit margin               | 55.8%   | 48.7%   | 7.1 pts.                                   |
| Pre-tax income                                   | \$1,722 | \$1,384 | 24.4%                                      |
| Pre-tax margin                                   | 16.7%   | 10.4%   | 6.3 pts.                                   |

\* Recast to conform with 2016 presentation

Systems gross profit margin increased year to year driven primarily by an improved mix (10.3 points) due to strong growth in z Systems and the divestiture of the lower margin System x business. The improvement was partially offset by lower margins (3.2 points) in z Systems and Power Systems compared to 2014. The 2015 Systems results reflected a successful transformation and ongoing repositioning of the business including a solid mainframe product cycle.

**Global Financing**

See pages 76 through 81 for an analysis of Global Financing's segment results.

**Geographic Revenue**

In addition to the revenue presentation by reportable segment, the company also measures revenue performance on a geographic basis. The following geographic, regional and country-specific revenue performance excludes OEM revenue.

(\$ in millions)

| For the year ended December 31: | 2015     | 2014     | Yr.-to-Yr.<br>Percent<br>Change | Yr.-to-Yr.<br>Percent Change<br>Adjusted for<br>Currency* |
|---------------------------------|----------|----------|---------------------------------|---|
| <b>Total revenue</b>            | \$81,741 | \$92,793 | (11.9)%                         | (1.2)%  |
| Geographies                     | \$81,430 | \$92,326 | (11.8)%                         | (1.1)%  |
| Americas                        | 38,486   | 41,410   | (7.1)                           | (1.8)   |
| Europe/Middle East/Africa       | 26,073   | 30,700   | (15.1)                          | 0.3   |
| Asia Pacific                    | 16,871   | 20,216   | (16.5)                          | (1.7)   |

\* Adjusted for divestitures and currency

Americas revenue decreased year to year as reported and adjusted for currency. There was a decline in North America as reported and adjusted for currency. Latin America declined as reported, but grew adjusted for currency. The U.S. decreased 4.4 percent as reported and 3 percent adjusted for divestitures. Canada was down 17.2 percent as reported and 2 percent adjusted for currency (13 points) and divestitures (2 points). In Latin America, Brazil decreased 26.0 percent as reported and 2 percent adjusted for currency (22 points) and the divested businesses (2 points), while Mexico had growth of 0.5 percent as reported and 14 percent adjusted for currency (9 points) and divestitures (4 points).

EMEA revenue decreased year to year as reported, but was flat compared to 2014 adjusted for currency and the divested businesses. Germany decreased 13.2 percent as reported, but grew 7 percent adjusted for currency (17 points) and the divested businesses (3 points). The UK decreased 6.3 percent year to year as reported, but grew 3 percent adjusted for currency (7 points) and the divested businesses (2 points). The Middle East and Africa region decreased 4.8 percent as reported, but grew 5 percent adjusted for the divested businesses (6 points) and currency (4 points). Russia decreased 32.2 percent as reported and 24 percent adjusted for the divestitures.

Asia Pacific revenue decreased 16.5 percent as reported and 2 percent adjusted for currency (9 points) and the divested businesses (6 points) compared to 2014. Japan decreased 9.9 percent as reported, but had growth of 5 percent adjusted for currency (13 points) and the divested businesses (2 points). China decreased 34.4 percent as reported and 21 percent adjusted for the divested businesses (12 points) and currency (1 point). India decreased 3.8 percent as reported, but had growth of 8 percent adjusted for the divested businesses (7 points) and currency (5 points).

**Total Expense and Other (Income)**

(\$ in millions)

| For the year ended<br>December 31:                             | 2015     | 2014     | Yr.-to-Yr.<br>Percent/<br>Margin<br>Change |
|--|----------|----------|--|
| <b>Total consolidated<br/>expense and<br/>other (income)</b>   | \$24,740 | \$26,421 | (6.4)%                                     |
| Non-operating<br>adjustments                                   |          |          |  |
| Amortization of acquired<br>intangible assets                  | (304)    | (374)    | (18.8)                                     |
| Acquisition-related<br>charges                                 | (26)     | (12)     | 112.6                                      |
| Non-operating<br>retirement-related<br>(costs)/income          | (581)    | (180)    | 222.4                                      |
| <b>Operating (non-GAAP)<br/>expense and other<br/>(income)</b> | \$23,830 | \$25,855 | (7.8)%                                     |
| Total consolidated<br>expense-to-revenue<br>ratio              | 30.3%    | 28.5%    | 1.8 pts.                                   |
| Operating (non-GAAP)<br>expense-to-revenue<br>ratio            | 29.2%    | 27.9%    | 1.3 pts.                                   |

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Selling, General and Administrative**

(\$ in millions)

| For the year ended<br>December 31:                                      | 2015            | 2014            | Yr.-to-Yr.<br>Percent<br>Change |
|---|-----------------|-----------------|---------------------------------|
| <b>Selling, general and administrative expense</b>                      |                 |                 |                                 |
| Selling, general and administrative—other                               | \$16,643        | \$18,532        | (10.2)%                         |
| Advertising and promotional expense                                     | 1,290           | 1,307           | (1.3)                           |
| Workforce rebalancing charges   | 587             | 1,472           | (60.1)                          |
| Retirement-related costs  | 1,052           | 811             | 29.7                            |
| Amortization of acquired intangible assets                              | 304             | 374             | (18.8)                          |
| Stock-based compensation  | 322             | 350             | (8.0)                           |
| Bad debt expense  | 231             | 334             | (30.8)                          |
| <b>Total consolidated selling, general and administrative expense</b>   | <b>\$20,430</b> | <b>\$23,180</b> | <b>(11.9)%</b>                  |
| Non-operating adjustments   |                 |                 |                                 |
| Amortization of acquired intangible assets                              | (304)           | (374)           | (18.8)                          |
| Acquisition-related charges   | (21)            | (11)            | 81.1                            |
| Non-operating retirement-related (costs)/income                         | (533)           | (257)           | 107.3                           |
| <b>Operating (non-GAAP) selling, general and administrative expense</b> | <b>\$19,573</b> | <b>\$22,537</b> | <b>(13.2)%</b>                  |

Total SG&A expense decreased 11.9 percent versus 2014, primarily driven by the following factors:

- The effects of currency (7 points);
- Lower workforce rebalancing charges (3 points); and
- The impact of the divested System x business (1 point).

Operating (non-GAAP) expense decreased 13.2 percent year to year driven primarily by the same factors.

Bad debt expense decreased \$103 million in 2015 compared to 2014. The receivables provision coverage was 2.6 percent at December 31, 2015, an increase of 40 basis points from December 31, 2014.

**Research, Development and Engineering**

(\$ in millions)

| For the year ended<br>December 31:                                | 2015           | 2014           | Yr.-to-Yr.<br>Percent<br>Change |
|---|----------------|----------------|---------------------------------|
| <b>Total consolidated research, development and engineering</b>   |                |                |                                 |
|   | \$5,247        | \$5,437        | (3.5)%                          |
| Non-operating adjustment  |                |                |                                 |
| Non-operating retirement-related (costs)/income                   | (48)           | 77             | NM                              |
| <b>Operating (non-GAAP) research, development and engineering</b> | <b>\$5,200</b> | <b>\$5,514</b> | <b>(5.7)%</b>                   |

NM—Not meaningful

RD&E expense was 6.4 percent of revenue in 2015 and 5.9 percent of revenue in 2014.

RD&E expense decreased 3.5 percent in 2015 versus 2014 primarily driven by:

- The effects of currency (5 points); and
- The impact of the divested System x business (4 points); partially offset by
- Increased base spending (4 points); and
- Higher expense due to acquisitions (1 point).

Operating (non-GAAP) RD&E expense decreased 5.7 percent in 2015 compared to 2014, driven primarily by the same factors.

**Intellectual Property and Custom Development Income**

(\$ in millions)

| For the year ended<br>December 31:                              | 2015*        | 2014*        | Yr.-to-Yr.<br>Percent<br>Change |
|---|--------------|--------------|---------------------------------|
| Licensing of intellectual property including royalty-based fees | \$407        | \$378        | 7.6%                            |
| Custom development income                                       | 262          | 330          | (20.5)                          |
| Sales/other transfers of intellectual property                  | 13           | 34           | (62.6)                          |
| <b>Total</b>  | <b>\$682</b> | <b>\$742</b> | <b>(8.1)%</b>                   |

\* Reclassified to conform to 2016 presentation

The timing and amount of licensing, sales and other transfers of IP may vary significantly from period to period depending upon the timing of licensing agreements, economic conditions, industry consolidation and the timing of new patents and know-how development. There were no significant individual IP transactions in 2015 or 2014.

**Other (Income) and Expense**

(\$ in millions)

| For the year ended December 31:                          | 2015            | 2014              | Yr.-to-Yr. Percent Change |
|--|-----------------|-------------------|---------------------------|
| <b>Other (income) and expense</b>                        |                 |                   |                           |
| Foreign currency transaction losses/(gains)              | \$ 414          | \$ (599)          | NM                        |
| (Gains)/losses on derivative instruments                 | (853)           | 654               | NM                        |
| Interest income  | (72)            | (90)              | (19.8)%                   |
| Net (gains)/losses from securities and investment assets | 47              | (26)              | NM                        |
| Other  | (260)           | (1,878)           | (86.1)%                   |
| <b>Total consolidated other (income) and expense</b>     | <b>\$ (724)</b> | <b>\$ (1,938)</b> | <b>(62.6)%</b>            |
| Non-operating adjustment                                 |                 |                   |                           |
| Acquisition-related charges                              | (5)             | (1)               | NM                        |
| <b>Operating (non-GAAP) other (income) and expense</b>   | <b>\$ (729)</b> | <b>\$ (1,939)</b> | <b>(62.4)%</b>            |

NM—Not meaningful

The decrease in consolidated other income of \$1,214 million year over year was primarily driven by:

- Lower gains on divestitures (\$1,623 million) primarily associated with the divestitures of the System x and customer care businesses in 2014; and
- Higher foreign currency transaction losses (\$1,013 million); partially offset by
- Increased gains on derivative instruments (\$1,507 million).

**Interest Expense**

(\$ in millions)

| For the year ended December 31: | 2015         | 2014         | Yr.-to-Yr. Percent Change |
|---------------------------------|--------------|--------------|---------------------------|
| Interest expense                |              |              |                           |
| <b>Total</b>                    | <b>\$468</b> | <b>\$484</b> | <b>(3.2)%</b>             |

The decrease in interest expense compared to 2014 was primarily driven by lower average debt levels, partially offset by higher average interest rates. Overall interest expense (excluding capitalized interest) was \$1,009 million, a decrease of \$16 million year to year.

**Income Taxes**

The continuing operations effective tax rate for 2015 was 16.2 percent, a decrease of 5.0 points versus 2014, primarily driven by the following factors:

- The benefit resulting from the completion of the U.S. 2011-2012 tax audit in 2015, including the associated reserve redeterminations (3.9 points); and

- A benefit due to the geographic mix of pre-tax income in 2015 (3.5 points); partially offset by
- A reduced benefit year to year in the utilization of foreign tax credits (2.5 points).

The continuing operations operating (non-GAAP) effective tax rate was 17.2 percent, a decrease of 3.8 points versus 2014 principally driven by the same factors described above.

**Results of Discontinued Operations**

The loss from discontinued operations, net of tax, was \$0.2 billion in 2015 and \$3.7 billion in 2014. The loss from discontinued operations in 2014 included a nonrecurring pre-tax charge of \$4.7 billion, or \$3.4 billion, net of tax, which included an impairment to reflect the fair value less estimated costs to sell the Microelectronics business and other estimated costs related to the transaction, including cash consideration. The discontinued operations effective tax rate in 2015 was 40.3 percent compared to 30.2 percent in 2014.

**Financial Position**

At December 31, 2015, the company continued to have the financial flexibility to support the business over the long term. Cash and marketable securities at December 31, 2015 were \$8,195 million, a decrease of \$282 million from December 31, 2014. During the year, the company continued to manage the investment portfolio to meet its capital preservation and liquidity objectives.

Total debt of \$39,890 million decreased \$832 million from the December 31, 2014 level. Within total debt, \$27,205 million was in support of the Global Financing business which was leveraged at a 7.3 to 1 ratio. The company continued to have substantial flexibility in the debt markets. During 2015, the company completed bond issuances totaling \$3,368 million, with terms ranging from 3 to 7 years, and interest rates ranging from 0.53 to 2.88 percent depending on maturity.

Consistent with accounting standards, the company remeasured the funded status of its retirement and postretirement plans at December 31. At December 31, 2015, the overall net underfunded position was \$15,513 million, a decrease of \$1,419 million from December 31, 2014 driven by an increase in discount rates. At December 31, 2015, the company's qualified defined benefit plans were well funded. In 2015, the return on the U.S. Personal Pension Plan assets was negative 1.0 percent and the plan was 101 percent funded at December 31. Overall, global asset returns were negative 0.2 percent and the qualified defined benefit plans worldwide were 97 percent funded at December 31, 2015.

During 2015, the company generated \$17,008 million in cash from operations, an increase of \$139 million compared to 2014. The company generated \$13,075 million in free cash flow, an increase of \$703 million versus 2014. The company returned \$9,507 million to shareholders in 2015, with \$4,897 million in dividends and \$4,609 million in gross share repurchases. In 2015, the company repurchased 30.3 million shares and had \$5.6 billion remaining in share repurchase authorization at December 31, 2015.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**GAAP Reconciliation**

The tables below provide a reconciliation of the company's income statement results as reported under GAAP to its operating earnings presentation which is a non-GAAP measure. The company's calculation of operating (non-GAAP) earnings, as presented, may differ from similarly titled measures reported by other companies. Please refer to the "Operating (non-GAAP) Earnings" section on pages 26 and 27 for the company's rationale for presenting operating earnings information.

(\$ in millions except per share amount)

| <b>For the year ended December 31, 2015:</b>          | <b>GAAP</b> | <b>Acquisition-Related Adjustments</b> | <b>Retirement-Related Adjustments</b> | <b>Operating (non-GAAP)</b> |
|---|-------------|--|---------------------------------------|-----------------------------|
| Gross profit  | \$40,684    | \$ 373                                 | \$ 469                                | \$41,526                    |
| Gross profit margin                                   | 49.8%       | 0.5 pts.                               | 0.6 pts.                              | 50.8%                       |
| SG&A  | \$20,430    | (\$324)                                | (\$533)                               | \$19,573                    |
| RD&E  | 5,247       | —                                      | (48)                                  | 5,200                       |
| Other (income) and expense                            | (724)       | (5)                                    | —                                     | (729)                       |
| Total expense and other (income)                      | 24,740      | (330)                                  | (581)                                 | 23,830                      |
| Pre-tax income from continuing operations             | 15,945      | 703                                    | 1,050                                 | 17,697                      |
| Pre-tax margin from continuing operations             | 19.5%       | 0.9 pts.                               | 1.3 pts.                              | 21.6%                       |
| Provision for income taxes*                           | \$ 2,581    | \$ 141                                 | \$ 316                                | \$ 3,037                    |
| Effective tax rate                                    | 16.2%       | 0.2 pts.                               | 0.9 pts.                              | 17.2%                       |
| Income from continuing operations                     | \$13,364    | \$ 562                                 | \$ 734                                | \$14,659                    |
| Income margin from continuing operations              | 16.3%       | 0.7 pts.                               | 0.9 pts.                              | 17.9%                       |
| Diluted earnings per share from continuing operations | \$ 13.60    | \$0.57                                 | \$0.75                                | \$ 14.92                    |

\* The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

(\$ in millions except per share amount)

| <b>For the year ended December 31, 2014:</b>          | <b>GAAP</b> | <b>Acquisition-Related Adjustments</b> | <b>Retirement-Related Adjustments</b> | <b>Operating (non-GAAP)</b> |
|---|-------------|--|---------------------------------------|-----------------------------|
| Gross profit  | \$46,407    | \$ 416                                 | \$ 173                                | \$46,996                    |
| Gross profit margin                                   | 50.0%       | 0.4 pts.                               | 0.2 pts.                              | 50.6%                       |
| SG&A  | \$23,180    | (\$385)                                | (\$257)                               | \$22,537                    |
| RD&E  | 5,437       | —                                      | 77                                    | 5,514                       |
| Other (income) and expense                            | (1,938)     | (1)                                    | —                                     | (1,939)                     |
| Total expense and other (income)                      | 26,421      | (386)                                  | (180)                                 | 25,855                      |
| Pre-tax income from continuing operations             | 19,986      | 803                                    | 353                                   | 21,142                      |
| Pre-tax margin from continuing operations             | 21.5%       | 0.9 pts.                               | 0.4 pts.                              | 22.8%                       |
| Provision for income taxes*                           | \$ 4,234    | \$ 133                                 | \$ 73                                 | \$ 4,440                    |
| Effective tax rate                                    | 21.2%       | (0.2) pts.                             | 0.0 pts.                              | 21.0%                       |
| Income from continuing operations                     | \$15,751    | \$ 670                                 | \$ 280                                | \$16,702                    |
| Income margin from continuing operations              | 17.0%       | 0.7 pts.                               | 0.3 pts.                              | 18.0%                       |
| Diluted earnings per share from continuing operations | \$ 15.59    | \$0.66                                 | \$0.28                                | \$ 16.53                    |

\* The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

**OTHER INFORMATION****Looking Forward**

The company's strategies, investments and actions are all taken with an objective of optimizing long-term performance. A long-term perspective ensures that the company is well-positioned to take advantage of the major shifts in technology, business and the global economy.

Within the IT industry, there are major shifts occurring—driven by cognitive; including data and analytics, cloud and changes in the ways individuals and enterprises are engaging. The company is bringing together its cognitive technologies on cloud platforms that create industry-based solutions in order to solve enterprise clients' real-world problems. The company continues to address the higher value areas of enterprise IT and is amassing a unique set of capabilities and is differentiating itself from other technology providers as it moves into new spaces, and in some cases, creating entirely new markets. IBM is more than a hardware, software and services company; it has emerged as a cognitive solutions and cloud platform company. The company's strategic imperatives—cloud, analytics, mobile, social and security solutions—are focused on these market shifts.

In 2016, the company made significant progress in its transformation, including strong revenue growth in the strategic imperatives, repositioning of the core businesses, continued high levels of investment, both organic and through acquisitions, and remixing skills. The company had 13 percent growth as reported (14 percent adjusted for currency) in the strategic imperatives, generating \$33 billion of revenue, which represented 41 percent of total revenue. The growth rate achieved in 2016 keeps the company ahead of track of previous expectations of \$40 billion of revenue from the strategic imperatives in 2018. In addition, the company expects to continue to allocate its capital efficiently and effectively to investments, and to return value to its shareholders through a combination of dividends and share repurchases. Over the long term, in consideration of the opportunities it will continue to develop, the company expects to have the ability to generate low single-digit revenue growth, and with a higher value business mix, high single-digit operating (non-GAAP) earnings per share growth, with free cash flow realization of GAAP net income in the 90 to 100 percent range.

The company enters 2017 in a stronger position than a year ago, even taking into account the ongoing shifts in the IT industry, country-specific issues and opportunities, certain macro effects of currency and potential tax reform. In 2017, the company will continue to focus on growing the strategic imperatives and the transformation of its core businesses, with a continued high level of investment, although the higher-level investment that began

in 2015 has now fully wrapped on a year-to-year basis. While pre-tax income is expected to decline year to year on a GAAP basis due to higher non-operating pension expense, the company expects growth in operating (non-GAAP) pre-tax income in 2017. In order to achieve these expectations, gross profit margin expansion is not required, which gives the company flexibility to accelerate its shift into as-a-Service faster. The company expects to continue to monetize its technology, including through IP licensing arrangements in 2017, with the opportunity for IP income to be flat year to year. Consistent with the long-term model, the company also expects over the course of 2017 to continue to acquire key capabilities, remix skills, invest in areas of growth and return value to shareholders. This is all taken into account in the full-year view. Overall, the company expects GAAP earnings per share from continuing operations for 2017 to be at least \$11.95. Excluding acquisition-related charges of \$0.75 per share and non-operating retirement-related items of \$1.10 per share, operating (non-GAAP) earnings per share is expected to be at least \$13.80. For the first quarter of 2017, the company expects operating (non-GAAP) earnings per share to be approximately 17 percent of the full year expectation. The company expects a discrete tax benefit in the first quarter of 2017, similar to the first quarter of 2016, though smaller in size, and other actions are expected to offset a portion of the benefit. This is taken into account in the earnings per share skew for first quarter.

Free cash flow realization, defined as free cash flow to income from continuing operations (GAAP), was 97 percent as reported in 2016 and is again expected to be in excess of 90 percent in 2017. The company expects free cash flow to be essentially flat year to year.

The company expects that the 2017 GAAP tax rate will be approximately 3 points lower than the operating (non-GAAP) tax rate expectation. Expectations for the operating (non-GAAP) tax rate are approximately 15 percent plus or minus three points, excluding discrete items. The rate will change year to year based on nonrecurring events, such as the settlement of income tax audits and changes in tax laws, as well as recurring factors including the geographic mix of income before taxes, the timing and amount of foreign dividend repatriation, state and local taxes and the effects of various global income tax strategies.

In January 2017, the company announced a reorganization of its client and commercial financing business as a wholly owned subsidiary, IBM Credit, LLC. The subsidiary is expected to begin accessing capital markets directly in 2017 and the company expects to increase its financing business leverage from 7:1 to 9:1. See page 81 for additional information.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

The company expects 2017 pre-tax retirement-related plan cost to be approximately \$2.9 billion, an increase of approximately \$900 million compared to 2016. This estimate reflects current pension plan assumptions at December 31, 2016. Within total retirement-related plan cost, operating retirement-related plan cost is expected to be approximately \$1.4 billion, approximately flat versus 2016. Non-operating retirement-related plan cost is expected to be approximately \$1.5 billion, an increase of approximately \$900 million compared to 2016, driven by lower income from expected return on assets. Contributions for all retirement-related plans are expected to be approximately \$2.5 billion in 2017, an increase of approximately \$100 million compared to 2016.

For a discussion of new accounting standards that the company will adopt in future periods, please see note B, "Accounting Changes," beginning on page 99.

**Liquidity and Capital Resources**

The company has consistently generated strong cash flow from operations, providing a source of funds ranging between \$16.9 billion and \$19.6 billion per year over the past five years. The company provides for additional liquidity through several sources: maintaining an adequate cash balance, access to global funding sources, a committed global credit facility and other committed and uncommitted lines of credit worldwide. The following table provides a summary of the major sources of liquidity for the years ended December 31, 2012 through 2016.

**Cash Flow and Liquidity Trends**

(\$ in billions)

|   | 2016    | 2015    | 2014    | 2013    | 2012    |
|---|---------|---------|---------|---------|---------|
| Net cash from operating activities        | \$ 17.0 | \$ 17.0 | \$ 16.9 | \$ 17.5 | \$ 19.6 |
| Cash and short-term marketable securities | \$ 8.5  | \$ 8.2  | \$ 8.5  | \$ 11.1 | \$ 11.1 |
| Committed global credit facility          | \$ 10.3 | \$ 10.0 | \$ 10.0 | \$ 10.0 | \$ 10.0 |

The major rating agencies' ratings on the company's debt securities at December 31, 2016 appear in the following table and remain unchanged from December 31, 2015. The company's indenture governing its debt securities and its various credit facilities each contain significant covenants which obligate the company to promptly pay principal and interest, limit the aggregate amount of secured indebtedness and sale and leaseback transactions to 10 percent of the company's consolidated net tangible assets, and restrict the company's ability to merge or consolidate unless certain conditions are met. The credit facilities also include a covenant on the company's consolidated net interest expense ratio, which cannot be less than 2.20 to 1.0, as well as a cross default provision with respect to other defaulted indebtedness of at least \$500 million.

The company is in compliance with all of its significant debt covenants and provides periodic certification to its lenders. The failure to comply with its debt covenants could constitute an event of default with respect to the debt to which such provisions apply. If certain events of default were to occur, the principal and interest on the debt to which such event of default applied would become immediately due and payable.

The company does not have "ratings trigger" provisions in its debt covenants or documentation, which would allow the holders to declare an event of default and seek to accelerate payments thereunder in the event of a change in credit rating. The company's contractual agreements governing derivative instruments contain standard market clauses which can trigger the termination of the agreement if the company's credit rating were to fall below investment grade. At December 31, 2016, the fair value of those instruments that were in a liability position was \$206 million, before any applicable netting, and this position is subject to fluctuations in fair value period to period based on the level of the company's outstanding instruments and market conditions. The company has no other contractual arrangements that, in the event of a change in credit rating, would result in a material adverse effect on its financial position or liquidity.

|                       | Standard & Poor's | Moody's Investors Service | Fitch Ratings |
|-----------------------|-------------------|---------------------------|---------------|
| Senior long-term debt | AA-               | Aa3                       | A+            |
| Commercial paper      | A-1+              | Prime-1                   | F1            |

The company prepares its Consolidated Statement of Cash Flows in accordance with applicable accounting standards for cash flow presentation on page 87 and highlights causes and events underlying sources and uses of cash in that format on page 47. For the purpose of running its business, the company manages, monitors and analyzes cash flows in a different format.

Management uses free cash flow as a measure to evaluate its operating results, plan share repurchase levels, strategic investments and assess its ability and need to incur and service debt. The entire free cash flow amount is not necessarily available for discretionary expenditures. The company defines free cash flow as net cash from operating activities less the change in Global Financing receivables and net capital expenditures, including the investment in software. A key objective of the Global Financing business is to generate strong returns on equity, and increasing receivables is the basis for growth. Accordingly, management considers Global Financing receivables as a profit-generating investment, not as working capital that should be minimized for efficiency. Therefore, management includes presentations of both free cash flow and net cash from operating activities that exclude the effect of Global Financing receivables. Free cash flow guidance is derived using an estimate of profit, working capital and operational cash outflows. As previously noted, the company views Global Financing receivables as a profit generating investment which it seeks to maximize and therefore it is not considered when formulating guidance for free cash flow. As a result, the company does not estimate a GAAP Net Cash from Operations expectation metric.

From the perspective of how management views cash flow, in 2016, after investing \$3.7 billion in capital investments primarily in support of cloud and cognitive, the services backlog and the upcoming new hardware product cycles, the company generated free cash flow of \$11.6 billion, a decrease of \$1.5 billion compared to 2015. The decrease was driven primarily by

performance-related declines in net income and a decline in cash provided by trade receivables; partially offset by a reduction in cash tax payments.

In 2016, the company continued to focus its cash utilization on returning value to shareholders including \$5.3 billion in dividends and \$3.5 billion in gross common stock repurchases (23.3 million shares). In addition, \$5.7 billion was utilized for 15 acquisitions in 2016.

Over the past five years, the company generated over \$70 billion in free cash flow. During that period, the company invested over \$16 billion in strategic acquisitions and returned over \$65 billion to shareholders through dividends and net share repurchases. The company's performance during this period demonstrates that there is fungibility across the elements of share repurchases, dividends and acquisitions. The amount of prospective returns to shareholders in the form of dividends and share repurchases will vary based upon several factors including each year's operating results, capital expenditure requirements, research and development investments and acquisitions, as well as the factors discussed below.

The company's Board of Directors meets quarterly to consider the dividend payment. In the second quarter of 2016, the Board of Directors increased the company's quarterly common stock dividend from \$1.30 to \$1.40 per share.

The table below represents the way in which management reviews cash flow as described above.

(\$ in billions)

| <b>For the year ended December 31:</b>                                     | <b>2016</b> | <b>2015</b> | <b>2014</b> | <b>2013</b> | <b>2012</b> |
|--|-------------|-------------|-------------|-------------|-------------|
| Net cash from operating activities per GAAP                                | \$17.0      | \$17.0      | \$ 16.9     | \$ 17.5     | \$ 19.6     |
| Less: the change in Global Financing receivables                           | 1.7         | 0.2         | 0.7         | (1.3)       | (2.9)       |
| Net cash from operating activities, excluding                              |             |             |             |             |             |
| Global Financing receivables   | 15.3        | 16.9        | 16.2        | 18.8        | 22.5        |
| Capital expenditures, net  | (3.7)       | (3.8)       | (3.8)       | (3.8)       | (4.3)       |
| Free cash flow (FCF)   | 11.6        | 13.1        | 12.4        | 15.0        | 18.2        |
| Acquisitions   | (5.7)       | (3.3)       | (0.7)       | (3.1)       | (3.7)       |
| Divestitures   | (0.5)       | (0.4)       | 2.4         | 0.3         | 0.6         |
| Share repurchase   | (3.5)       | (4.6)       | (13.7)      | (13.9)      | (12.0)      |
| Dividends  | (5.3)       | (4.9)       | (4.3)       | (4.1)       | (3.8)       |
| Non-Global Financing debt  | 1.3         | (0.1)       | (1.3)       | 3.2         | 0.7         |
| Other (includes Global Financing receivables and<br>Global Financing debt) | 2.3         | 0.0         | 2.6         | 2.4         | (0.8)       |
| Change in cash, cash equivalents and short-term<br>marketable securities   | \$ 0.3      | \$ (0.3)    | \$ (2.6)    | \$ (0.1)    | \$ (0.8)    |
| <b>FCF as percent of Income from Continuing Operations</b>                 | <b>97%</b>  | <b>98%</b>  | <b>79%</b>  | <b>89%</b>  | <b>107%</b> |

**Management Discussion**

## International Business Machines Corporation and Subsidiary Companies

Events that could temporarily change the historical cash flow dynamics discussed previously include significant changes in operating results, material changes in geographic sources of cash, unexpected adverse impacts from litigation, future pension funding requirements during periods of severe downturn in the capital markets or the timing of tax payments. Whether any litigation has such an adverse impact will depend on a number of variables, which are more completely described in note M, "Contingencies and Commitments," on pages 127 to 129. With respect to pension funding, in 2016, the company contributed \$507 million to its non-U.S. defined benefit plans compared to \$514 million in 2015. As highlighted in the Contractual Obligations table, the company expects to make legally mandated pension plan contributions to certain non-U.S. plans of approximately \$2.3 billion in the next five years. The 2017 contributions are currently expected to be approximately \$500 million. Contributions related to all retirement-related plans is expected to be approximately \$2.5 billion in 2017, an increase of approximately \$100 million compared to 2016. Financial market performance could increase the legally mandated minimum contributions in certain non-U.S. countries that require more frequent remeasurement of the funded status. The company is not quantifying any further impact from pension funding because it is not possible to predict future movements in the capital markets or pension plan funding regulations.

The Pension Protection Act of 2006 was enacted into law in 2006, and, among other things, increased the funding requirements for certain U.S. defined benefit plans beginning after December 31, 2007. No mandatory contribution is required for the U.S. defined benefit plan in 2017 as of December 31, 2016.

**Contractual Obligations**

(\$ in millions)

|  | Total Contractual Payment Stream | Payments Due In |                 |                 |                 |
|--|----------------------------------|-----------------|-----------------|-----------------|-----------------|
|  |                                  | 2017            | 2018–19         | 2020–21         | After 2021      |
| Long-term debt obligations                               | \$41,138                         | \$ 6,238        | \$10,109        | \$ 8,506        | \$16,284        |
| Interest on long-term debt obligations                   | 10,372                           | 1,240           | 1,843           | 1,329           | 5,960           |
| Capital (finance) lease obligations                      | 7                                | 1               | 4               | 2               | —               |
| Operating lease obligations                              | 6,883                            | 1,414           | 2,546           | 1,812           | 1,111           |
| Purchase obligations                                     | 3,334                            | 799             | 1,211           | 783             | 541             |
| Other long-term liabilities:                             |                                  |                 |                 |                 |                 |
| Minimum defined benefit plan pension funding (mandated)* | 2,300                            | 500             | 1,000           | 800             | —               |
| Excess 401(k) Plus Plan                                  | 1,675                            | 181             | 402             | 456             | 636             |
| Long-term termination benefits                           | 1,322                            | 428             | 183             | 117             | 595             |
| Tax reserves**   | 3,066                            | 966             |                 |                 |                 |
| Divestiture related                                      | 488                              | 302             | 167             | 18              | —               |
| Other  | 1,117                            | 91              | 142             | 99              | 785             |
| <b>Total</b>   | <b>\$71,702</b>                  | <b>\$12,160</b> | <b>\$17,607</b> | <b>\$13,921</b> | <b>\$25,913</b> |

\* As funded status on plans will vary, obligations for mandated minimum pension payments after 2021 could not be reasonably estimated.

\*\*These amounts represent the liability for unrecognized tax benefits. The company estimates that approximately \$966 million of the liability is expected to be settled within the next 12 months. The settlement period for the noncurrent portion of our income tax liability cannot be reasonably estimated as the timing of the payments will depend on the progress of tax examinations with the various tax authorities; however, it is not expected to be due within the next 12 months.

The company's U.S. cash flows continue to be sufficient to fund its current domestic operations and obligations, including investing and financing activities such as dividends and debt service. The company's U.S. operations generate substantial cash flows, and, in those circumstances where the company has additional cash requirements in the U.S., the company has several liquidity options available. These options may include the ability to borrow additional funds at reasonable interest rates, utilizing its committed global credit facility, repatriating certain foreign earnings and utilizing intercompany loans with certain foreign subsidiaries.

The company does earn a significant amount of its pre-tax income outside the U.S. The company's policy is to indefinitely reinvest the undistributed earnings of its foreign subsidiaries, and accordingly, no provision for federal income taxes has been made on accumulated earnings of foreign subsidiaries. The company periodically repatriates a portion of these earnings to the extent that it does not incur an additional U.S. tax liability. Quantification of the deferred tax liability, if any, associated with indefinitely reinvested earnings is not practicable. While the company currently does not have a need to repatriate funds held by its foreign subsidiaries, if these funds are needed for operations and obligations in the U.S., the company could elect to repatriate these funds which could result in a reassessment of the company's policy and increased tax expense.

Total contractual obligations are reported in the previous table excluding the effects of time value, and therefore, may not equal the amounts reported in the Consolidated Statement of Financial Position. Certain noncurrent liabilities are excluded from the previous table as their future cash outflows are uncertain. This includes deferred taxes, derivatives, deferred income, disability benefits and other sundry items. Certain obligations related to the company's divestitures are included.

Purchase obligations include all commitments to purchase goods or services of either a fixed or minimum quantity that meet any of the following criteria: (1) they are noncancelable, (2) the company would incur a penalty if the agreement was canceled, or (3) the company must make specified minimum payments even if it does not take delivery of the contracted products or services (take-or-pay). If the obligation to purchase goods or services is noncancelable, the entire value of the contract is included in the previous table. If the obligation is cancelable, but the company would incur a penalty if canceled, the dollar amount of the penalty is included as a purchase obligation. Contracted minimum amounts specified in take-or-pay contracts are also included in the table as they represent the portion of each contract that is a firm commitment.

In the ordinary course of business, the company enters into contracts that specify that the company will purchase all or a portion of its requirements of a specific product, commodity or service from a supplier or vendor. These contracts are generally entered into in order to secure pricing or other negotiated terms. They do not specify fixed or minimum quantities to be purchased and, therefore, the company does not consider them to be purchase obligations.

Interest on floating-rate debt obligations is calculated using the effective interest rate at December 31, 2016, plus the interest rate spread associated with that debt, if any.

#### Off-Balance Sheet Arrangements

From time to time, the company may enter into off-balance sheet arrangements as defined by SEC Financial Reporting Release 67 (FRR-67), "Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations."

At December 31, 2016, the company had no off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources. See the table on page 70 for the company's contractual obligations and note M, "Contingencies and Commitments," on page 129 for detailed information about the company's guarantees, financial commitments and indemnification arrangements. The company does not have retained interests in assets transferred to unconsolidated entities or other material off-balance sheet interests or instruments.

#### Critical Accounting Estimates

The application of GAAP requires the company to make estimates and assumptions about certain items and future events that directly affect its reported financial condition. The accounting estimates and assumptions discussed in this section are those that the company considers to be the most critical to its financial statements. An accounting estimate is considered critical if both (a) the nature of the estimate or assumption is material due to the levels of subjectivity and judgment involved, and (b) the impact within a reasonable range of outcomes of the estimate and assumption is material to the company's financial condition. Senior management has discussed the development, selection and disclosure of these estimates with the Audit Committee of the company's Board of Directors. The company's significant accounting policies are described in note A, "Significant Accounting Policies," on pages 90 to 99.

A quantitative sensitivity analysis is provided where that information is reasonably available, can be reliably estimated and provides material information to investors. The amounts used to assess sensitivity (e.g., 1 percent, 10 percent, etc.) are included to allow users of the Annual Report to understand a general direction cause and effect of changes in the estimates and do not represent management's predictions of variability. For all of these estimates, it should be noted that future events rarely develop exactly as forecasted, and estimates require regular review and adjustment.

#### Pension Assumptions

For the company's defined benefit pension plans, the measurement of the benefit obligation to employees and net periodic pension (income)/cost requires the use of certain assumptions, including, among others, estimates of discount rates and expected return on plan assets.

Changes in the discount rate assumptions would impact the (gain)/loss amortization and interest cost components of the net periodic pension (income)/cost calculation and the projected benefit obligation (PBO). The company decreased the discount rate assumption for the IBM Personal Pension Plan (PPP), a U.S.-based defined benefit plan, by 20 basis points to 3.80 percent on December 31, 2016. This change will increase pre-tax cost and expense recognized in 2017 by an estimated \$61 million. If the discount rate assumption for the PPP had increased by 20 basis points on December 31, 2016, pre-tax cost and expense recognized in 2017 would have decreased by an estimated \$63 million. Changes in the discount rate assumptions would impact the PBO which, in turn, may impact the company's funding decisions if the PBO exceeds plan assets. A 25 basis point increase or decrease in the discount rate would cause a corresponding decrease or increase, respectively, in the PPP's PBO of an estimated \$1.2 billion based upon December 31, 2016 data.

The expected long-term return on plan assets assumption is used in calculating the net periodic pension (income)/cost. Expected returns on plan assets are calculated based on the market-related value of plan assets, which recognizes changes in the fair value of plan assets systematically over a five-year period in the expected return on plan assets line in net periodic pension (income)/cost. The differences between the actual return on plan assets and the expected long-term return on plan assets are recognized over five years in the expected return on plan assets line in net periodic pension (income)/cost and also as a component of actuarial (gains)/losses, which are recognized over the service lives or life expectancy of the participants, depending on the plan, provided such amounts exceed thresholds which are based upon the benefit obligation or the value of plan assets, as provided by accounting standards.

To the extent the outlook for long-term returns changes such that management changes its expected long-term return on plan assets assumption, each 50 basis point increase or decrease in the expected long-term return on PPP plan assets assumption would have an estimated decrease or increase, respectively, of \$263 million on the following year's pre-tax net periodic pension (income)/cost (based upon the PPP's plan assets at December 31, 2016 and assuming no contributions are made in 2017).

The company may voluntarily make contributions or be required, by law, to make contributions to its pension plans. Actual results that differ from the estimates may result in more or less future company funding into the pension plans than is planned by management. Impacts of these types of changes on the company's pension plans in other countries worldwide would vary depending upon the status of each respective plan.

In addition to the above, the company evaluates other pension assumptions involving demographic factors, such as retirement age and mortality, and updates these assumptions to reflect experience and expectations for the future. Actual results in any given year can differ from actuarial assumptions because of economic and other factors.

For additional information on the company's pension plans and the development of these assumptions, see Note S, "Retirement-Related Benefits," on pages 143 and 144.

#### **Revenue Recognition**

Application of the various accounting principles in GAAP related to the measurement and recognition of revenue requires the company to make judgments and estimates. Specifically, complex arrangements with nonstandard terms and conditions may require significant contract interpretation to determine the appropriate accounting, including whether the deliverables specified in a multiple-deliverable arrangement should be treated as separate units of accounting. Other significant judgments include determining whether IBM or a reseller is acting as the principal in a transaction and whether separate contracts are considered part of one arrangement.

Revenue recognition is also impacted by the company's ability to estimate sales incentives, expected returns and collectibility. The company considers various factors, including a review of specific transactions, the creditworthiness of the customers, historical experience and market and economic conditions when

calculating these provisions and allowances. Evaluations are conducted each quarter to assess the adequacy of the estimates. If these estimates were changed by 10 percent in 2016, net income would have been impacted by \$79 million (excluding Global Financing receivables).

#### **Costs to Complete Service Contracts**

The company enters into numerous service contracts through its services businesses. During the contractual period, revenue, cost and profits may be impacted by estimates of the ultimate profitability of each contract, especially contracts for which the company uses the percentage-of-completion (POC) method of accounting. If at any time these estimates indicate the POC contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately in cost. The company performs ongoing profitability analyses of its POC-based services contracts in order to determine whether the latest estimates require updating. Key factors reviewed by the company to estimate the future costs to complete each contract are future labor costs, future product costs and expected productivity efficiencies. Contract loss provisions recorded as a component of other accrued expenses and liabilities were \$13 million and \$12 million at December 31, 2016 and 2015, respectively.

#### **Income Taxes**

The company is subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgments are required in determining the consolidated provision for income taxes.

During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. As a result, the company recognizes tax liabilities based on estimates of whether additional taxes and interest will be due. These tax liabilities are recognized when, despite the company's belief that its tax return positions are supportable, the company believes that certain positions may not be fully sustained upon review by tax authorities. The company believes that its accruals for tax liabilities are adequate for all open audit years based on its assessment of many factors, including past experience and interpretations of tax law. This assessment relies on estimates and assumptions, and may involve a series of complex judgments about future events. To the extent that new information becomes available which causes the company to change its judgment regarding the adequacy of existing tax liabilities, such changes to tax liabilities will impact income tax expense in the period in which such determination is made.

Significant judgment is also required in determining any valuation allowance recorded against deferred tax assets. In assessing the need for a valuation allowance, management considers all available evidence for each jurisdiction including past operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies. In the event that the company changes its determination as to the amount of deferred tax assets that can be realized, the company will adjust its valuation allowance with a corresponding impact to income tax expense in the period in which such determination is made.

The consolidated provision for income taxes will change period to period based on nonrecurring events, such as the settlement of income tax audits and changes in tax laws, as well as recurring factors including the geographic mix of income before taxes, the timing and amount of foreign dividend repatriation, state and local taxes and the effects of various global income tax strategies.

To the extent that the provision for income taxes increases/decreases by 1 percent of income from continuing operations before income taxes, consolidated net income would have decreased/improved by \$123 million in 2016.

#### **Valuation of Assets**

The application of business combination and impairment accounting requires the use of significant estimates and assumptions. The acquisition method of accounting for business combinations requires the company to estimate the fair value of assets acquired, liabilities assumed, and any noncontrolling interest in the acquiree to properly allocate purchase price consideration between assets that are depreciated and amortized from goodwill and indefinite-lived intangible assets. Impairment testing for assets, other than goodwill and indefinite-lived intangible assets, requires the allocation of cash flows to those assets or group of assets and if required, an estimate of fair value for the assets or group of assets. The company's estimates are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable. These valuations require the use of management's assumptions, which would not reflect unanticipated events and circumstances that may occur.

#### **Valuation of Goodwill**

The company reviews goodwill for impairment annually and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable. In 2015, the company elected to perform the first step of the quantitative test to compare the fair value of each reporting unit to its carrying value instead of first conducting a qualitative assessment. In 2016, the company resumed the assessment of qualitative risk factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount.

The company assesses qualitative factors in each of its reporting units that carry goodwill including relevant events and circumstances that affect the fair value of reporting units. Examples include, but are not limited to, macroeconomic, industry and market conditions; as well as other individual factors such as:

- A loss of key personnel;
- A significant adverse shift in the operating environment of the reporting unit such as unanticipated competition;
- A significant pending litigation;
- A more likely than not expectation that a reporting unit or a significant portion of a reporting unit will be sold or otherwise disposed of; and
- An adverse action or assessment by a regulator.

The company assesses these qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. This quantitative test is required only if the company concludes that it is more likely than not that a reporting unit's fair value is less than its carrying amount.

In the fourth quarter, the company performed its annual goodwill impairment analysis. The qualitative assessment illustrated evidence of a potential impairment triggering event as a result of the financial performance of the Systems reporting unit. The quantitative analysis resulted in no impairment as the reporting unit's estimated fair value exceeded the carrying amount by over 100 percent.

#### **Loss Contingencies**

The company is currently involved in various claims and legal proceedings. At least quarterly, the company reviews the status of each significant matter and assesses its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be reasonably estimated, the company accrues a liability for the estimated loss. Significant judgment is required in both the determination of probability and the determination as to whether an exposure is reasonably estimable. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, the company reassesses the potential liability related to its pending claims and litigation, and may revise its estimates. These revisions in the estimates of the potential liabilities could have a material impact on the company's results of operations and financial position.

#### **Global Financing Receivables Allowance for Credit Losses**

The Global Financing business reviews its financing receivables portfolio at least quarterly in order to assess collectibility. A description of the methods used by management to estimate the amount of uncollectible receivables is included in note A, "Significant Accounting Policies," on page 98. Factors that could result in actual receivable losses that are materially different from the estimated reserve include sharp changes in the economy, or a significant change in the economic health of a particular client that represents a concentration in Global Financing's receivables portfolio.

To the extent that actual collectibility differs from management's estimates currently provided for by 10 percent, Global Financing's segment pre-tax income and the company's income from continuing operations before income taxes would be higher or lower by an estimated \$44 million depending upon whether the actual collectibility was better or worse, respectively, than the estimates.

#### **Residual Value**

Residual value represents the estimated fair value of equipment under lease as of the end of the lease. Residual value estimates impact the determination of whether a lease is classified as operating or capital. Global Financing estimates the future fair value of leased equipment by using historical models, analyzing the current market for new and used equipment, and obtaining forward-looking product information such as marketing plans

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and technological innovations. Residual value estimates are periodically reviewed and “other than temporary” declines in estimated future residual values are recognized upon identification. Anticipated increases in future residual values are not recognized until the equipment is remarketed.

Factors that could cause actual results to materially differ from the estimates include significant changes in the used-equipment market brought on by unforeseen changes in technology innovations and any resulting changes in the useful lives of used equipment.

To the extent that actual residual value recovery is lower than management’s estimates by 10 percent, Global Financing’s segment pre-tax income and the company’s income from continuing operations before income taxes for 2016 would have been lower by an estimated \$72 million. If the actual residual value recovery is higher than management’s estimates, the increase in income will be realized at the end of lease when the equipment is remarketed.

**Currency Rate Fluctuations**

Changes in the relative values of non-U.S. currencies to the U.S. dollar affect the company’s financial results and financial position. At December 31, 2016, currency changes resulted in assets and liabilities denominated in local currencies being translated into less dollars than at year-end 2015. The company uses financial hedging instruments to limit specific currency risks related to financing transactions and other foreign currency-based transactions.

During periods of sustained movements in currency, the marketplace and competition adjust to the changing rates. For example, when pricing offerings in the marketplace, the company may use some of the advantage from a weakening U.S. dollar to improve its position competitively, and price more aggressively to win the business, essentially passing on a portion of the currency advantage to its customers. Competition will frequently take the same action. Consequently, the company believes that some of the currency-based changes in cost impact the prices charged to clients. The company also maintains currency hedging programs for cash management purposes which temporarily mitigate, but do not eliminate, the volatility of currency impacts on the company’s financial results.

The company translates revenue, cost and expense in its non-U.S. operations at current exchange rates in the reported period. References to “adjusted for currency” or “constant currency” reflect adjustments based upon a simple mathematical formula. However, this constant currency methodology that the company utilizes to disclose this information does not incorporate any operational actions that management may take in reaction to fluctuating currency rates. Currency movements impacted the company’s year-to-year revenue and earnings per share growth in 2016. Based on the currency rate movements in 2016, total revenue decreased 2.2 percent as reported and 1.6 percent at constant currency versus 2015. On an income from continuing operations before income taxes basis, these translation impacts offset by the net impact of hedging activities resulted in a theoretical maximum (assuming no pricing or sourcing actions) increase of approximately \$125 million in 2016, on an

as-reported basis and an increase of approximately \$150 million on an operating (non-GAAP) basis. The same mathematical exercise resulted in a decrease of approximately \$900 million in 2015 on an as-reported basis and a decrease of approximately \$1,000 million on an operating (non-GAAP) basis. The company views these amounts as a theoretical maximum impact to its as-reported financial results. Considering the operational responses mentioned above, movements of exchange rates, and the nature and timing of hedging instruments, it is difficult to predict future currency impacts on any particular period, but the company believes it could be substantially less than the theoretical maximum given the competitive pressure in the marketplace.

For non-U.S. subsidiaries and branches that operate in U.S. dollars or whose economic environment is highly inflationary, translation adjustments are reflected in results of operations. Generally, the company manages currency risk in these entities by linking prices and contracts to U.S. dollars.

The company continues to monitor the economic conditions in Venezuela. In mid-February 2016, changes to the currency exchange systems were announced which eliminated the SICAD exchange rate and replaced the SIMADI rate with DICOM, which is expected to be a floating exchange rate. The company recorded a pre-tax loss of \$43 million in the first quarter of 2016 in other (income) and expense in the Consolidated Statement of Earnings as a result of the elimination of SICAD and devaluation of the new exchange. The system for currency exchange in Venezuela has remained constant through the fourth quarter and the company continued to use the SIMADI rate since the DICOM rate had not been instrumented by the authorities. Total pre-tax loss for 2016 was \$48 million. The company’s net assets denominated in local currency were \$11 million at December 31, 2016. The company’s operations in Venezuela comprised less than 1 percent of total 2016, 2015 and 2014 revenue, respectively.

**Market Risk**

In the normal course of business, the financial position of the company is routinely subject to a variety of risks. In addition to the market risk associated with interest rate and currency movements on outstanding debt and non-U.S. dollar denominated assets and liabilities, other examples of risk include collectibility of accounts receivable and recoverability of residual values on leased assets.

The company regularly assesses these risks and has established policies and business practices to protect against the adverse effects of these and other potential exposures. As a result, the company does not anticipate any material losses from these risks.

The company’s debt, in support of the Global Financing business and the geographic breadth of the company’s operations, contains an element of market risk from changes in interest and currency rates. The company manages this risk, in part, through the use of a variety of financial instruments including derivatives, as described in note D, “Financial Instruments—Derivative Financial Instruments,” on pages 110 through 114.

To meet disclosure requirements, the company performs a sensitivity analysis to determine the effects that market risk exposures may have on the fair values of the company's debt and other financial instruments.

The financial instruments that are included in the sensitivity analysis are comprised of the company's cash and cash equivalents, marketable securities, short-term and long-term loans, commercial financing and installment payment receivables, investments, long-term and short-term debt and derivative financial instruments. The company's derivative financial instruments generally include interest rate swaps, foreign currency swaps and forward contracts.

To perform the sensitivity analysis, the company assesses the risk of loss in fair values from the effect of hypothetical changes in interest rates and foreign currency exchange rates on market-sensitive instruments. The market values for interest and foreign currency exchange risk are computed based on the present value of future cash flows as affected by the changes in rates that are attributable to the market risk being measured. The discount rates used for the present value computations were selected based on market interest and foreign currency exchange rates in effect at December 31, 2016 and 2015. The differences in this comparison are the hypothetical gains or losses associated with each type of risk.

Information provided by the sensitivity analysis does not necessarily represent the actual changes in fair value that the company would incur under normal market conditions because, due to practical limitations, all variables other than the specific market risk factor are held constant. In addition, the results of the model are constrained by the fact that certain items are specifically excluded from the analysis, while the financial instruments relating to the financing or hedging of those items are included by definition. Excluded items include short-term and long-term receivables from sales-type and direct financing leases, forecasted foreign currency cash flows and the company's net investment in foreign operations. As a consequence, reported changes in the values of some of the financial instruments impacting the results of the sensitivity analysis are not matched with the offsetting changes in the values of the items that those instruments are designed to finance or hedge.

The results of the sensitivity analysis at December 31, 2016 and 2015, are as follows:

#### **Interest Rate Risk**

At December 31, 2016, a 10 percent decrease in the levels of interest rates with all other variables held constant would result in a decrease in the fair value of the company's financial instruments of \$147 million as compared with a decrease of \$69 million at December 31, 2015. A 10 percent increase in the levels of interest rates with all other variables held constant would result in an increase in the fair value of the company's financial instruments of \$142 million as compared to an increase of \$66 million at December 31, 2015. Changes in the relative sensitivity of the fair value of the company's financial instrument

portfolio for these theoretical changes in the level of interest rates are primarily driven by changes in the company's debt maturities, interest rate profile and amount.

#### **Foreign Currency Exchange Rate Risk**

At December 31, 2016, a 10 percent weaker U.S. dollar against foreign currencies, with all other variables held constant, would result in a decrease in the fair value of the company's financial instruments of \$132 million as compared with a decrease of \$74 million at December 31, 2015. Conversely, a 10 percent stronger U.S. dollar against foreign currencies, with all other variables held constant, would result in an increase in the fair value of the company's financial instruments of \$132 million compared with an increase of \$74 million at December 31, 2015.

#### **Financing Risks**

See the "Description of Business" on page 34 for a discussion of the financing risks associated with the Global Financing business and management's actions to mitigate such risks.

#### **Cybersecurity**

The company's approach to cybersecurity draws on the depth and breadth of its global capabilities, both in terms of its offerings to clients and its internal approaches to risk management. The company has commercial solutions that deliver identity and access management, data security, application security, network security and endpoint security. IBM's solutions include security intelligence, analytics and forensic tools that can collect information on customer IT security events and vulnerabilities and provide detailed information to customers about potential threats and security posture. The company's services businesses offer professional solutions for security from assessment and incident response to deployment and resource augmentation. In addition, the company offers managed and outsourced security solutions from multiple security operations centers around the world. Finally, security is embedded in a multitude of IBM offerings through secure engineering processes and by critical functions (encryption, access control, etc.) in servers, storage, software, service, and other solutions.

From an enterprise perspective, IBM implements a multi-faceted risk-management approach to identify and address cybersecurity risks. The company has established policies and procedures that provide the foundation upon which IBM's infrastructure and data are managed. IBM performs ongoing assessments regarding its technical controls and its methods for identifying emerging risks related to cybersecurity. The company uses a layered approach with overlapping controls to defend against cybersecurity attacks and threats on networks, end-user devices, servers, applications and cloud solutions. The company also has a global incident response process to respond to cybersecurity threats. In addition, the company utilizes a combination of online training, educational tools, social media and other awareness initiatives to foster a culture of security awareness and responsibility among its workforce.

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Employees and Related Workforce**

(In thousands)

| <b>For the year ended<br/>December 31:</b> | <b>2016</b> |
|--|-------------|
| IBM/wholly owned subsidiaries              | 380.3       |
| Less-than-wholly owned subsidiaries        | 9.6         |
| Complementary                              | 24.5        |

As a globally integrated enterprise, the company operates in more than 175 countries and is continuing to shift its business to the higher value segments of enterprise IT. The company continues to remix its skills and people needs to match the best opportunities in the marketplace.

The complementary workforce is an approximation of equivalent full-time employees hired under temporary, part-time and limited-term employment arrangements to meet specific business needs in a flexible and cost-effective manner.

**GLOBAL FINANCING**

Global Financing is a reportable segment that is measured as a stand-alone entity.

In 2016, the Global Financing business remained focused on its core competencies—providing IT financing to the company's clients and business partners. For the year, Global Financing delivered external revenue of \$1,692 million and total revenue of \$3,494 million. Total pre-tax income of \$1,656 million decreased 29.9 percent compared to 2015 and return on equity was 30.6 percent.

In addition to the overall health of the economy and its impact on corporate IT budgets, key drivers of Global Financing's results are interest rates and originations. Interest rates directly impact Global Financing's business by increasing or decreasing both financing revenue and the associated borrowing costs. Originations, which determine the asset base of Global Financing's annuity-like business, are impacted by IBM's non-Global Financing sales and services volumes and Global Financing's participation rates. Participation rates are the propensity of IBM's clients to finance their transactions through Global Financing in lieu of paying IBM up-front cash or financing through a third party.

**Results of Operations**

(\$ in millions)

| <b>For the year ended<br/>December 31:</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| External revenue                           | \$1,692     | \$1,840     | \$2,034     |
| Internal revenue                           | 1,802       | 2,637       | 2,488       |
| Total revenue                              | 3,494       | 4,477       | 4,522       |
| Cost                                       | 1,146       | 1,412       | 1,428       |
| Gross profit                               | \$2,348     | \$3,065     | \$3,094     |
| Gross profit margin                        | 67.2%       | 68.5%       | 68.4%       |
| Pre-tax income                             | \$1,656     | \$2,364     | \$2,189     |
| After-tax income*                          | \$1,126     | \$1,572     | \$1,462     |
| Return on equity*                          | 30.6%       | 41.5%       | 36.8%       |

\* See page 80 for the details of the after-tax income and return on equity calculation.

Total revenue in 2016 decreased \$983 million versus 2015 as a result of:

- A decline in external revenue of 8.0 percent (down 6.9 percent adjusted for currency), due to a decrease in financing revenue (down 11.2 percent to \$1,231 million), partially offset by an increase in used equipment sales revenue (up 1.6 percent to \$461 million); and
- A decline in internal revenue of 31.7 percent, due to decreases in used equipment sales revenue (down 35.5 percent to \$1,486 million) and financing revenue (down 5.2 percent to \$316 million).

The decrease in external financing revenue was due to lower asset yields and a decrease in average asset balance, as well as a decline in remarketing lease revenue. The decrease in internal financing revenue was primarily due to lower asset yields, partially offset by an increase in average asset balance.

Global Financing gross profit decreased 23.4 percent in 2016 compared to 2015, due to decreases in used equipment sales gross profit and financing gross profit. The gross profit margin declined 1.3 points compared to 2015 due to a decrease in equipment sales margin, partially offset by an increase in financing margin.

Total revenue in 2015 decreased \$45 million versus 2014 as a result of:

- A decrease in external revenue of 9.5 percent (up 1.5 percent adjusted for currency), driven by decreases in financing revenue (down 10.2 percent to \$1,386 million) and used equipment sales revenue (down 7.6 percent to \$454 million); partially offset by
- An increase in internal revenue of 6.0 percent driven by an increase in used equipment sales revenue (up 10.7 percent to \$2,303 million); partially offset by a decrease in financing revenue (down 18.3 percent to \$334 million).

The decrease in external and internal financing revenue was primarily due to decreases in the average asset balance and yields, as well as a decrease in remarketing lease revenue.

Global Financing gross profit decreased 0.9 percent compared to 2014 due to a decrease in financing gross profit, partially offset by an increase in used equipment sales gross profit. The gross profit margin was flat compared to 2014 with an increase in equipment sales margin, offset by a shift in mix away from higher margin financing and a decrease in financing margin.

Global Financing pre-tax income decreased 29.9 percent in 2016 versus 2015, following an increase of 8.0 percent in 2015 versus 2014. The decrease in 2016 was driven by a decrease in gross profit (\$717 million) and an increase in selling, general and administrative expenses (\$66 million), partially offset by a decrease in financing receivables provisions (\$75 million). The increase in 2015 was driven by decreases in selling, general and administrative expenses (\$107 million) and financing receivables provisions (\$96 million); partially offset by the decrease in gross profit (\$29 million). The decrease in financing receivable provisions in 2016 was due to lower specific reserve requirements in China, partially offset by higher reserves in Brazil in the current year. At December 31, 2016, the overall allowance for credit losses coverage rate was 1.6 percent, a decrease of 54 basis points year over year primarily due to a write-off of previously reserved receivables.

The decrease in return on equity from 2015 to 2016 was driven by the decrease in net income, partially offset by a lower average equity balance. The increase in return on equity from 2014 to 2015 was driven by the increase in net income and a lower average equity balance.

### Financial Condition

#### Balance Sheet

(\$ in millions)

| At December 31:  | 2016            | 2015            |
|--|-----------------|-----------------|
| Cash and cash equivalents  | \$ 1,844        | \$ 1,555        |
| Net investment in sales-type and direct financing leases         | 6,893           | 7,594           |
| Equipment under operating leases—external clients <sup>(1)</sup> | 548             | 605             |
| Client loans   | 11,478          | 12,525          |
| Total client financing assets                                    | 18,920          | 20,725          |
| Commercial financing receivables                                 | 9,700           | 8,948           |
| Intercompany financing receivables <sup>(2)(3)</sup>             | 4,959           | 4,245           |
| Other receivables  | 196             | 308             |
| Other assets   | 872             | 378             |
| <b>Total assets</b>  | <b>\$36,492</b> | <b>\$36,157</b> |
| Intercompany payables <sup>(2)</sup>                             | \$ 2,189        | \$ 3,089        |
| Debt <sup>(4)</sup>  | 27,859          | 27,205          |
| Other liabilities  | 2,631           | 2,134           |
| Total liabilities  | 32,679          | 32,428          |
| Total equity   | 3,812           | 3,729           |
| <b>Total liabilities and equity</b>                              | <b>\$36,492</b> | <b>\$36,157</b> |

<sup>(1)</sup> Includes intercompany mark-up, priced on an arm's-length basis, on products purchased from the company's product divisions which is eliminated in IBM's consolidated results

<sup>(2)</sup> Entire amount eliminated for purposes of IBM's consolidated results and therefore does not appear on page 86

<sup>(3)</sup> These assets, along with all other financing assets in this table, are leveraged at the value in the table using Global Financing debt.

<sup>(4)</sup> Global Financing debt is comprised of intercompany loans and external debt. A portion of Global Financing debt is in support of the company's internal business, or related to intercompany mark-up embedded in the Global Financing assets.

**Management Discussion****International Business Machines Corporation and Subsidiary Companies****Sources and Uses of Funds**

The primary use of funds in Global Financing is to originate client and commercial financing assets. Client financing assets for end users consist primarily of IBM systems, software and services, but also include OEM equipment, software and services to meet IBM clients' total solutions requirements. Client financing assets are primarily sales-type, direct financing and operating leases for systems products, as well as loans and installment payment plans for systems, software and services with terms up to seven years. Global Financing's client loans and installment payment plans are primarily for software and services and are unsecured. These agreements are subjected to credit analysis to evaluate the associated risk and, when deemed necessary, actions are taken to mitigate risks, which include covenants to protect against credit deterioration during the life of the obligation.

Commercial financing receivables arise primarily from inventory and accounts receivable financing for dealers and remarketers of IBM and OEM products. Payment terms for inventory financing and accounts receivable financing generally range from 30 to 90 days. These short-term receivables are primarily unsecured and are also subjected to additional credit analysis in order to evaluate the associated risk.

In addition to the actions previously described, the company has a long-standing practice of taking mitigation actions, in certain circumstances, to transfer credit risk to third parties, including credit insurance, financial guarantees, non-recourse borrowings, transfer of receivables recorded as true sale in accordance with accounting guidance or sales of equipment under operating lease.

At December 31, 2016, substantially all financing assets were IT related assets, and approximately 52 percent of the total external portfolio was with investment grade clients with no direct exposure to consumers. The reduction in investment grade year to year (3 points) was driven primarily by rating changes within the existing portfolio, not by changing the company's approach to the market. This investment grade percentage is based on credit ratings of the companies in the portfolio. Additionally, as noted above, the company takes actions to transfer exposure to third parties. On that basis, the investment grade content would increase by 14 points to 66 percent, also a reduction of 3 points year to year.

**Originations**

The following are total financing originations:

(\$ in millions)

| <b>For the year ended<br/>December 31:</b> | <b>2016</b>     | <b>2015</b>     | <b>2014</b>     |
|--|-----------------|-----------------|-----------------|
| <b>Client financing</b>                    | <b>\$11,703</b> | <b>\$14,444</b> | <b>\$15,099</b> |
| <b>Commercial financing</b>                | <b>42,666</b>   | <b>40,571</b>   | <b>43,664</b>   |
| <b>Total</b>                               | <b>\$54,370</b> | <b>\$55,015</b> | <b>\$58,762</b> |

In 2016, cash collection of client financing assets exceeded new financing originations, while new financing originations of commercial financing exceeded collections. This resulted in a net decline in financing assets from December 2015. The decrease in originations in 2016 versus 2015, as well as the decrease in originations in 2015 versus 2014, was due to declining volumes. Internal loan financing with Technology Services & Cloud Platforms is executed under a loan facility and is not considered originations.

Cash generated by Global Financing in 2016 was deployed to pay intercompany payables and dividends to IBM as well as external payables to business partners and OEM suppliers.

**Global Financing Receivables and Allowances**

The following table presents external financing receivables excluding residual values, and the allowance for credit losses:

(\$ in millions)

| <b>At December 31:</b>                   | <b>2016</b>     | <b>2015</b>     |
|--|-----------------|-----------------|
| <b>Gross financing receivables</b>       | <b>\$28,043</b> | <b>\$29,086</b> |
| Specific allowance for credit losses     | 335             | 517             |
| Unallocated allowance for credit losses  | 103             | 93              |
| <b>Total allowance for credit losses</b> | <b>438</b>      | <b>610</b>      |
| <b>Net financing receivables</b>         | <b>\$27,605</b> | <b>\$28,475</b> |
| Allowance for credit losses coverage     | 1.6%            | 2.1%            |

**Roll Forward of Global Financing Receivables Allowance for Credit Losses**

(\$ in millions)

| <b>January 1,<br/>2016</b> | <b>Allowance<br/>Used*</b> | <b>Additions/<br/>(Reductions)</b> | <b>Other**</b> | <b>December 31,<br/>2016</b> |
|----------------------------|----------------------------|------------------------------------|----------------|------------------------------|
| \$610                      | \$(236)                    | \$69                               | \$(5)          | \$438                        |

\* Represents reserved receivables, net of recoveries, that were written off during the period

\*\*Primarily represents translation adjustments

The percentage of Global Financing receivables reserved was 1.6 percent at December 31, 2016 and 2.1 percent at December 31, 2015. In the fourth quarter of 2016, write-offs of \$188 million of receivables previously reserved, primarily in China, was the primary driver of the 35 percent reduction in the specific allowance, from \$517 million at December 31, 2015, to \$335 million at December 31, 2016. See note F, "Financing Receivables" on pages 114 to 118 for additional information. Unallocated reserves increased 10 percent from \$93 million at December 31, 2015, to \$103 million at December 31, 2016, due to higher general reserve requirements in Brazil.

Global Financing's bad debt expense was \$69 million for 2016, compared to \$144 million for 2015. The year-to-year decrease in bad debt expense was due to lower specific reserve requirements in China, partially offset by higher reserve requirements in Brazil in the current year.

#### Residual Value

Residual value is a risk unique to the financing business and management of this risk is dependent upon the ability to accurately project future equipment values at lease inception. Global Financing has insight into product plans and cycles for the IBM products under lease. Based upon this product information, Global Financing continually monitors projections of future equipment values and compares them with the residual values reflected in the portfolio.

Global Financing optimizes the recovery of residual values by selling assets sourced from end of lease, leasing used equipment to new clients, or extending lease arrangements with current clients. Sales of equipment include equipment returned at the end of a lease, surplus internal equipment, or used equipment purchased externally. These sales represented 55.7 percent and 61.6 percent of Global Financing's revenue in 2016 and 2015, respectively. The decrease was due to a lower volume of used equipment sales for internal transactions. The gross profit margins on total equipment sales were 60.5 percent and 66.0 percent in 2016 and 2015, respectively. The decrease in the gross profit margin was primarily driven by a shift in mix away from higher margin internal equipment sales.

The table below presents the recorded amount of unguaranteed residual value for sales-type, direct financing and operating leases at December 31, 2016 and 2015. In addition, the table presents the residual value as a percentage of the related original amount financed and a run out of when the unguaranteed residual value assigned to equipment on leases at December 31, 2016 is expected to be returned to the company. In addition to the unguaranteed residual value, on a limited basis, Global Financing will obtain guarantees of the future value of the equipment to be returned at end of lease. While primarily focused on IBM products, guarantees are also obtained for certain OEM products. These third-party guarantees are included in minimum lease payments as provided for by accounting standards in the determination of lease classifications for the covered equipment and provide protection against risk of loss arising from declines in equipment values for these assets.

The residual value guarantee increases the minimum lease payments that are utilized in determining the classification of a lease as a sales-type lease, direct financing lease or operating lease. The aggregate asset values associated with the guarantees of sales-type leases were \$329 million and \$811 million for the financing transactions originated during the years ended December 31, 2016 and December 31, 2015, respectively. In 2016, the residual value guarantee program resulted in the company recognizing approximately \$220 million of revenue that would otherwise have been recognized in future periods as operating lease revenue. If the company had chosen to not participate in a residual value guarantee program in 2016 and prior years, the 2016 impact would be substantially mitigated by the effect of prior year asset values being recognized as operating lease revenue in the current year. The aggregate asset values associated with the guarantees of direct financing leases were \$169 million and \$185 million for the financing transactions originated during the years ended December 31, 2016 and 2015, respectively. The associated aggregate guaranteed future values at the scheduled end of lease were \$19 million and \$54 million for the financing transactions originated during the years ended December 31, 2016 and 2015, respectively. The cost of guarantees was \$2 million and \$5 million for the years ended December 31, 2016 and 2015, respectively.

#### Unguaranteed Residual Value

(\$ in millions)

| At December 31:                          | Total         |               | Estimated Run Out of 2016 Balance |              |              |                 |
|--|---------------|---------------|-----------------------------------|--------------|--------------|-----------------|
|  | 2015          | 2016          | 2017                              | 2018         | 2019         | 2020 and Beyond |
| Sales-type and direct financing leases   | \$ 645        | \$ 585        | \$110                             | \$167        | \$187        | \$121           |
| Operating leases                         | 144           | 140           | 50                                | 42           | 33           | 15              |
| <b>Total unguaranteed residual value</b> | <b>\$ 789</b> | <b>\$ 725</b> | <b>\$160</b>                      | <b>\$209</b> | <b>\$220</b> | <b>\$136</b>    |
| Related original amount financed         | \$14,223      | \$12,845      |                                   |              |              |                 |
| Percentage                               | 5.6%          | 5.6%          |                                   |              |              |                 |

**Management Discussion**

International Business Machines Corporation and Subsidiary Companies

**Debt**

| <b>At December 31:</b> | <b>2016</b> | <b>2015</b> |
|------------------------|-------------|-------------|
| Debt-to-equity ratio   | 7.3x        | 7.3x        |

The debt used to fund Global Financing assets is composed of intercompany loans and external debt. Total debt changes generally correspond with the level of client and commercial financing receivables, the level of cash and cash equivalents, the change in intercompany and external payables and the change in intercompany investment from IBM. The terms of the intercompany loans are set by the company to substantially match the term and currency underlying the financing receivable and are based on arm's-length pricing.

Global Financing provides financing predominantly for the company's external client assets, as well as for assets under

contract by other IBM units. As previously stated, the company measures Global Financing as a stand-alone entity, and accordingly, interest expense relating to debt supporting Global Financing's external client and internal business is included in the "Global Financing Results of Operations" on page 76 and in note T, "Segment Information," on pages 150 to 154. In the company's Consolidated Statement of Earnings, the external debt-related interest expense supporting Global Financing's internal financing to the company is reclassified from cost of financing to interest expense.

The following table provides additional information on total company debt. In this table, intercompany activity includes internal loans and leases at arm's-length pricing in support of long-term services contracts and other internal activity. The company believes these assets should be appropriately leveraged in line with the overall Global Financing business model.

(\$ in millions)

|                                      | <b>December 31, 2016</b> | <b>December 31, 2015</b> |
|--------------------------------------|--------------------------|--------------------------|
| <b>Global Financing Segment</b>      | \$27,859                 | \$27,205                 |
| Debt to support external clients     | \$24,034                 | \$23,934                 |
| Debt to support internal clients     | 3,825                    | 3,271                    |
| <b>Non-Global Financing Segments</b> | 14,309                   | 12,684                   |
| Debt supporting operations           | 18,134                   | 15,955                   |
| Intercompany activity                | (3,825)                  | (3,271)                  |
| <b>Total company debt</b>            | <b>\$42,169</b>          | <b>\$39,890</b>          |

**Liquidity and Capital Resources**

Global Financing is a segment of the company, and therefore is supported by the company's overall liquidity position and access to capital markets. Cash generated by Global Financing was deployed to pay dividends to the company in order to maintain an appropriate debt-to-equity ratio.

**Return on Equity**

(\$ in millions)

| <b>At December 31:</b>                               | <b>2016</b>  | <b>2015</b>  |
|--|--------------|--------------|
| Numerator  |              |              |
| Global Financing after-tax income <sup>(1)*</sup>    | \$1,126      | \$1,572      |
| Denominator  |              |              |
| Average Global Financing equity <sup>(2)**</sup>     | \$3,680      | \$3,785      |
| Global Financing return on equity <sup>(1)/(2)</sup> | <b>30.6%</b> | <b>41.5%</b> |

\* Calculated based upon an estimated tax rate principally based on Global Financing's geographic mix of earnings as IBM's provision for income taxes is determined on a consolidated basis

\*\*Average of the ending equity for Global Financing for the last five quarters

**Looking Forward**

Global Financing's financial position provides flexibility and funding capacity which enables the company to be well positioned in the current environment. Global Financing's assets and new financing volumes are IBM and OEM products and services financed to the company's clients and business partners, and substantially all financing assets are IT related assets which provide a stable base of business for future growth. Global Financing's offerings are competitive and available to clients as a result of the company's borrowing cost and access to the capital markets. Overall, Global Financing's originations will be dependent upon the demand for IT products and services as well as client participation rates.

IBM continues to access both the short-term commercial paper market and the medium- and long-term debt markets. A protracted period where IBM could not access the capital markets would likely lead to a slowdown in originations.

As part of its transformation, the company changed the structure of its financing business in January 2017 to drive operational benefits. The client and commercial financing businesses have been reorganized as a wholly owned subsidiary, IBM Credit LLC. This will drive operational benefits by consolidating the operations of the financing business. Debt will be issued directly out of the new entity, and the new entity is expected to be able to access the capital markets later in 2017. The financing business expects to increase its leverage from approximately 7:1 to 9:1, which represents an increase of approximately \$600 million in Global Financing debt. The Global Financing segment remains unchanged, and will continue to include the client and commercial financing businesses, as well as the hardware remanufacturing and remarketing business.

Interest rates and the overall economy (including currency fluctuations) will have an effect on both revenue and gross profit. The company's interest rate risk management policy, however, combined with the Global Financing pricing strategy should mitigate gross margin erosion due to changes in interest rates.

The economy could impact the credit quality of the Global Financing receivables portfolio and therefore the level of provision for credit losses. Global Financing will continue to apply rigorous credit policies in both the origination of new business and the evaluation of the existing portfolio and will take risk mitigation actions when necessary.

As previously discussed, Global Financing has historically been able to manage residual value risk both through insight into the company's product cycles, as well as through its remarketing business.

Global Financing has policies in place to manage each of the key risks involved in financing. These policies, combined with product and client knowledge, should allow for the prudent management of the business going forward, even during periods of uncertainty with respect to the global economy.

**Report of Management**

International Business Machines Corporation and Subsidiary Companies

**Management Responsibility  
for Financial Information**

Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with IBM management. The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, applying certain estimates and judgments as required.

IBM maintains an effective internal control structure. It consists, in part, of organizational arrangements with clearly defined lines of responsibility and delegation of authority, and comprehensive systems and control procedures. An important element of the control environment is an ongoing internal audit program. Our system also contains self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

To assure the effective administration of internal controls, we carefully select and train our employees, develop and disseminate written policies and procedures, provide appropriate communication channels and foster an environment conducive to the effective functioning of controls. We believe that it is essential for the company to conduct its business affairs in accordance with the highest ethical standards, as set forth in the IBM Business Conduct Guidelines. These guidelines, translated into numerous languages, are distributed to employees throughout the world, and reemphasized through internal programs to assure that they are understood and followed.

The Audit Committee of the Board of Directors is composed solely of independent, non-management directors, and is responsible for recommending to the Board the independent registered public accounting firm to be retained for the coming year, subject to stockholder ratification. The Audit Committee meets regularly and privately with the independent registered public accounting firm, with the company's internal auditors, as well as with IBM management, to review accounting, auditing, internal control structure and financial reporting matters.

**Management's Report on Internal Control  
Over Financial Reporting**

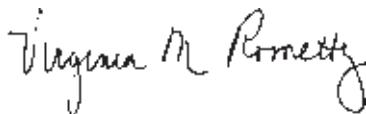
Management is responsible for establishing and maintaining adequate internal control over financial reporting of the company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

The company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) 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.

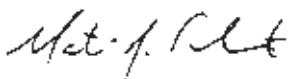
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the company's internal control over financial reporting was effective as of December 31, 2016.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, is retained to audit IBM's Consolidated Financial Statements and the effectiveness of the internal control over financial reporting. Its accompanying report is based on audits conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States).



**Virginia M. Rometty**  
Chairman, President and  
Chief Executive Officer  
February 28, 2017



**Martin J. Schroeter**  
Senior Vice President and  
Chief Financial Officer  
February 28, 2017

**To the Stockholders and Board of  
Directors of International Business  
Machines Corporation:**

In our opinion, the accompanying consolidated statements of Financial Position and the related consolidated statements of Earnings, Comprehensive Income, Changes in Equity and Cash Flows present fairly, in all material respects, the financial position of International Business Machines Corporation and its subsidiaries at December 31, 2016 and December 31, 2015 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting appearing on page 82. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

*PricewaterhouseCoopers LLP*

**PricewaterhouseCoopers LLP**

New York, New York

February 28, 2017

**Consolidated Statement of Earnings**

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

| For the year ended December 31:                              | Notes | 2016            | 2015        | 2014          |
|--|-------|-----------------|-------------|---------------|
| <b>Revenue</b>   |       |                 |             |               |
| Services   |       | \$51,268        | \$49,911    | \$55,673      |
| Sales  |       | 26,942          | 29,967      | 35,063        |
| Financing  |       | 1,710           | 1,864       | 2,057         |
| <b>Total revenue</b>   | T     | <b>79,919</b>   | 81,741      | 92,793        |
| <b>Cost</b>  |       |                 |             |               |
| Services   |       | 34,021          | 33,126      | 36,034        |
| Sales  |       | 6,559           | 6,920       | 9,312         |
| Financing  |       | 1,044           | 1,011       | 1,040         |
| <b>Total cost</b>  |       | <b>41,625</b>   | 41,057      | 46,386        |
| <b>Gross profit</b>  |       | <b>38,294</b>   | 40,684      | 46,407        |
| <b>Expense and other (income)</b>                            |       |                 |             |               |
| Selling, general and administrative                          |       | 21,069          | 20,430      | 23,180        |
| Research, development and engineering                        | O     | 5,751           | 5,247       | 5,437         |
| Intellectual property and custom development income          |       | (1,631)         | (682)       | (742)         |
| Other (income) and expense                                   |       | 145             | (724)       | (1,938)       |
| Interest expense   | D&J   | 630             | 468         | 484           |
| <b>Total expense and other (income)</b>                      |       | <b>25,964</b>   | 24,740      | 26,421        |
| <b>Income from continuing operations before income taxes</b> |       | <b>12,330</b>   | 15,945      | 19,986        |
| Provision for income taxes                                   | N     | 449             | 2,581       | 4,234         |
| <b>Income from continuing operations</b>                     |       | <b>11,881</b>   | 13,364      | 15,751        |
| Loss from discontinued operations, net of tax                | C     | (9)             | (174)       | (3,729)       |
| <b>Net income</b>  |       | <b>\$11,872</b> | \$13,190    | \$12,022      |
| <b>Earnings/(loss) per share of common stock</b>             |       |                 |             |               |
| <b>Assuming dilution</b>                                     |       |                 |             |               |
| Continuing operations  | P     | \$ 12.39        | \$ 13.60    | \$ 15.59      |
| Discontinued operations                                      | P     | (0.01)          | (0.18)      | (3.69)        |
| <b>Total</b>   | P     | <b>\$ 12.38</b> | \$ 13.42    | \$ 11.90      |
| <b>Basic</b>   |       |                 |             |               |
| Continuing operations  | P     | \$ 12.44        | \$ 13.66    | \$ 15.68      |
| Discontinued operations                                      | P     | (0.01)          | (0.18)      | (3.71)        |
| <b>Total</b>   | P     | <b>\$ 12.43</b> | \$ 13.48    | \$ 11.97      |
| <b>Weighted-average number of common shares outstanding</b>  |       |                 |             |               |
| Assuming dilution  |       | 958,714,097     | 982,700,267 | 1,010,000,480 |
| Basic  |       | 955,422,530     | 978,744,523 | 1,004,272,584 |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

(\$ in millions)

| For the year ended December 31:  | Notes | 2016     | 2015     | 2014     |
|--|-------|----------|----------|----------|
| <b>Net income</b>  |       | \$11,872 | \$13,190 | \$12,022 |
| <b>Other comprehensive income/(loss), before tax</b>                               |       |          |          |          |
| <b>Foreign currency translation adjustments</b>                                    | L     | (20)     | (1,379)  | (1,636)  |
| <b>Net changes related to available-for-sale securities</b>                        | L     |          |          |          |
| Unrealized gains/(losses) arising during the period                                |       | (38)     | (54)     | (29)     |
| Reclassification of (gains)/losses to net income                                   |       | 34       | 86       | 5        |
| <b>Total net changes related to available-for-sale securities</b>                  |       | (3)      | 32       | (24)     |
| <b>Unrealized gains/(losses) on cash flow hedges</b>                               | L     |          |          |          |
| Unrealized gains/(losses) arising during the period                                |       | 243      | 618      | 958      |
| Reclassification of (gains)/losses to net income                                   |       | 102      | (1,072)  | (97)     |
| <b>Total unrealized gains/(losses) on cash flow hedges</b>                         |       | 345      | (454)    | 861      |
| <b>Retirement-related benefit plans</b>  | L     |          |          |          |
| Prior service costs/(credits)  |       | —        | 6        | 1        |
| Net (losses)/gains arising during the period                                       |       | (2,490)  | (2,963)  | (9,799)  |
| Curtailments and settlements   |       | (16)     | 33       | 24       |
| Amortization of prior service (credits)/costs                                      |       | (107)    | (100)    | (114)    |
| Amortization of net (gains)/losses   |       | 2,764    | 3,304    | 2,531    |
| <b>Total retirement-related benefit plans</b>                                      |       | 150      | 279      | (7,357)  |
| <b>Other comprehensive income/(loss), before tax</b>                               | L     | 472      | (1,523)  | (8,156)  |
| <b>Income tax (expense)/benefit related to items of other comprehensive income</b> | L     | (263)    | (208)    | 1,883    |
| <b>Other comprehensive income/(loss)</b>   | L     | 209      | (1,731)  | (6,274)  |
| <b>Total comprehensive income</b>  |       | \$12,081 | \$11,459 | \$ 5,748 |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

**Consolidated Statement of Financial Position**  
 International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

| At December 31:  | Notes | 2016             | 2015             |
|--|-------|------------------|------------------|
| <b>Assets</b>  |       |                  |                  |
| Current assets   |       |                  |                  |
| Cash and cash equivalents  |       | \$ 7,826         | \$ 7,686         |
| Marketable securities  | D     | 701              | 508              |
| Notes and accounts receivable—trade (net of allowances of \$290 in 2016 and \$367 in 2015) |       | 9,182            | 8,333            |
| Short-term financing receivables (net of allowances of \$337 in 2016 and \$490 in 2015)    | F     | 19,006           | 19,020           |
| Other accounts receivable (net of allowances of \$48 in 2016 and \$51 in 2015)             |       | 1,057            | 1,201            |
| Inventories  | E     | 1,553            | 1,551            |
| Prepaid expenses and other current assets  |       | 4,564            | 4,205            |
| Total current assets   |       | 43,888           | 42,504           |
| Property, plant and equipment  | G     | 30,133           | 29,342           |
| Less: Accumulated depreciation   | G     | 19,303           | 18,615           |
| Property, plant and equipment—net  | G     | 10,830           | 10,727           |
| Long-term financing receivables (net of allowances of \$101 in 2016 and \$118 in 2015)     | F     | 9,021            | 10,013           |
| Prepaid pension assets   | S     | 3,034            | 1,734            |
| Deferred taxes   | N     | 5,224            | 4,822            |
| Goodwill   | I     | 36,199           | 32,021           |
| Intangible assets—net  | I     | 4,688            | 3,487            |
| Investments and sundry assets  | H     | 4,585            | 5,187            |
| <b>Total assets</b>  |       | <b>\$117,470</b> | <b>\$110,495</b> |
| <b>Liabilities and equity</b>  |       |                  |                  |
| Current liabilities  |       |                  |                  |
| Taxes  | N     | \$ 3,235         | \$ 2,847         |
| Short-term debt  |       | D&J              | 7,513            |
| Accounts payable   |       | 6,209            | 6,028            |
| Compensation and benefits  |       | 3,577            | 3,560            |
| Deferred income  |       | 11,035           | 11,021           |
| Other accrued expenses and liabilities   |       | 4,705            | 4,353            |
| Total current liabilities  |       | 36,275           | 34,269           |
| Long-term debt   |       | D&J              | 34,655           |
| Retirement and nonpension postretirement benefit obligations                               | S     | 17,070           | 16,504           |
| Deferred income  |       | 3,600            | 3,771            |
| Other liabilities  | K     | 7,477            | 8,099            |
| <b>Total liabilities</b>   |       | <b>99,078</b>    | <b>96,071</b>    |
| Contingencies and commitments  | M     |                  |                  |
| Equity   | L     |                  |                  |
| IBM stockholders' equity   |       |                  |                  |
| Common stock, par value \$.20 per share, and additional paid-in capital                    |       | 53,935           | 53,262           |
| Shares authorized: 4,687,500,000   |       |                  |                  |
| Shares issued (2016—2,225,116,815; 2015—2,221,223,449)                                     |       |                  |                  |
| Retained earnings  |       | 152,759          | 146,124          |
| Treasury stock, at cost (shares: 2016—1,279,249,412; 2015—1,255,494,724)                   |       | (159,050)        | (155,518)        |
| Accumulated other comprehensive income/(loss)  |       | (29,398)         | (29,607)         |
| Total IBM stockholders' equity   |       | 18,246           | 14,262           |
| Noncontrolling interests   | A     | 146              | 162              |
| <b>Total equity</b>  |       | <b>18,392</b>    | <b>14,424</b>    |
| <b>Total liabilities and equity</b>  |       | <b>\$117,470</b> | <b>\$110,495</b> |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

(\$ in millions)

| For the year ended December 31:   | 2016            | 2015            | 2014            |
|---|-----------------|-----------------|-----------------|
| <b>Cash flows from operating activities</b>                                     |                 |                 |                 |
| Net income  | \$11,872        | \$13,190        | \$12,022        |
| Adjustments to reconcile net income<br>to cash provided by operating activities |                 |                 |                 |
| Depreciation  | 2,837           | 2,662           | 3,145           |
| Amortization of intangibles   | 1,544           | 1,193           | 1,347           |
| Stock-based compensation  | 544             | 468             | 512             |
| Deferred taxes  | (1,132)         | 1,387           | (237)           |
| Net (gain)/loss on asset sales and other  | 62              | 481             | (1,535)         |
| Loss on microelectronics business disposal                                      | —               | 71              | 3,381           |
| Change in operating assets and liabilities, net of acquisitions/divestitures    |                 |                 |                 |
| Receivables (including financing receivables)                                   | 712             | 812             | 1,270           |
| Retirement related  | 54              | (22)            | (655)           |
| Inventories   | (14)            | 133             | (39)            |
| Other assets/other liabilities  | 282             | (3,448)         | (1,886)         |
| Accounts payable  | 197             | 81              | (456)           |
| <b>Net cash provided by operating activities</b>                                | <b>16,958</b>   | <b>17,008</b>   | <b>16,868</b>   |
| <b>Cash flows from investing activities</b>                                     |                 |                 |                 |
| Payments for property, plant and equipment                                      | (3,567)         | (3,579)         | (3,740)         |
| Proceeds from disposition of property, plant and equipment                      | 424             | 370             | 404             |
| Investment in software  | (583)           | (572)           | (443)           |
| Purchases of marketable securities and other investments                        | (5,917)         | (3,073)         | (2,338)         |
| Proceeds from disposition of marketable securities and other investments        | 5,692           | 2,842           | 2,493           |
| Non-operating finance receivables—net   | (891)           | (398)           | (1,078)         |
| Acquisition of businesses, net of cash acquired                                 | (5,679)         | (3,349)         | (656)           |
| Divestiture of businesses, net of cash transferred                              | (454)           | (401)           | 2,357           |
| <b>Net cash used in investing activities</b>                                    | <b>(10,976)</b> | <b>(8,159)</b>  | <b>(3,001)</b>  |
| <b>Cash flows from financing activities</b>                                     |                 |                 |                 |
| Proceeds from new debt  | 9,132           | 5,540           | 8,180           |
| Payments to settle debt   | (6,395)         | (5,622)         | (4,644)         |
| Short-term borrowings/(repayments) less than 90 days—net                        | 26              | 101             | (1,753)         |
| Common stock repurchases  | (3,502)         | (4,609)         | (13,679)        |
| Common stock transactions—other   | 204             | 322             | 709             |
| Cash dividends paid   | (5,256)         | (4,897)         | (4,265)         |
| <b>Net cash used in financing activities</b>                                    | <b>(5,791)</b>  | <b>(9,166)</b>  | <b>(15,452)</b> |
| Effect of exchange rate changes on cash and cash equivalents                    | (51)            | (473)           | (655)           |
| Net change in cash and cash equivalents   | 140             | (790)           | (2,240)         |
| Cash and cash equivalents at January 1  | 7,686           | 8,476           | 10,716          |
| <b>Cash and cash equivalents at December 31</b>                                 | <b>\$ 7,826</b> | <b>\$ 7,686</b> | <b>\$ 8,476</b> |
| <b>Supplemental data</b>  |                 |                 |                 |
| Income taxes paid—net of refunds received                                       | \$ 1,078        | \$ 2,657        | \$ 5,748        |
| Interest paid on debt   | \$ 1,158        | \$ 995          | \$ 1,061        |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

**Consolidated Statement of Changes in Equity**

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

|   | <b>Common<br/>Stock and<br/>Additional<br/>Paid-In Capital</b> | <b>Retained<br/>Earnings</b> | <b>Treasury<br/>Stock</b> | <b>Accumulated<br/>Other<br/>Comprehensive<br/>Income/(Loss)</b> | <b>Total IBM<br/>Stockholders'<br/>Equity</b> | <b>Non-<br/>Controlling<br/>Interests</b> | <b>Total<br/>Equity</b> |
|---|--|------------------------------|---------------------------|--|---|---|-------------------------|
| <b>2014</b>   |  |                              |                           |  |   |   |                         |
| Equity, January 1, 2014   | \$51,594   | \$130,042                    | \$(137,242)               | \$(21,602)   | \$22,792                                      | \$137                                     | \$22,929                |
| Net income plus other<br>comprehensive income/(loss)  |  |                              |                           |  |   |   |                         |
| Net income  |  | 12,022                       |                           |  | 12,022  |   | 12,022                  |
| Other comprehensive<br>income/(loss)  |  |                              |                           | (6,274)  | (6,274)                                       |   | (6,274)                 |
| Total comprehensive income/(loss)   |  |                              |                           |  | \$ 5,748                                      |   | \$ 5,748                |
| Cash dividends paid—<br>common stock  |  | (4,265)                      |                           |  | (4,265)                                       |   | (4,265)                 |
| Common stock issued under<br>employee plans (7,687,026<br>shares)   |  | 977                          |                           |  | 977   |   | 977                     |
| Purchases (1,313,569 shares) and<br>sales (1,264,232 shares) of<br>treasury stock under<br>employee plans—net |  | (6)                          | (79)                      |  | (85)  |   | (85)                    |
| Other treasury shares purchased,<br>not retired (71,504,867 shares)   |  |                              | (13,395)                  |  | (13,395)                                      |   | (13,395)                |
| Changes in other equity   | 95   |                              |                           |  | 95  |   | 95                      |
| Changes in noncontrolling interests   |  |                              |                           |  | 8   |   | 8                       |
| <b>Equity, December 31, 2014</b>  | <b>\$52,666</b>  | <b>\$137,793</b>             | <b>\$(150,715)</b>        | <b>\$(27,875)</b>  | <b>\$11,868</b>                               | <b>\$146</b>                              | <b>\$12,014</b>         |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

(\$ in millions)

|   | <b>Common<br/>Stock and<br/>Additional<br/>Paid-In Capital</b> | <b>Retained<br/>Earnings</b> | <b>Treasury<br/>Stock</b> | <b>Accumulated<br/>Other<br/>Comprehensive<br/>Income/(Loss)</b> | <b>Total IBM<br/>Stockholders'<br/>Equity</b> | <b>Non-<br/>Controlling<br/>Interests</b> | <b>Total<br/>Equity</b> |
|---|--|------------------------------|---------------------------|--|---|---|-------------------------|
| <b>2015</b>   |  |                              |                           |  |   |   |                         |
| Equity, January 1, 2015   | \$52,666   | \$137,793                    | \$(150,715)               | \$(27,875)   | \$11,868                                      | \$146                                     | \$12,014                |
| Net income plus other<br>comprehensive income/(loss)  |  |                              |                           |  |   |   |                         |
| Net income  |  | 13,190                       |                           |  | 13,190  |   | 13,190                  |
| Other comprehensive<br>income/(loss)  |  |                              |                           | (1,731)  | (1,731)                                       |   | (1,731)                 |
| Total comprehensive income/(loss)   |  |                              |                           |  | \$11,459                                      |   | \$11,459                |
| Cash dividends paid—<br>common stock  |  | (4,897)                      |                           |  | (4,897)                                       |   | (4,897)                 |
| Common stock issued under<br>employee plans (6,013,875<br>shares)   |  | 606                          |                           |  | 606   |   | 606                     |
| Purchases (1,625,820 shares) and<br>sales (1,155,558 shares) of<br>treasury stock under<br>employee plans—net |  | 39                           | (102)                     |  | (63)  |   | (63)                    |
| Other treasury shares purchased,<br>not retired (30,338,647 shares)   |  |                              | (4,701)                   |  | (4,701)                                       |   | (4,701)                 |
| Changes in other equity   | (10)   |                              |                           |  | (10)  |   | (10)                    |
| Changes in noncontrolling interests   |  |                              |                           |  | 16  |   | 16                      |
| <b>Equity, December 31, 2015</b>  | <b>\$53,262</b>  | <b>\$146,124</b>             | <b>\$(155,518)</b>        | <b>\$(29,607)</b>  | <b>\$14,262</b>                               | <b>\$162</b>                              | <b>\$14,424</b>         |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

**Consolidated Statement of Changes in Equity**  
 International Business Machines Corporation and Subsidiary Companies

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(\$ in millions)

|   | Common<br>Stock and<br>Additional<br>Paid-In Capital | Retained<br>Earnings | Treasury<br>Stock  | Accumulated<br>Other<br>Comprehensive<br>Income/(Loss) | Total IBM<br>Stockholders'<br>Equity | Non-<br>Controlling<br>Interests | Total<br>Equity |
|---|--|----------------------|--------------------|--|--------------------------------------|----------------------------------|-----------------|
| <b>2016</b>   |  |                      |                    |  |                                      |                                  |                 |
| Equity, January 1, 2016   | \$53,262   | \$146,124            | \$155,518          | \$(29,607)   | \$14,262                             | \$162                            | \$14,424        |
| Net income plus other<br>comprehensive income/(loss)  |  |                      |                    |  |                                      |                                  |                 |
| Net income  |  | 11,872               |                    |  | 11,872                               |                                  | 11,872          |
| Other comprehensive<br>income/(loss)  |  |                      |                    | 209  | 209                                  |                                  | 209             |
| Total comprehensive income/(loss)   |  |                      |                    |  | \$12,081                             |                                  | \$12,081        |
| Cash dividends paid—<br>common stock  |  | (5,256)              |                    |  | (5,256)                              |                                  | (5,256)         |
| Common stock issued under<br>employee plans (3,893,366<br>shares)   |  | 695                  |                    |  | 695                                  |                                  | 695             |
| Purchases (854,365 shares) and<br>sales (383,077 shares) of<br>treasury stock under<br>employee plans—net |  | 18                   | (77)               |  | (59)                                 |                                  | (59)            |
| Other treasury shares purchased,<br>not retired (23,283,400 shares)                                       |  |                      |                    | (3,455)  | (3,455)                              |                                  | (3,455)         |
| Changes in other equity   | (22)   | 0                    |                    |  | (22)                                 |                                  | (22)            |
| Changes in noncontrolling interests   |  |                      |                    |  |                                      | (16)                             | (16)            |
| <b>Equity, December 31, 2016</b>  | <b>\$53,935</b>                                      | <b>\$152,759</b>     | <b>\$(159,050)</b> | <b>\$(29,398)</b>                                      | <b>\$18,246</b>                      | <b>\$146</b>                     | <b>\$18,392</b> |

Amounts may not add due to rounding.

The accompanying notes on pages 90 through 154 are an integral part of the financial statements.

**NOTE A. SIGNIFICANT ACCOUNTING POLICIES****Basis of Presentation**

The accompanying Consolidated Financial Statements and footnotes of the International Business Machines Corporation (IBM or the company) have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Within the financial statements and tables presented, certain columns and rows may not add due to the use of rounded numbers for disclosure purposes. Percentages presented are calculated from the underlying whole-dollar amounts. Certain prior year amounts have been reclassified to conform to the current year presentation. This is annotated where applicable.

On October 20, 2014, the company announced a definitive agreement to divest its Microelectronics business and manufacturing operations to GLOBALFOUNDRIES. The transaction closed on July 1, 2015. Refer to note C, "Acquisitions/Divestitures," for additional information on the transaction.

In January 2016, the company made a number of changes to its organizational structure and management system. These changes impacted the company's reportable segments, but did not impact the company's Consolidated Financial Statements. Refer to note T, "Segment Information," on pages 150 to 154 for additional information on the changes in reportable segments.

Noncontrolling interest amounts of \$16 million, \$8 million and \$6 million, net of tax, for the years ended December 31, 2016, 2015 and 2014, respectively, are included as a reduction within other (income) and expense in the Consolidated Statement of Earnings.

**Principles of Consolidation**

The Consolidated Financial Statements include the accounts of IBM and its controlled subsidiaries, which are primarily majority owned. Any noncontrolling interest in the equity of a subsidiary is reported in Equity in the Consolidated Statement of Financial Position. Net income and losses attributable to the noncontrolling interest is reported as described above in the Consolidated Statement of Earnings. The accounts of variable interest entities (VIEs) are included in the Consolidated Financial Statements, if required. Investments in business entities in which the company does not have control, but has the ability to exercise significant influence over operating and financial policies, are accounted for using the equity method and the company's proportionate share of income or loss is recorded in other (income) and expense. The accounting policy for other investments in equity securities is on page 98 within "Marketable Securities." Equity investments in non-publicly traded entities are primarily accounted for using the cost method. All intercompany transactions and accounts have been eliminated in consolidation.

**Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenue, costs, expenses and other comprehensive income/(loss) (OCI) that are reported in the Consolidated Financial Statements and accompanying disclosures. These estimates are based on management's best knowledge of current events, historical

experience, actions that the company may undertake in the future and on various other assumptions that are believed to be reasonable under the circumstances. As a result, actual results may be different from these estimates. See "Critical Accounting Estimates" on pages 71 to 74 for a discussion of the company's critical accounting estimates.

**Revenue**

The company recognizes revenue when it is realized or realizable and earned. The company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable and collectibility is reasonably assured. Delivery does not occur until products have been shipped or services have been provided to the client, risk of loss has transferred to the client, and either client acceptance has been obtained, client acceptance provisions have lapsed, or the company has objective evidence that the criteria specified in the client acceptance provisions have been satisfied. The sales price is not considered to be fixed or determinable until all contingencies related to the sale have been resolved.

The company recognizes revenue on sales to solution providers, resellers and distributors (herein referred to as "resellers") when the reseller has: economic substance apart from the company, credit risk, risk of loss to the inventory; and, the fee to the company is not contingent upon resale or payment by the end user, the company has no further obligations related to bringing about resale or delivery and all other revenue recognition criteria have been met.

The company reduces revenue for estimated client returns, stock rotation, price protection, rebates and other similar allowances. (See Schedule II, "Valuation and Qualifying Accounts and Reserves" included in the company's Annual Report on Form 10-K). Revenue is recognized only if these estimates can be reasonably and reliably determined. The company bases its estimates on historical results taking into consideration the type of client, the type of transaction and the specifics of each arrangement. Payments made under cooperative marketing programs are recognized as an expense only if the company receives from the client an identifiable benefit sufficiently separable from the product sale whose fair value can be reasonably and reliably estimated. If the company does not receive an identifiable benefit sufficiently separable from the product sale whose fair value can be reasonably estimated, such payments are recorded as a reduction of revenue.

Revenue from sales of third-party vendor products or services is recorded net of costs when the company is acting as an agent between the client and the vendor, and gross when the company is a principal to the transaction. Several factors are considered to determine whether the company is an agent or principal, most notably whether the company is the primary obligor to the client, or has inventory risk. Consideration is also given to whether the company adds meaningful value to the vendor's product or service, was involved in the selection of the vendor's product or service, has latitude in establishing the sales price or has credit risk.

The company reports revenue net of any revenue-based taxes assessed by governmental authorities that are imposed on and concurrent with specific revenue-producing transactions. In addition to the aforementioned general policies, the following

are the specific revenue recognition policies for multiple-deliverable arrangements and for each major category of revenue.

#### **Multiple-Deliverable Arrangements**

The company enters into revenue arrangements that may consist of multiple deliverables of its products and services based on the needs of its clients. These arrangements may include any combination of services, software, hardware and/or financing. For example, a client may purchase a server that includes operating system software. In addition, the arrangement may include post-contract support for the software and a contract for post-warranty maintenance service for the hardware. These types of arrangements can also include financing provided by the company. These arrangements consist of multiple deliverables, with the hardware and software delivered in one reporting period, and the software support and hardware maintenance services delivered across multiple reporting periods. In another example, a client may outsource the running of its datacenter operations to the company on a long-term, multiple-year basis and periodically purchase servers and/or software products from the company to upgrade or expand its facility. The outsourcing services are provided on a continuous basis across multiple reporting periods, and the hardware and software products are delivered in one reporting period. To the extent that a deliverable in a multiple-deliverable arrangement is subject to specific accounting guidance, that deliverable is accounted for in accordance with such specific guidance. Examples of such arrangements may include leased hardware which is subject to specific leasing guidance or software which is subject to specific software revenue recognition guidance on whether and/or how to separate multiple-deliverable arrangements into separate units of accounting (separability) and how to allocate the arrangement consideration among those separate units of accounting (allocation). For all other deliverables in multiple-deliverable arrangements, the guidance below is applied for separability and allocation. A multiple-deliverable arrangement is separated into more than one unit of accounting if the following criteria are met:

- The delivered item(s) has value to the client on a stand-alone basis; and
- If the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the company.

If these criteria are not met, the arrangement is accounted for as one unit of accounting which would result in revenue being recognized ratably over the contract term or being deferred until the earlier of when such criteria are met or when the last undelivered element is delivered. If these criteria are met for each element and there is a relative selling price for all units of accounting in an arrangement, the arrangement consideration is allocated to the separate units of accounting based on each unit's relative selling price. The following revenue policies are then applied to each unit of accounting, as applicable.

Revenue from the company's cloud, analytics, mobile, security, and cognitive offerings follow the specific revenue recognition policies for multiple-deliverable arrangements and for each major category of revenue depending on the type of offering which can be comprised of services, hardware and/or software.

#### **Services**

The company's primary services offerings include information technology (IT) datacenter and business process outsourcing, application management services, consulting and systems integration, technology infrastructure and system maintenance, hosting and the design and development of complex IT systems to a client's specifications (design and build). Many of these services can be delivered entirely or partially through as-a-Service or cloud delivery models. These services are provided on a time-and-material basis, as a fixed-price contract or as a fixed-price per measure of output contract and the contract terms range from less than one year to over 10 years.

Revenue from IT datacenter and business process outsourcing contracts is recognized in the period the services are provided using either an objective measure of output or on a straight-line basis over the term of the contract. Under the output method, the amount of revenue recognized is based on the services delivered in the period.

Revenue from application management services, technology infrastructure, and system maintenance and hosting contracts is recognized on a straight-line basis over the terms of the contracts. Revenue from time-and-material contracts is recognized as labor hours are delivered and direct expenses are incurred. Revenue related to extended warranty and product maintenance contracts is recognized on a straight-line basis over the delivery period.

Revenue from fixed-price design and build contracts is recognized under the percentage-of-completion (POC) method. Under the POC method, revenue is recognized based on the labor costs incurred to date as a percentage of the total estimated labor costs to fulfill the contract. If circumstances arise that change the original estimates of revenues, costs, or extent of progress toward completion, revisions to the estimates are made. These revisions may result in increases or decreases in estimated revenues or costs, and such revisions are reflected in income in the period in which the circumstances that gave rise to the revision become known by the company.

The company performs ongoing profitability analyses of its services contracts accounted for under the POC method in order to determine whether the latest estimates of revenues, costs and profits require updating. If at any time these estimates indicate that the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately. For non-POC method services contracts, any losses are recorded as incurred.

In some services contracts, the company bills the client prior to recognizing revenue from performing the services. Deferred income of \$5,873 million and \$6,039 million at December 31, 2016 and 2015, respectively, is included in the Consolidated Statement of Financial Position. In other services contracts, the company performs the services prior to billing the client. Unbilled accounts receivable of \$1,611 million and \$1,630 million at December 31, 2016 and 2015, respectively, is included in notes and accounts receivable-trade in the Consolidated Statement of Financial Position.

Billings usually occur in the month after the company performs the services or in accordance with specific contractual provisions. Unbilled receivables are expected to be billed within four months.

**Hardware**

The company's hardware offerings include the sale or lease of system servers and storage solutions. The company also offers installation services for its more complex hardware products.

Revenue from hardware sales and sales-type leases is recognized when risk of loss has transferred to the client and there are no unfulfilled company obligations that affect the client's final acceptance of the arrangement. Any cost of standard warranties and remaining obligations that are inconsequential or perfunctory are accrued when the corresponding revenue is recognized. Revenue from rentals and operating leases is recognized on a straight-line basis over the term of the rental or lease.

**Software**

Revenue from perpetual (one-time charge) license software is recognized at the inception of the license term if all revenue recognition criteria have been met. Revenue from post-contract support, which may include unspecified upgrades on a when-and-if-available basis, is recognized on a straight-line basis over the period such items are delivered. Revenue from software hosting or Software-as-a-Service arrangements is recognized as the service is delivered. In software hosting arrangements, the rights provided to the customer (e.g., ownership of a license, contract termination provisions and the feasibility of the customer to operate the software) are considered in determining whether the arrangement includes a license. In arrangements which include a software license, the associated revenue is recognized according to whether the license is perpetual or term. Revenue from term (recurring license charge) license software is recognized on a straight-line basis over the period that the client is entitled to use the license.

In multiple-deliverable arrangements that include software that is more than incidental to the products or services as a whole (software multiple-deliverable arrangements), software and software-related elements are accounted for in accordance with software revenue recognition guidance. Software-related elements include software products and services for which a software deliverable is essential to its functionality. Tangible products containing software components and non-software components that function together to deliver the tangible product's essential functionality are not within the scope of software revenue recognition guidance and are accounted for based on other applicable revenue recognition guidance.

A software multiple-deliverable arrangement is separated into more than one unit of accounting if all of the following criteria are met:

- The functionality of the delivered element(s) is not dependent on the undelivered element(s);
- There is vendor-specific objective evidence (VSOE) of fair value of the undelivered element(s). VSOE of fair value is based on the price charged when the deliverable is sold separately by the company on a regular basis and not as part of the multiple-deliverable arrangement; and
- Delivery of the delivered element(s) represents the culmination of the earnings process for that element(s).

If any one of these criteria is not met, the arrangement is accounted for as one unit of accounting which would result in revenue being recognized ratably over the contract term or being

deferred until the earlier of when such criteria are met or when the last undelivered element is delivered. If these criteria are met for each element and there is VSOE of fair value for all units of accounting in an arrangement, the arrangement consideration is allocated to the separate units of accounting based on each unit's relative VSOE of fair value. There may be cases, however, in which there is VSOE of fair value of the undelivered item(s) but no such evidence for the delivered item(s). In these cases, the residual method is used to allocate the arrangement consideration. Under the residual method, the amount of consideration allocated to the delivered item(s) equals the total arrangement consideration less the aggregate VSOE of fair value of the undelivered elements.

The company's multiple-deliverable arrangements may have a stand-alone software deliverable that is subject to the existing software revenue recognition guidance. The revenue for these multiple-deliverable arrangements is allocated to the software deliverable and the non-software deliverables based on the relative selling prices of all of the deliverables in the arrangement using the hierarchy: VSOE, third-party evidence (TPE) or best estimate of selling price (BESP). In circumstances where the company cannot determine VSOE or TPE of the selling price for all of the deliverables in the arrangement, including the software deliverable, BESP is used for the purpose of performing this allocation.

**Financing**

Financing income attributable to sales-type leases, direct financing leases and loans is recognized on the accrual basis using the effective interest method. Operating lease income is recognized on a straight-line basis over the term of the lease.

**Best Estimate of Selling Price**

In certain instances, the company is not able to establish VSOE for all elements in a multiple-deliverable arrangement. When VSOE cannot be established, the company attempts to establish the selling price of each element based on TPE. TPE is determined based on competitor prices for similar deliverables when sold separately.

When the company is unable to establish selling price using VSOE or TPE, the company uses BESP in its allocation of arrangement consideration. The objective of BESP is to determine the price at which the company would transact a sale if the product or service were sold on a stand-alone basis. BESP may be used, for example, if a product is not sold on a stand-alone basis or when the company sells a new product, for which VSOE and TPE does not yet exist, in a multiple-deliverable arrangement prior to selling the new product on a stand-alone basis.

The company determines BESP by considering multiple factors including, but not limited to, overall market conditions, including geographic or regional specific factors, competitive positioning, competitor actions, internal costs, profit objectives and pricing practices. The determination of BESP is a formal process that includes review and approval by the company's management. In addition, the company regularly reviews VSOE and TPE for its products and services, in addition to BESP.

**Services Costs**

Recurring operating costs for services contracts, including costs related to bid and proposal activities, are recognized as incurred. For fixed-price design and build contracts, the costs of external

hardware and software accounted for under the POC method are deferred and recognized based on the labor costs incurred to date, as a percentage of the total estimated labor costs to fulfill the contract. Certain eligible, nonrecurring costs incurred in the initial phases of outsourcing contracts are deferred and subsequently amortized. These costs consist of transition and setup costs related to the installation of systems and processes and are amortized on a straight-line basis over the expected period of benefit, not to exceed the term of the contract. Additionally, fixed assets associated with outsourcing contracts are capitalized and depreciated on a straight-line basis over the expected useful life of the asset. If an asset is contract specific, then the depreciation period is the shorter of the useful life of the asset or the contract term. Amounts paid to clients in excess of the fair value of acquired assets used in outsourcing arrangements are deferred and amortized on a straight-line basis as a reduction of revenue over the expected period of benefit not to exceed the term of the contract. The company performs periodic reviews to assess the recoverability of deferred contract transition and setup costs. This review is done by comparing the estimated minimum remaining undiscounted cash flows of a contract to the unamortized contract costs. If such minimum undiscounted cash flows are not sufficient to recover the unamortized costs, an impairment loss is recognized.

Deferred services transition and setup costs were \$2,072 million and \$2,144 million at December 31, 2016 and 2015, respectively. Amortization of deferred services transition and setup costs was estimated at December 31, 2016 to be \$590 million in 2017, \$515 million in 2018, \$374 million in 2019, \$248 million in 2020 and \$344 million thereafter.

Deferred amounts paid to clients in excess of the fair value of acquired assets used in outsourcing arrangements were \$160 million and \$184 million at December 31, 2016 and 2015, respectively. Amortization of deferred amounts paid to clients in excess of the fair value of acquired assets is recorded as an offset of revenue and was estimated at December 31, 2016 to be \$53 million in 2017, \$46 million in 2018, \$28 million in 2019, \$20 million in 2020 and \$13 million thereafter. In situations in which an outsourcing contract is terminated, the terms of the contract may require the client to reimburse the company for the recovery of unbilled accounts receivable, unamortized deferred costs incurred to purchase specific assets utilized in the delivery of services and to pay any additional costs incurred by the company to transition the services.

#### **Software Costs**

Costs that are related to the conceptual formulation and design of licensed software programs are expensed as incurred to research, development and engineering expense; costs that are incurred to produce the finished product after technological feasibility has been established are capitalized as an intangible asset. Capitalized amounts are amortized on a straight-line basis over periods ranging up to three years and are recorded in software cost within cost of sales. The company performs periodic reviews to ensure that unamortized program costs remain recoverable from future revenue. Costs to support or service licensed programs are charged to software cost within cost of sales as incurred.

The company capitalizes certain costs that are incurred to purchase or to create and implement internal-use software programs, including software coding, installation, testing and

certain data conversions. These capitalized costs are amortized on a straight-line basis over periods ranging up to three years and are recorded in selling, general and administrative expense.

#### **Product Warranties**

The company offers warranties for its hardware products that generally range up to three years, with the majority being either one or three years. Estimated costs for warranty terms standard to the deliverable are recognized when revenue is recorded for the related deliverable. The company estimates its warranty costs standard to the deliverable based on historical warranty claim experience and estimates of future spending, and applies this estimate to the revenue stream for products under warranty. Estimated future costs for warranties applicable to revenue recognized in the current period are charged to cost of sales. The warranty liability is reviewed quarterly to verify that it properly reflects the remaining obligation based on the anticipated expenditures over the balance of the obligation period. Adjustments are made when actual warranty claim experience differs from estimates. Costs from fixed-price support or maintenance contracts, including extended warranty contracts, are recognized as incurred.

Revenue from extended warranty contracts is initially recorded as deferred income and subsequently recognized on a straight-line basis over the delivery period. Changes in deferred income for extended warranty contracts, and in the warranty liability for standard warranties, which are included in other accrued expenses and liabilities and other liabilities in the Consolidated Statement of Financial Position, are presented in the following tables:

#### **Standard Warranty Liability**

(\$ in millions)

|   | <b>2016</b>   | <b>2015</b>   |
|---|---------------|---------------|
| Balance at January 1                      | \$ 181        | \$ 197        |
| Current period accruals                   | 145           | 173           |
| Accrual adjustments to reflect experience | (6)           | 7             |
| Charges incurred                          | (164)         | (196)         |
| <b>Balance at December 31</b>             | <b>\$ 156</b> | <b>\$ 181</b> |

#### **Extended Warranty Liability (Deferred Income)**

(\$ in millions)

|  | <b>2016</b>   | <b>2015</b>   |
|--|---------------|---------------|
| Balance at January 1                                 | \$ 538        | \$ 536        |
| Revenue deferred for new extended warranty contracts | 263           | 286           |
| Amortization of deferred revenue                     | (267)         | (253)         |
| Other*   | (4)           | (31)          |
| <b>Balance at December 31</b>                        | <b>\$ 531</b> | <b>\$ 538</b> |
| Current portion                                      | \$ 264        | \$ 238        |
| Noncurrent portion                                   | \$ 267        | \$ 300        |

\* Other consists primarily of foreign currency translation adjustments.

#### **Shipping and Handling**

Costs related to shipping and handling are recognized as incurred and included in cost in the Consolidated Statement of Earnings.

**Expense and Other Income****Selling, General and Administrative**

Selling, general and administrative (SG&A) expense is charged to income as incurred. Expenses of promoting and selling products and services are classified as selling expense and include such items as compensation, advertising, sales commissions and travel. General and administrative expense includes such items as compensation, legal costs, office supplies, non-income taxes, insurance and office rental. In addition, general and administrative expense includes other operating items such as an allowance for credit losses, workforce rebalancing charges for contractually obligated payments to employees terminated in the ongoing course of business, acquisition costs related to business combinations, amortization of certain intangible assets and environmental remediation costs.

**Advertising and Promotional Expense**

The company expenses advertising and promotional costs as incurred. Cooperative advertising reimbursements from vendors are recorded net of advertising and promotional expense in the period in which the related advertising and promotional expense is incurred. Advertising and promotional expense, which includes media, agency and promotional expense, was \$1,327 million, \$1,290 million and \$1,307 million in 2016, 2015 and 2014, respectively, and is recorded in SG&A expense in the Consolidated Statement of Earnings.

**Research, Development and Engineering**

Research, development and engineering (RD&E) costs are expensed as incurred. Software costs that are incurred to produce the finished product after technological feasibility has been established are capitalized as an intangible asset.

**Intellectual Property and Custom Development Income**

The company licenses and sells the rights to certain of its intellectual property (IP) including internally developed patents, trade secrets and technological know-how. Certain IP transactions to third parties are licensing/royalty-based and others are transaction-based sales/other transfers. Income from licensing arrangements is recognized at the inception of the perpetual license term if all revenue recognition criteria have been met. Income from royalty-based fee arrangements is recognized over time or as the licensee sells future related products (i.e., variable royalty, based upon licensee's revenue). The company also enters into cross-licensing arrangements of patents, and income from these arrangements is recognized when earned. In addition, the company earns income from certain custom development projects for strategic technology partners and specific clients. The company records the income from these projects if the fee is not refundable, is not dependent upon the success of the project and when all revenue recognition have been met.

**Other (Income) and Expense**

Other (income) and expense includes interest income (other than from Global Financing external transactions), gains and losses on certain derivative instruments, gains and losses from securities and other investments, gains and losses from certain real estate transactions, foreign currency transaction gains and

losses, gains and losses from the sale of businesses, other than reported as discontinued operations, and amounts related to accretion of asset retirement obligations.

**Business Combinations and Intangible Assets Including Goodwill**

The company accounts for business combinations using the acquisition method and accordingly, the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree are recorded at their acquisition date fair values. Goodwill represents the excess of the purchase price over the fair value of net assets, including the amount assigned to identifiable intangible assets. The primary drivers that generate goodwill are the value of synergies between the acquired entities and the company and the acquired assembled workforce, neither of which qualifies as a separately identifiable intangible asset. Goodwill recorded in an acquisition is assigned to applicable reporting units based on expected revenues. Identifiable intangible assets with finite lives are amortized over their useful lives. Amortization of completed technology is recorded in Cost, and amortization of all other intangible assets is recorded in SG&A expense. Acquisition-related costs, including advisory, legal, accounting, valuation and other costs, are expensed in the periods in which the costs are incurred. The results of operations of acquired businesses are included in the Consolidated Financial Statements from the acquisition date.

**Impairment**

Long-lived assets, other than goodwill and indefinite-lived intangible assets, are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The impairment test is based on undiscounted cash flows and, if impaired, the asset is written down to fair value based on either discounted cash flows or appraised values. Goodwill and indefinite-lived intangible assets are tested at least annually, in the fourth quarter, for impairment and whenever changes in circumstances indicate an impairment may exist. Goodwill is tested at the reporting unit level which is the operating segment, or a business, which is one level below that operating segment (the "component" level) if discrete financial information is prepared and regularly reviewed by management at the segment level. Components are aggregated as a single reporting unit if they have similar economic characteristics.

**Depreciation and Amortization**

Property, plant and equipment are carried at cost and depreciated over their estimated useful lives using the straight-line method. The estimated useful lives of certain depreciable assets are as follows: buildings, 30 to 50 years; building equipment, 10 to 20 years; land improvements, 20 years; plant, laboratory and office equipment, 2 to 20 years; and computer equipment, 1.5 to 5 years. Leasehold improvements are amortized over the shorter of their estimated useful lives or the related lease term, rarely exceeding 25 years.

Capitalized software costs incurred or acquired after technological feasibility has been established are amortized over periods ranging up to 3 years. Capitalized costs for internal-use software are amortized on a straight-line basis over periods ranging up to 3 years. Other intangible assets are amortized over periods between 1 and 7 years.

### **Environmental**

The cost of internal environmental protection programs that are preventative in nature are expensed as incurred. When a cleanup program becomes likely, and it is probable that the company will incur cleanup costs and those costs can be reasonably estimated, the company accrues remediation costs for known environmental liabilities. The company's maximum exposure for all environmental liabilities cannot be estimated and no amounts are recorded for environmental liabilities that are not probable or estimable.

### **Asset Retirement Obligations**

Asset retirement obligations (ARO) are legal obligations associated with the retirement of long-lived assets. These liabilities are initially recorded at fair value and the related asset retirement costs are capitalized by increasing the carrying amount of the related assets by the same amount as the liability. Asset retirement costs are subsequently depreciated over the useful lives of the related assets. Subsequent to initial recognition, the company records period-to-period changes in the ARO liability resulting from the passage of time in interest expense and revisions to either the timing or the amount of the original expected cash flows to the related assets.

### **Defined Benefit Pension and Nonpension Postretirement Benefit Plans**

The funded status of the company's defined benefit pension plans and nonpension postretirement benefit plans (retirement-related benefit plans) is recognized in the Consolidated Statement of Financial Position. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation at December 31, the measurement date. For defined benefit pension plans, the benefit obligation is the projected benefit obligation (PBO), which represents the actuarial present value of benefits expected to be paid upon retirement based on employee services already rendered and estimated future compensation levels. For the nonpension postretirement benefit plans, the benefit obligation is the accumulated postretirement benefit obligation (APBO), which represents the actuarial present value of postretirement benefits attributed to employee services already rendered. The fair value of plan assets represents the current market value of assets held in an irrevocable trust fund, held for the sole benefit of participants, which are invested by the trust fund. Overfunded plans, with the fair value of plan assets exceeding the benefit obligation, are aggregated and recorded as a prepaid pension asset equal to this excess. Underfunded plans, with the benefit obligation exceeding the fair value of plan assets, are aggregated and recorded as a retirement and nonpension postretirement benefit obligation equal to this excess.

The current portion of the retirement and nonpension postretirement benefit obligations represents the actuarial present value of benefits payable in the next 12 months exceeding the fair value of plan assets, measured on a plan-by-plan basis. This obligation is recorded in compensation and benefits in the Consolidated Statement of Financial Position.

Net periodic pension and nonpension postretirement benefit cost/(income) is recorded in the Consolidated Statement of Earnings and includes service cost, interest cost, expected return on plan assets, amortization of prior service costs/(credits) and (gains)/losses previously recognized as a

component of OCI and amortization of the net transition asset remaining in accumulated other comprehensive income/(loss) (AOCI). Service cost represents the actuarial present value of participant benefits earned in the current year. Interest cost represents the time value of money cost associated with the passage of time. Certain events, such as changes in the employee base, plan amendments and changes in actuarial assumptions, result in a change in the benefit obligation and the corresponding change in OCI. The result of these events is amortized as a component of net periodic cost/(income) over the service lives or life expectancy of the participants, depending on the plan, provided such amounts exceed thresholds which are based upon the benefit obligation or the value of plan assets. Net periodic cost/(income) is recorded in Cost, SG&A and RD&E in the Consolidated Statement of Earnings based on the employees' respective functions.

(Gains)/losses and prior service costs/(credits) not recognized as a component of net periodic cost/(income) in the Consolidated Statement of Earnings as they arise are recognized as a component of OCI in the Consolidated Statement of Comprehensive Income. Those (gains)/losses and prior service costs/(credits) are subsequently recognized as a component of net periodic cost/(income) pursuant to the recognition and amortization provisions of applicable accounting guidance. (Gains)/losses arise as a result of differences between actual experience and assumptions or as a result of changes in actuarial assumptions. Prior service costs/(credits) represent the cost of benefit changes attributable to prior service granted in plan amendments.

The measurement of benefit obligations and net periodic cost/(income) is based on estimates and assumptions approved by the company's management. These valuations reflect the terms of the plans and use participant-specific information such as compensation, age and years of service, as well as certain assumptions, including estimates of discount rates, expected return on plan assets, rate of compensation increases, interest crediting rates and mortality rates.

### **Defined Contribution Plans**

The company's contribution for defined contribution plans is recorded when the employee renders service to the company. The charge is recorded in Cost, SG&A and RD&E in the Consolidated Statement of Earnings based on the employees' respective functions.

### **Stock-Based Compensation**

Stock-based compensation represents the cost related to stock-based awards granted to employees. The company measures stock-based compensation cost at the grant date, based on the estimated fair value of the award and recognizes the cost on a straight-line basis (net of estimated forfeitures) over the employee requisite service period. The company grants its employees Restricted Stock Units (RSUs), including Retention Restricted Stock Units (RRSUs) and Performance Share Units (PSUs) and periodically grants stock options. RSUs are stock awards granted to employees that entitle the holder to shares of common stock as the award vests, typically over a one- to five-year period. The fair value of the awards is determined and fixed on the grant date based on the company's stock price, adjusted for the exclusion of dividend equivalents. The company estimates the fair value of stock options using a Black-Scholes

valuation model. Stock-based compensation cost is recorded in Cost, SG&A, and RD&E in the Consolidated Statement of Earnings based on the employees' respective functions.

The company records deferred tax assets for awards that result in deductions on the company's income tax returns, based on the amount of compensation cost recognized and the statutory tax rate in the jurisdiction in which it will receive a deduction. Differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the income tax return are recorded in additional paid-in capital (if the tax deduction exceeds the deferred tax asset) or in the Consolidated Statement of Earnings (if the deferred tax asset exceeds the tax deduction and no additional paid-in capital exists from previous awards).

#### **Income Taxes**

Income tax expense is based on reported income before income taxes. Deferred income taxes reflect the tax effect of temporary differences between asset and liability amounts that are recognized for financial reporting purposes and the amounts that are recognized for income tax purposes. These deferred taxes are measured by applying currently enacted tax laws. Valuation allowances are recognized to reduce deferred tax assets to the amount that will more likely than not be realized. In assessing the need for a valuation allowance, management considers all available evidence for each jurisdiction including past operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies. When the company changes its determination as to the amount of deferred tax assets that can be realized, the valuation allowance is adjusted with a corresponding impact to income tax expense in the period in which such determination is made.

The company recognizes tax liabilities when, despite the company's belief that its tax return positions are supportable, the company believes that certain positions may not be fully sustained upon review by tax authorities. Benefits from tax positions are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement. The current portion of tax liabilities is included in taxes and the noncurrent portion of tax liabilities is included in other liabilities in the Consolidated Statement of Financial Position. To the extent that new information becomes available which causes the company to change its judgment regarding the adequacy of existing tax liabilities, such changes to tax liabilities will impact income tax expense in the period in which such determination is made. Interest and penalties, if any, related to accrued liabilities for potential tax assessments are included in income tax expense.

#### **Translation of Non-U.S. Currency Amounts**

Assets and liabilities of non-U.S. subsidiaries that have a local functional currency are translated to United States (U.S.) dollars at year-end exchange rates. Translation adjustments are recorded in OCI. Income and expense items are translated at weighted-average rates of exchange prevailing during the year.

Inventories, property, plant and equipment—net and other non-monetary assets and liabilities of non-U.S. subsidiaries and branches that operate in U.S. dollars are translated at the approximate exchange rates prevailing when the company acquired the assets or liabilities. All other assets and liabilities denominated in a currency other than U.S. dollars are translated at year-end exchange rates with the transaction gain or loss

recognized in other (income) and expense. Income and expense items are translated at the weighted-average rates of exchange prevailing during the year. These translation gains and losses are included in net income for the period in which exchange rates change.

#### **Derivative Financial Instruments**

Derivatives are recognized in the Consolidated Statement of Financial Position at fair value and are reported in prepaid expenses and other current assets, investments and sundry assets, other accrued expenses and liabilities or other liabilities. Classification of each derivative as current or noncurrent is based upon whether the maturity of the instrument is less than or greater than 12 months. To qualify for hedge accounting, the company requires that the instruments be effective in reducing the risk exposure that they are designated to hedge. For instruments that hedge cash flows, hedge designation criteria also require that it be probable that the underlying transaction will occur. Instruments that meet established accounting criteria are formally designated as hedges. These criteria demonstrate that the derivative is expected to be highly effective at offsetting changes in fair value or cash flows of the underlying exposure both at inception of the hedging relationship and on an ongoing basis. The method of assessing hedge effectiveness and measuring hedge ineffectiveness is formally documented at hedge inception. The company assesses hedge effectiveness and measures hedge ineffectiveness at least quarterly throughout the designated hedge period.

Where the company applies hedge accounting, the company designates each derivative as a hedge of: (1) the fair value of a recognized financial asset or liability, or of an unrecognized firm commitment (fair value hedge attributable to interest rate or foreign currency risk); (2) the variability of anticipated cash flows of a forecasted transaction, or the cash flows to be received or paid related to a recognized financial asset or liability (cash flow hedge attributable to interest rate or foreign currency risk); or (3) a hedge of a long-term investment (net investment hedge) in a foreign operation. In addition, the company may enter into derivative contracts that economically hedge certain of its risks, even though hedge accounting does not apply or the company elects not to apply hedge accounting. In these cases, there exists a natural hedging relationship in which changes in the fair value of the derivative, which are recognized currently in net income, act as an economic offset to changes in the fair value of the underlying hedged item(s).

Changes in the fair value of a derivative that is designated as a fair value hedge, along with offsetting changes in the fair value of the underlying hedged exposure, are recorded in earnings each period. For hedges of interest rate risk, the fair value adjustments are recorded as adjustments to interest expense and cost of financing in the Consolidated Statement of Earnings. For hedges of currency risk associated with recorded financial assets or liabilities, derivative fair value adjustments are recognized in other (income) and expense in the Consolidated Statement of Earnings. Changes in the fair value of a derivative that is designated as a cash flow hedge are recorded, net of applicable taxes, in OCI, in the Consolidated Statement of Comprehensive Income. When net income is affected by the variability of the underlying cash flow, the applicable offsetting amount of the gain or loss from the derivative that is deferred in AOCI is released to net income and reported in interest expense, cost, SG&A expense or other (income) and expense in the

Consolidated Statement of Earnings based on the nature of the underlying cash flow hedged. Effectiveness for net investment hedging derivatives is measured on a spot-to-spot basis. The effective portion of changes in the fair value of net investment hedging derivatives and other non-derivative financial instruments designated as net investment hedges are recorded as foreign currency translation adjustments in AOCI. Changes in the fair value of the portion of a net investment hedging derivative excluded from the effectiveness assessment are recorded in interest expense. If the underlying hedged item in a fair value hedge ceases to exist, all changes in the fair value of the derivative are included in net income each period until the instrument matures. When the derivative transaction ceases to exist, a hedged asset or liability is no longer adjusted for changes in its fair value except as required under other relevant accounting standards.

Derivatives that are not designated as hedges, as well as changes in the fair value of derivatives that do not effectively offset changes in the fair value of the underlying hedged item throughout the designated hedge period (collectively, "ineffectiveness"), are recorded in earnings for each period and are primarily reported in other (income) and expense. When a cash flow hedging relationship is discontinued, the net gain or loss in AOCI must generally remain in AOCI until the item that was hedged affects earnings. However, when it is probable that a forecasted transaction will not occur by the end of the originally specified time period or within an additional two-month period thereafter, the net gain or loss in AOCI must be reclassified into earnings immediately.

The company reports cash flows arising from derivative financial instruments designated as fair value or cash flow hedges consistent with the classification of cash flows from the underlying hedged items that these derivatives are hedging. Accordingly, the cash flows associated with derivatives designated as fair value or cash flow hedges are classified in cash flows from operating activities in the Consolidated Statement of Cash Flows. Cash flows from derivatives designated as net investment hedges and derivatives that do not qualify as hedges are reported in cash flows from investing activities in the Consolidated Statement of Cash Flows. For currency swaps designated as hedges of foreign currency denominated debt (included in the company's debt risk management program as addressed in note D, "Financial Instruments," on pages 110 through 114), cash flows directly associated with the settlement of the principal element of these swaps are reported in payments to settle debt in cash flows from financing activities in the Consolidated Statement of Cash Flows.

#### **Financial Instruments**

In determining the fair value of its financial instruments, the company uses a variety of methods and assumptions that are based on market conditions and risks existing at each balance sheet date. See note D, "Financial Instruments," on pages 109 to 110 for further information. All methods of assessing fair value result in a general approximation of value, and such value may never actually be realized.

#### **Fair Value Measurement**

Accounting guidance defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Under this guidance, the company is required to classify certain assets and liabilities based on the following fair value hierarchy:

- Level 1—Quoted prices (unadjusted) in active markets for identical assets or liabilities that can be accessed at the measurement date;
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3—Unobservable inputs for the asset or liability.

The guidance requires the use of observable market data if such data is available without undue cost and effort.

When available, the company uses unadjusted quoted market prices in active markets to measure the fair value and classifies such items within Level 1. If quoted market prices are not available, fair value is based upon internally developed models that use current market-based or independently sourced market parameters such as interest rates and currency rates. Items valued using internally generated models are classified according to the lowest level input or value driver that is significant to the valuation.

The determination of fair value considers various factors including interest rate yield curves and time value underlying the financial instruments. For derivatives and debt securities, the company uses a discounted cash flow analysis using discount rates commensurate with the duration of the instrument.

In determining the fair value of financial instruments, the company considers certain market valuation adjustments to the "base valuations" calculated using the methodologies described below for several parameters that market participants would consider in determining fair value:

- Counterparty credit risk adjustments are applied to financial instruments, taking into account the actual credit risk of a counterparty as observed in the credit default swap market to determine the true fair value of such an instrument.
- Credit risk adjustments are applied to reflect the company's own credit risk when valuing all liabilities measured at fair value. The methodology is consistent with that applied in developing counterparty credit risk adjustments, but incorporates the company's own credit risk as observed in the credit default swap market.

As an example, the fair value of derivatives is derived utilizing a discounted cash flow model that uses observable market inputs such as known notional value amounts, yield curves, spot and forward exchange rates as well as discount rates. These inputs relate to liquid, heavily traded currencies with active markets which are available for the full term of the derivative.

Certain financial assets are measured at fair value on a nonrecurring basis. These assets include equity method investments that are recognized at fair value at the measurement date to the extent that they are deemed to be other-than-temporarily impaired. Certain assets that are measured at fair value on a recurring basis can be subject to nonrecurring fair value measurements. These assets include available-for-sale equity investments that are deemed to be other-than-temporarily impaired. In the event of an other-than-temporary impairment of a financial instrument, fair value is measured using a model described above.

Accounting guidance permits the measurement of eligible financial assets, financial liabilities and firm commitments at fair value, on an instrument-by-instrument basis, that are otherwise not permitted to be accounted for at fair value under other accounting standards. This election is irrevocable. The company has not applied the fair value option to any eligible assets or liabilities.

#### **Cash Equivalents**

All highly liquid investments with maturities of three months or less at the date of purchase are considered to be cash equivalents.

#### **Marketable Securities**

Debt securities included in current assets represent securities that are expected to be realized in cash within one year of the balance sheet date. Long-term debt securities that are not expected to be realized in cash within one year and alliance equity securities are included in investments and sundry assets. Debt and marketable equity securities are considered available for sale and are reported at fair value with unrealized gains and losses, net of applicable taxes, in OCI. The realized gains and losses for available-for-sale securities are included in other (income) and expense in the Consolidated Statement of Earnings. Realized gains and losses are calculated based on the specific identification method.

In determining whether an other-than-temporary decline in market value has occurred, the company considers the duration that, and extent to which, the fair value of the investment is below its cost, the financial condition and near-term prospects of the issuer or underlying collateral of a security; and the company's intent and ability to retain the security in order to allow for an anticipated recovery in fair value. Other-than-temporary declines in fair value from amortized cost for available-for-sale equity and debt securities that the company intends to sell or would more likely than not be required to sell before the expected recovery of the amortized cost basis are charged to other (income) and expense in the period in which the loss occurs. For debt securities that the company has no intent to sell and believes that it more likely than not will not be required to sell prior to recovery, only the credit loss component of the impairment is recognized in other (income) and expense, while the remaining loss is recognized in OCI. The credit loss component recognized in other (income) and expense is identified as the amount of the principal cash flows not expected to be received over the remaining term of the debt security as projected using the company's cash flow projections.

#### **Inventories**

Raw materials, work in process and finished goods are stated at the lower of average cost or market. Cash flows related to the sale of inventories are reflected in net cash provided by operating activities in the Consolidated Statement of Cash Flows.

#### **Allowance for Credit Losses**

Receivables are recorded concurrent with billing and shipment of a product and/or delivery of a service to customers. A reasonable estimate of probable net losses on the value of customer receivables is recognized by establishing an allowance for credit losses.

#### **Notes and Accounts Receivable—Trade**

An allowance for uncollectible trade receivables is estimated based on a combination of write-off history, aging analysis and any specific, known troubled accounts.

#### **Financing Receivables**

Financing receivables include sales-type leases, direct financing leases and loans. Leases are accounted for in accordance with lease accounting standards. Loan receivables are financial assets recorded at amortized cost which approximates fair value. The company determines its allowances for credit losses on financing receivables based on two portfolio segments: lease receivables and loan receivables. The company further segments the portfolio into two classes: major markets and growth markets.

When calculating the allowances, the company considers its ability to mitigate a potential loss by repossessing leased equipment and by considering the current fair market value of any other collateral. The value of the equipment is the net realizable value. The allowance for credit losses for capital leases, installment sales and customer loans includes an assessment of the entire balance of the capital lease or loan, including amounts not yet due. The methodologies that the company uses to calculate its receivables reserves, which are applied consistently to its different portfolios, are as follows:

**Individually Evaluated**—The company reviews all financing receivables considered at risk on a quarterly basis. The review primarily consists of an analysis based upon current information available about the client, such as financial statements, news reports, published credit ratings, current market-implied credit analysis, as well as the current economic environment, collateral net of repossession cost and prior collection history. For loans that are collateral dependent, impairment is measured using the fair value of the collateral when foreclosure is probable. Using this information, the company determines the expected cash flow for the receivable and calculates an estimate of the potential loss and the probability of loss. For those accounts in which the loss is probable, the company records a specific reserve.

**Collectively Evaluated**—The company records an unallocated reserve that is calculated by applying a reserve rate to its different portfolios, excluding accounts that have been specifically reserved. This reserve rate is based upon credit rating, probability of default, term, characteristics (lease/loan) and loss history. Factors that could result in actual receivable losses that are materially different from the estimated reserve include sharp changes in the economy, or a significant change in the economic health of a particular client that represents a concentration in the company's receivables portfolio.

#### Other Credit-Related Policies

**Past Due**—The company views receivables as past due when payment has not been received after 90 days, measured from the original billing date.

**Non-Accrual**—Certain receivables for which the company has recorded a specific reserve may also be placed on non-accrual status. Non-accrual assets are those receivables (impaired loans or nonperforming leases) with specific reserves and other accounts for which it is likely that the company will be unable to collect all amounts due according to original terms of the lease or loan agreement. Income recognition is discontinued on these receivables. Cash collections are first applied as a reduction to principal outstanding. Any cash received in excess of principal payments outstanding is recognized as interest income. Receivables may be removed from non-accrual status, if appropriate, based upon changes in client circumstances.

**Impaired Loans**—As stated above, the company evaluates all financing receivables considered at-risk, including loans, for impairment on a quarterly basis. The company considers any loan with an individually evaluated reserve as an impaired loan. Depending on the level of impairment, loans will also be placed on non-accrual status as appropriate. Client loans are primarily for software and services and are unsecured. These loans are subjected to credit analysis to evaluate the associated risk and, when deemed necessary, actions are taken to mitigate risks in the loan agreements which include covenants to protect against credit deterioration during the life of the obligation.

**Write Off**—Receivable losses are charged against the allowance in the period in which the receivable is deemed uncollectible. Subsequent recoveries, if any, are credited to the allowance. Write-offs of receivables and associated reserves occur to the extent that the customer is no longer in operation and/or, there is no reasonable expectation of additional collections or repossession. The company's assessments factor in the history of collections and write-offs in specific countries and across the portfolio.

#### Estimated Residual Values of Lease Assets

The recorded residual values of lease assets are estimated at the inception of the lease to be the expected fair value of the assets at the end of the lease term. The company periodically reassesses the realizable value of its lease residual values. Any anticipated increases in specific future residual values are not recognized before realization through remarketing efforts. Anticipated decreases in specific future residual values that are considered to be other-than-temporary are recognized immediately upon identification and are recorded as an adjustment to the residual value estimate. For sales-type and direct-financing leases, this reduction lowers the recorded net investment and is recognized as a loss charged to financing

income in the period in which the estimate is changed, as well as an adjustment to unearned income to reduce future-period financing income.

#### Common Stock

Common stock refers to the \$.20 par value per share capital stock as designated in the company's Certificate of Incorporation. Treasury stock is accounted for using the cost method. When treasury stock is reissued, the value is computed and recorded using a weighted-average basis.

#### Earnings Per Share of Common Stock

Earnings per share (EPS) is computed using the two-class method. The two-class method determines EPS for each class of common stock and participating securities according to dividends and dividend equivalents and their respective participation rights in undistributed earnings. Basic EPS of common stock is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted EPS of common stock is computed on the basis of the weighted-average number of shares of common stock plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. Dilutive potential common shares include outstanding stock awards, convertible notes and stock options.

### NOTE B. ACCOUNTING CHANGES

#### New Standards to be Implemented

In January 2017, the Financial Accounting Standards Board (FASB) issued guidance which clarifies the definition of a business. The guidance provides a more robust framework to use in determining when a set of assets and activities acquired or sold is a business. The guidance is effective January 1, 2018 and early adoption is permitted. The guidance will be applied prospectively to any transactions occurring within the period of adoption. The company adopted the guidance effective January 1, 2017 and does not expect a material impact in the consolidated financial statements.

In October 2016, the FASB issued guidance which requires an entity to recognize the income tax consequences of intra-entity transfers of assets, other than inventory, at the time of transfer. Assets within the scope of the guidance include intellectual property and property, plant and equipment. The guidance is effective January 1, 2018 and early adoption is permitted. The company adopted the guidance on January 1, 2017 using the required modified retrospective method. At adoption, \$95 million and \$47 million were reclassified from investments in sundry assets and prepaid and other current assets, respectively into retained earnings. Additionally, net deferred taxes of \$244 million were established in deferred taxes in the Consolidated Statement of Financial Position, resulting in a cumulative-effect net credit to retained earnings of \$102 million. In January 2017, the company had a transaction generating approximately \$400 million to \$500 million benefit to income tax expense, income from continuing operations and net income for the three months ended March 31, 2017. The ongoing impact of this guidance will be dependent on any transaction that is within its scope.

In June 2016, the FASB issued guidance for credit impairment based on an expected loss model rather than an incurred loss model. The guidance requires the consideration of all available relevant information when estimating expected credit losses, including past events, current conditions and forecasts and their implications for expected credit losses. The guidance is effective January 1, 2020 with a one-year early adoption permitted. The company is evaluating the impact of the new guidance.

In March 2016, the FASB issued guidance which changes the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification in the Consolidated Statement of Cash Flows. The guidance was effective January 1, 2017 and upon transition did not have a material impact in the Consolidated Statement of Financial Position. The ongoing impact of the guidance could result in increased volatility in the provision for income taxes and earnings per share in the Consolidated Statement of Earnings, depending on the company's share price at exercise or vesting of share-based awards compared to grant date, however these impacts are not expected to be material. The guidance also requires cash payments on behalf of employees for shares directly withheld for taxes to be presented as financing outflows in the Consolidated Statement of Cash Flows. Prior to adoption, the company reported this activity as an operating cash outflow. For the years ended December 31, 2016 and 2015, respectively, the amounts for this activity that were recorded as operating cash outflows were \$126 million and \$248 million. This provision of the guidance requires retrospective application upon adoption on January 1, 2017.

In February 2016, the FASB issued guidance which changes the accounting for leases. The guidance requires lessees to recognize right-of-use assets and lease liabilities for most leases in the Consolidated Statement of Financial Position. The guidance makes some changes to lessor accounting, including the elimination of the use of third-party residual value guarantee insurance in the capital lease test, and overall aligns with the new revenue recognition guidance. The guidance also requires qualitative and quantitative disclosures to assess the amount, timing and uncertainty of cash flows arising from leases. The company will adopt the guidance as of the effective date of January 1, 2019. The company is currently evaluating the impact of the new guidance on its consolidated financial results and expects it will have a material impact on the Consolidated Statement of Financial Position. The company's operating lease commitments were \$6.9 billion at December 31, 2016. In 2016, the use of third-party residual value guarantee insurance resulted in the company recognizing \$220 million of sales-type lease revenue that would otherwise have been recognized over the lease period as operating lease revenue.

In January 2016, the FASB issued guidance which addresses aspects of recognition, measurement, presentation and disclosure of financial instruments. Certain equity investments will be measured at fair value with changes recognized in net income. The amendment also simplifies the impairment test of equity investments that lack readily determinable fair value. The guidance is effective January 1, 2018 and early adoption is not permitted except for limited provisions. The guidance is not expected to have a material impact in the consolidated financial results.

The FASB issued guidance on the recognition of revenue from contracts with customers in May 2014 with amendments in 2015 and 2016. Revenue recognition will depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance also requires disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The guidance permits two methods of adoption: retrospectively to each prior reporting period presented, or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the cumulative catch-up transition method). The guidance was initially effective January 1, 2017 and early adoption was not permitted. The amended guidance provides for a one-year deferral of the effective date to January 1, 2018, with an option of applying the standard on the original effective date. The company will adopt the guidance on January 1, 2018 and apply the cumulative catch-up transition method.

Given the scope of work required to implement the recognition and disclosure requirements under the new standard, the company began its assessment process in 2014 and has since made significant progress, including identification of changes to policy, processes, systems and controls.

The company expects revenue recognition for its broad portfolio of hardware, software and services offerings to remain largely unchanged. However, the guidance is expected to change the timing of revenue recognition in certain areas, including accounting for certain software licenses. These impacts are not expected to be material. The company expects to continue to recognize revenue for term license (recurring license charge) software arrangements on a monthly basis over the period that the client is entitled to use the license due to the contractual terms in these arrangements.

Since the company currently expenses sales commissions as incurred, the requirement in the new standard to capitalize certain in-scope sales commissions is being evaluated to determine its potential impact in the consolidated financial statements in the year of adoption. There will be no impact to cash flows.

The company continues to assess all potential impacts of the guidance and given normal ongoing business dynamics, preliminary conclusions are subject to change.

#### **Standards Implemented**

In November 2015, the FASB issued guidance which requires deferred tax liabilities and assets be classified as noncurrent in the statement of financial position. The guidance was effective January 1, 2016 with early adoption permitted. The company adopted the guidance in the fourth quarter of 2015 on a retrospective basis. The guidance was a change in financial presentation only.

In September 2015, the FASB issued guidance eliminating the requirement that an acquirer in a business combination account for a measurement-period adjustment retrospectively. Instead, an acquirer will recognize a measurement-period adjustment during the period in which the amount of the adjustment is determined. In addition, the portion of the amount recorded in current-period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date should be presented separately on the face of the income statement or disclosed in the notes. The guidance was effective January 1, 2016 on a prospective basis. The guidance did not have a material impact in the consolidated financial results.

In May 2015, the FASB issued guidance which removed the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. The amendments also removed the requirement to make certain disclosures for all 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 entity has elected to measure the fair value using that practical expedient. The guidance was effective January 1, 2016. The guidance was a change in disclosure only and did not have an impact in the consolidated financial results.

In April 2015, the FASB issued guidance about whether a cloud computing arrangement includes a software license. If the arrangement includes a software license, then the customer should account for the software license consistent with the acquisition of other software licenses. If the arrangement does not include a software license, the customer should account for the arrangement as a services contract. All software licenses recognized under this guidance will be accounted for consistent with other licenses of intangible assets. The guidance was effective January 1, 2016 and the company adopted it on a prospective basis. The guidance did not have a material impact in the consolidated financial results.

In April 2015, the FASB issued guidance which requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The guidance was effective January 1, 2016 with early adoption permitted. The company adopted the guidance in the fourth quarter of 2015 on a retrospective basis. The company had debt issuance costs of \$82 million and \$74 million at December 31, 2016 and 2015, respectively. Debt issuance costs were previously included in investments and sundry assets in the Consolidated Statement of Financial Position.

## NOTE C. ACQUISITIONS/DIVESTITURES

### Acquisitions

Purchase price consideration for all acquisitions, as reflected in the tables in this note, was paid primarily in cash. All acquisitions are reported in the Consolidated Statement of Cash Flows net of acquired cash and cash equivalents.

### 2016

In 2016, the company completed fifteen acquisitions at an aggregate cost of \$5,899 million.

**The Weather Company (TWC)**—On January 29, 2016, the company completed the acquisition of TWC's B2B, mobile and cloud-based Web-properties, weather.com, Weather Underground, The Weather Company brand and WSI, its global business-to-business brand, for cash consideration of \$2,278 million. The cable television segment was not acquired by IBM, but is licensing weather forecast data and analytics from IBM under a long-term contract. TWC was a privately held business. Goodwill of \$1,717 million has been assigned to the Cognitive Solutions segment. It is expected that none of the goodwill will be deductible for tax purposes. The overall weighted-average useful life of the identified intangible assets acquired is 6.9 years.

**Truven Health Analytics, Inc. (Truven)**—On April 8, 2016, the company completed the acquisition of 100 percent of Truven, a leading provider of healthcare analytics solutions, for cash consideration of \$2,612 million, of which \$200 million will be paid in July 2017. Truven has developed proprietary analytic methods and assembled analytic content assets, creating extensive national healthcare utilization, performance, quality and cost data. Truven was a privately held business. Goodwill of \$1,933 million has been assigned to the Cognitive Solutions segment. It is expected that approximately 15 percent of the goodwill will be deductible for tax purposes. The overall weighted-average useful life of the identified intangible assets acquired is 6.9 years.

**Other Acquisitions**—The Technology Services & Cloud Platforms segment completed acquisitions of four businesses: in the first quarter: Ustream, Inc. (Ustream), a privately held business, and AT&T's application and hosting services business; in the third quarter, G4S's cash solutions business; and in the fourth quarter, Sanovi Technologies Private Limited (Sanovi), a privately held business. Global Business Services (GBS) completed acquisitions of six privately held businesses: in the first quarter, Resource/Ammirati, ecx International AG (ecx.io) and Optevia Limited (Optevia); in the second quarter, Aperto AG (Aperto) and Bluewolf Group, LLC (Bluewolf); and in the fourth quarter, Fluid, Inc.'s Expert Personal Shopper (XPS) business. The Cognitive Solutions segment completed acquisitions of three privately held businesses: in the second quarter, Resilient Systems, Inc. (Resilient) and EZ Legacy, Ltd. (EZSource); and in the fourth quarter, Promontory Financial Group, LLC (Promontory).

Each acquisition is expected to enhance the company's portfolio of product and services capabilities. Ustream provides cloud-based video streaming to enterprises and broadcasters. The acquisition of AT&T's application and hosting services business strengthens the company's cloud portfolio. The acquisition of G4S's cash solutions business brings together the engineering skills of G4S with the company's analytics and remote technology capabilities to expand delivery solutions. Sanovi provides hybrid cloud recovery, cloud migration and business continuity software for enterprise data centers and cloud infrastructure. Resource/Ammirati is a leading U.S.-based digital marketing and creative agency, addressing the rising demand from businesses seeking to reinvent themselves for the digital economy. Ecxi.io enhances GBS' IBM Interactive Experience (IBM iX) with new digital marketing, commerce and platform skills to accelerate clients' digital transformations. Optevia is a Software-as-a Service systems integrator specializing in CRM solutions for public sector organizations. Aperto also joined IBM iX, supporting the company's growth in Europe, with expertise in digital strategy projects, including website and application development. Bluewolf extends the company's analytics,

experience design and industry consulting leadership with one of the world's leading Salesforce consulting practices to deliver differentiated, consumer-grade experiences via the cloud. Fluid, Inc.'s Expert Personal Shopper business extends the company's portfolio of SaaS offerings and services, helping clients conduct commerce and engage with their customers. Resilient, a provider of incident response solutions, automates and orchestrates the many processes needed when dealing with cyber incidents from breaches to lost devices. EZSource helps developers quickly and easily understand and change mainframe code based on data displayed through dashboards and other visualizations. Promontory, a global market-leading risk management and regulatory compliance consulting firm, helps address clients' escalating regulations and risk management requirements.

All of these Other Acquisitions were for 100 percent of the acquired businesses.

The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2016.

#### **2016 Acquisitions**

(\$ in millions)

|                                | Amortization Life (in Years) | The Weather Company | Truven Health Analytics | Other Acquisitions |
|--------------------------------|------------------------------|---------------------|-------------------------|--------------------|
| Current assets                 |                              | \$ 76               | \$ 171                  | \$ 153             |
| Fixed assets/noncurrent assets |                              | 123                 | 127                     | 110                |
| Intangible assets              |                              |                     |                         |                    |
| Goodwill                       | N/A                          | 1,717               | 1,933                   | 593                |
| Completed technology           | 1-7                          | 160                 | 338                     | 96                 |
| Client relationships           | 3-7                          | 313                 | 516                     | 226                |
| Patents/trademarks             | 1-7                          | 349                 | 54                      | 42                 |
| Total assets acquired          |                              | 2,738               | 3,141                   | 1,220              |
| Current liabilities            |                              | (88)                | (148)                   | (96)               |
| Noncurrent liabilities         |                              | (372)               | (381)                   | (76)               |
| Total liabilities assumed      |                              | (460)               | (529)                   | (171)              |
| Bargain purchase gain          |                              | —                   | —                       | (40)*              |
| <b>Total purchase price</b>    |                              | <b>\$2,278</b>      | <b>\$2,612</b>          | <b>\$1,009</b>     |

N/A—Not applicable.

\* Bargain purchase gain relating to AT&T's application and hosting services business was recognized in selling, general and administrative expense in the Consolidated Statement of Earnings in the three months ended March 31, 2016.

The acquisitions were accounted for as business combinations using the acquisition method, and accordingly, the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquired entity were recorded at their estimated fair values at the date of acquisition. The primary items that generated the goodwill are the value of the synergies between the acquired businesses and IBM and the acquired assembled workforce, neither of which qualify as an amortizable intangible asset.

For the Other Acquisitions, the overall weighted-average life of the identified amortizable intangible assets acquired is 6.3 years. These identified intangible assets will be amortized on a straight-line basis over their useful lives. Goodwill of \$119 million has been assigned to the Technology Services & Cloud Platforms segment, goodwill of \$303 million has been

assigned to the GBS segment and goodwill of \$171 million has been assigned to the Cognitive Solutions segment. It is expected that approximately 55 percent of the goodwill will be deductible for tax purposes.

On February 3, 2017, the company announced that it had acquired Agile 3 Solutions, LLC (Agile 3 Solutions), a privately held business based in San Francisco, California. Agile 3 Solutions is a developer of software used by the C-Suite and senior executives to better visualize, understand and manage risks associated with the protection of sensitive data. The business will be integrated within the Technology Services & Cloud Platforms segment. At the date of issuance of the financial statements, the initial purchase accounting was not complete for this acquisition.

**2015**

In 2015, the company completed fourteen acquisitions at an aggregate cost of \$3,555 million.

**Merge Healthcare, Inc. (Merge)**—On October 13, 2015, the company completed the acquisition of 100 percent of Merge, a publicly held business and a leading provider of medical image handling and processing, interoperability and clinical systems designed to advance healthcare quality and efficiency, for cash consideration of \$1,036 million. Merge joined the company's Watson Health business unit, bolstering clients' ability to analyze and cross-reference medical images against billions of data points already in the Watson Health Cloud. Goodwill of \$695 million was assigned to the Cognitive Solutions (\$502 million) and Technology Services & Cloud Platforms (\$193 million) segments. It was expected that none of the goodwill would be deductible for tax purposes. The overall weighted-average useful life of the identified intangible assets acquired was 7.0 years.

**Cleversafe, Inc. (Cleversafe)**—On November 6, 2015, the company completed the acquisition of 100 percent of Cleversafe, a privately held business and a leading developer and manufacturer of object-based storage software and appliances, for cash consideration of \$1,309 million. Cleversafe's integration into the company's Cloud business gives clients strategic data flexibility, simplified management and consistency with on-premise, cloud and hybrid cloud deployment options. Goodwill of \$1,000 million was assigned to the Technology Services & Cloud Platforms (\$590 million) and Systems (\$410 million) segments. It was expected that none of the goodwill would be deductible for tax purposes. The overall weighted-average useful life of the identified intangible assets acquired was 6.9 years.

**Other Acquisitions**—The Cognitive Solutions segment completed acquisitions of six privately held businesses: in the first quarter, AlchemyAI, Inc. (AlchemyAI) and Blekko, Inc. (Blekko); in the second quarter, Explorys, Inc. (Explorys) and Phytel, Inc. (Phytel); in the third quarter, Compose, Inc. (Compose); and in the fourth quarter, IRIS Analytics GmbH (IRIS Analytics). The Technology Services & Cloud Platforms segment completed acquisitions of four privately held businesses: in the

second quarter, Blue Box Group, Inc. (Blue Box); in the third quarter, StrongLoop, Inc. (StrongLoop); and in the fourth quarter, Gravitant, Inc. (Gravitant) and Clearleap, Inc. (Clearleap). GBS completed acquisitions of two privately held businesses in the fourth quarter, Advanced Application Corporation (AAC) and Meteorix, LLC. (Meteorix).

AlchemyAI provides scalable cognitive computing application program interface services and computing applications. Blekko technology provides advanced Web-crawling, categorization and intelligent filtering. Explorys provides secure cloud-based solutions for clinical integration, at-risk population management, cost of care measurement and pay-for-performance. Phytel's SaaS-based population health management offerings help providers identify patients at risk for care gaps and engage the patient to begin appropriate preventative care. Blue Box provides hosted, managed, OpenStack-based production-grade private clouds for the enterprise and service provider markets. Compose offers auto-scaling, production-ready databases to help software development teams deploy data services efficiently. StrongLoop provides application development software that enables software developers to build applications using application programming interfaces. AAC engages in system integration application development, software support and services. AAC was an affiliate of JBCC Holdings Inc. and IBM Japan Ltd. The company acquired all the shares of AAC which became a wholly owned subsidiary as of October 1, 2015. Gravitant develops cloud-based software to enable organizations to easily plan, buy and manage, or "broker," software and computing services from multiple suppliers across hybrid clouds. Meteorix offers consulting, deployment, integration and ongoing post-production services for Workday Financial Management and Human Capital Management applications. Clearleap provides cloud-based video services. IRIS Analytics provides technology and consultancy services to the payments industry to detect electronic payment fraud.

All of these Other Acquisitions were for 100 percent of the acquired businesses with the exception of the AAC acquisition.

The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2015.

**2015 Acquisitions**

(\$ in millions)

|                                | Amortization<br>Life (in Years) | Merge          | Cleversafe     | Other<br>Acquisitions |
|--------------------------------|---------------------------------|----------------|----------------|-----------------------|
| Current assets                 |                                 | \$ 94          | \$ 23          | \$ 60                 |
| Fixed assets/noncurrent assets |                                 | 128            | 63             | 82                    |
| Intangible assets              |                                 |                |                |                       |
| Goodwill                       | N/A                             | 695            | 1,000          | 895                   |
| Completed technology           | 5–7                             | 133            | 364            | 163                   |
| Client relationships           | 5–7                             | 145            | 23             | 95                    |
| Patents/trademarks             | 2–7                             | 54             | 11             | 23                    |
| Total assets acquired          |                                 | 1,248          | 1,484          | 1,318                 |
| Current liabilities            |                                 | (73)           | (15)           | (34)                  |
| Noncurrent liabilities         |                                 | (139)          | (160)          | (73)                  |
| Total liabilities assumed      |                                 | (212)          | (175)          | (107)                 |
| <b>Total purchase price</b>    |                                 | <b>\$1,036</b> | <b>\$1,309</b> | <b>\$1,210</b>        |

N/A—Not applicable

For the "Other Acquisitions," the overall weighted-average life of the identified intangible assets acquired was 6.4 years. These identified intangible assets will be amortized on a straight-line basis over their useful lives. Goodwill of \$518 million was assigned to the Cognitive Solutions segment, \$303 million was assigned to the Technology Services & Cloud Platforms segment, and \$74 million was assigned to the GBS segment. It was expected that 7 percent of the goodwill would be deductible for tax purposes.

#### **2014**

In 2014, the company completed six acquisitions at an aggregate cost of \$608 million.

The Cognitive Solutions segment completed acquisitions of four privately held businesses: in the first quarter, Cloudant, Inc. (Cloudant); in the second quarter, Silverpop Systems, Inc. (Silverpop) and Cognea Group Pty LTD (Cognea); and in the third quarter, CrossIdeas s.p.a. (CrossIdeas). Technology Services & Cloud Platforms completed acquisitions of two privately held businesses: in the first quarter, Aspera, Inc. (Aspera); and in the third quarter, Lighthouse Security Group, LLC (Lighthouse).

Aspera's technology helps make cloud computing faster, more predictable and more cost effective for big data transfers such as enterprise storage, sharing virtual images or accessing the cloud for increased computing capacity. Cloudant extends the company's mobile and cloud platform by enabling developers to easily and quickly create next-generation mobile and Web-based applications. Silverpop is a provider of cloud-based capabilities that deliver personalized customer engagements in highly scalable environments. Cognea offers personalized artificial intelligence capabilities designed to serve as an intuitive interface between human users and data-driven information. CrossIdeas delivers next generation identity and access governance capabilities to help mitigate access risks and segregation of duty violations. Lighthouse provides cloud-enabled managed identity and access management solutions. All acquisitions were for 100 percent of the acquired businesses.

The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2014.

#### **2014 Acquisitions**

| (\$ in millions)               | <b>Amortization Life (in Years)</b> | <b>Total Acquisitions</b> |
|--------------------------------|-------------------------------------|---------------------------|
| Current assets                 |                                     | \$ 56                     |
| Fixed assets/noncurrent assets |                                     | 39                        |
| Intangible assets              |                                     |                           |
| Goodwill                       | N/A                                 | 442                       |
| Completed technology           | 5–7                                 | 68                        |
| Client relationships           | 7                                   | 77                        |
| Patents/trademarks             | 1–7                                 | 18                        |
| Total assets acquired          |                                     | 701                       |
| Current liabilities            |                                     | (26)                      |
| Noncurrent liabilities         |                                     | (67)                      |
| Total liabilities assumed      |                                     | (93)                      |
| <b>Total purchase price</b>    |                                     | <b>\$608</b>              |

N/A—Not applicable

The overall weighted-average life of the identified amortizable intangible assets acquired was 6.8 years. These identified intangible assets will be amortized on a straight-line basis over their useful lives. Goodwill of \$442 million was assigned to the Cognitive Solutions (\$311 million) and Technology Services & Cloud Platforms (\$131 million) segments. It was expected that approximately 1 percent of the goodwill would be deductible for tax purposes.

#### **Divestitures**

**Microelectronics**—On October 20, 2014, IBM and GLOBALFOUNDRIES announced a definitive agreement in which GLOBALFOUNDRIES would acquire the company's Microelectronics business, including existing semiconductor manufacturing assets and operations in East Fishkill, NY and Essex Junction, VT. The commercial OEM business acquired by GLOBALFOUNDRIES includes custom logic and specialty foundry, manufacturing and related operations. The transaction closed on July 1, 2015.

The transaction includes a 10-year exclusive manufacturing sourcing agreement in which GLOBALFOUNDRIES will provide server processor semiconductor technology for use in IBM Systems. The agreement provides the company with capacity and market-based pricing for current semiconductor nodes in production and progression to nodes in the future for both development and production needs. As part of the transaction, the company will provide GLOBALFOUNDRIES with certain transition services, including IT, supply chain, packaging and test services and lab services. The initial term for these transition services was one to three years, with GLOBALFOUNDRIES having the ability to renew.

In the third quarter of 2014, the company recorded a pre-tax charge of \$4.7 billion related to the sale of the Microelectronics disposal group, which was part of the Systems reportable segment. The pre-tax charge reflected the fair value less the estimated cost of selling the disposal group including an impairment to the semiconductor long-lived assets of \$2.4 billion, \$1.5 billion representing the cash consideration expected to be transferred to GLOBALFOUNDRIES and \$0.8 billion of other related costs. Additional pre-tax charges of \$116 million were recorded during 2015 related to the disposal, and pre-tax charges of less than \$1 million were recorded during the year ended December 31, 2016. The cumulative pre-tax charge was \$4.8 billion as of December 31, 2016. Any additional charges that may be recorded in future periods are expected to be immaterial.

Reporting the related assets and liabilities initially as held for sale at September 30, 2014 was based on meeting all of the criteria for such reporting in the applicable accounting guidance. While the company met certain criteria for held for sale reporting in prior periods, it did not meet all of the criteria until September 30, 2014. In addition, at September 30, 2014, the company concluded that the Microelectronics business met the criteria for discontinued operations reporting. The disposal group constituted a component under accounting guidance. The continuing cash inflows and outflows with the discontinued component are related to the manufacturing sourcing arrangement and the transition, packaging and test services. These cash flows are not direct cash flows as they are not significant and the company has no significant continuing involvement.

All assets and liabilities of the business, classified as held for sale at June 30, 2015, were transferred at closing. The company transferred \$515 million of net cash to GLOBALFOUNDRIES in the third quarter of 2015. This amount included \$750 million of cash consideration, adjusted by the amount of working capital due from GLOBALFOUNDRIES and other miscellaneous items. A second cash payment in the amount of \$500 million was transferred in December 2016. The remaining cash consideration of \$250 million is expected to be transferred in December 2017.

Summarized financial information for discontinued operations is shown below.

(\$ in millions)

| For the year ended<br>December 31:                                    | 2016          | 2015            | 2014              |
|---|---------------|-----------------|-------------------|
| Total revenue   | \$ 0          | \$ 720          | \$ 1,335          |
| Loss from discontinued<br>operations, before tax                      | (11)          | (175)           | (619)             |
| Loss on disposal, before<br>tax                                       | 0             | (116)           | (4,726)           |
| Total loss from<br>discontinued<br>operations, before<br>income taxes | (11)          | (291)           | (5,346)           |
| Provision/(benefit) for<br>income taxes                               | (2)           | (117)           | (1,617)           |
| <b>Loss from discontinued<br/>operations, net of tax</b>              | <b>\$ (9)</b> | <b>\$ (174)</b> | <b>\$ (3,729)</b> |

**Industry Standard Server**—On January 23, 2014, IBM and Lenovo Group Limited (Lenovo) announced a definitive agreement in which Lenovo would acquire the company's industry standard server portfolio (System x) for an adjusted purchase price of \$2.1 billion, consisting of approximately \$1.8 billion in cash, with the balance in Lenovo common stock. The stock represented less than 5 percent equity ownership in Lenovo. The company sold to Lenovo its System x, BladeCenter and Flex System blade servers and switches, x86-based Flex integrated systems, NeXtScale and iDataPlex servers and associated software, blade networking and maintenance operations. As of March 31, 2016, all Lenovo common stock was sold.

IBM and Lenovo entered into a strategic relationship which included a global OEM and reseller agreement for sales of IBM's industry-leading entry and midrange Storwize disk storage systems, tape storage systems, General Parallel File System software, SmartCloud Entry offering, and elements of IBM's system software, including Systems Director and Platform Computing solutions. Effective with the initial closing of the transaction, Lenovo assumed related customer service and maintenance operations. IBM will continue to provide maintenance delivery on Lenovo's behalf for an extended period of time. In addition, as part of the transaction agreement, the company is providing Lenovo with certain transition services, including IT and supply chain services. The initial term for these transition services ranged from less than one year to three years. Certain services could be renewed by Lenovo for an additional year.

The initial closing was completed on October 1, 2014. A subsequent closing occurred in most other countries in which there was a large business footprint on December 31, 2014. The remaining countries closed on March 31, 2015. An assessment of the ongoing contractual terms of the transaction resulted in the recognition of pre-tax gains of \$63 million and \$57 million in 2015 and 2016, respectively.

Overall, the company expects to recognize a total pre-tax gain on the sale of approximately \$1.6 billion, which does not include associated costs related to transition and performance-based costs. Net of these charges, the pre-tax gain was approximately \$1.3 billion, of which the cumulative gain recorded as of December 31, 2016 is \$1.2 billion. The balance of the gain is expected to be recognized in 2019 upon conclusion of the maintenance agreement.

**Customer Care**—On September 10, 2013, IBM and SYNNEX announced a definitive agreement in which SYNNEX would acquire the company's worldwide customer care business process outsourcing services business for \$501 million, consisting of approximately \$430 million in cash, net of balance sheet adjustments, and \$71 million in SYNNEX common stock, which represented less than 5 percent equity ownership in SYNNEX. As part of the transaction, SYNNEX entered into a multi-year agreement with the company, and Concentrix, SYNNEX's outsourcing business, became an IBM strategic business partner for global customer care business process outsourcing services.

The initial closing was completed on January 31, 2014, with subsequent closings occurring during 2014. For the full year of 2014, the company recorded a pre-tax gain of \$202 million related to this transaction.

In the second quarter of 2015, resolution of the final balance sheet adjustments was concluded. An assessment of the ongoing contractual terms of the transaction resulted in the recognition of a pre-tax gain of \$7 million in 2015. Through December 31, 2016, the cumulative pre-tax gain attributed to this transaction was \$213 million.

**Others**—In addition to those above, the company completed the following divestitures:

2016—In the first quarter of 2016, the company completed four software product-related divestitures. In the fourth quarter of 2016, the company completed the divestiture of one service-related offering. The financial terms related to these transactions were not material. Overall, the company recorded a pre-tax gain of \$42 million related to these transactions in 2016.

2015—In the first quarter of 2015, the company completed two software product-related divestitures and in the second quarter, the company completed one software product-related divestiture and the divestiture of one Global Business Services' offering. In the fourth quarter of 2015, the company completed three software product-related divestitures. The financial terms related to these transactions were not material. Overall, the company recorded a pre-tax gain of \$81 million related to these transactions in 2015.

2014—In the second quarter of 2014, the company completed one software product-related divestiture and the divestiture of one Global Business Services' offering. In the third quarter, the company completed four software product-related divestitures. In the fourth quarter of 2014, the company completed two software product-related divestitures. The financial terms related to these transactions were not material. Overall, the company recorded a pre-tax gain of \$132 million related to these transactions in 2014.

## NOTE D. FINANCIAL INSTRUMENTS

### Fair Value Measurements

#### Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present the company's financial assets and financial liabilities that are measured at fair value on a recurring basis at December 31, 2016 and 2015.

| At December 31, 2016:                                | Level 1        | Level 2        | Level 3    | Total                        |
|--|----------------|----------------|------------|------------------------------|
| <b>Assets</b>  |                |                |            |                              |
| Cash equivalents <sup>(1)</sup>                      |                |                |            |                              |
| Time deposits and certificates of deposit            | \$ —           | \$3,629        | \$—        | \$3,629                      |
| Money market funds                                   | 1,204          | —              | —          | 1,204                        |
| <b>Total</b>   | <b>1,204</b>   | <b>3,629</b>   | <b>—</b>   | <b>4,832<sup>(6)</sup></b>   |
| Debt securities—current <sup>(2)</sup>               | —              | 699            | —          | 699 <sup>(6)</sup>           |
| Debt securities—noncurrent <sup>(3)</sup>            | 1              | 6              | —          | 8                            |
| Available-for-sale equity investments <sup>(3)</sup> | 7              | —              | —          | 7                            |
| Derivative assets <sup>(4)</sup>                     |                |                |            |                              |
| Interest rate contracts                              | —              | 555            | —          | 555                          |
| Foreign exchange contracts                           | —              | 560            | —          | 560                          |
| Equity contracts                                     | —              | 11             | —          | 11                           |
| <b>Total</b>   | <b>—</b>       | <b>1,126</b>   | <b>—</b>   | <b>1,126<sup>(7)</sup></b>   |
| <b>Total assets</b>                                  | <b>\$1,212</b> | <b>\$5,460</b> | <b>\$—</b> | <b>\$6,672<sup>(7)</sup></b> |
| <b>Liabilities</b>                                   |                |                |            |                              |
| Derivative liabilities <sup>(5)</sup>                |                |                |            |                              |
| Foreign exchange contracts                           | \$ —           | \$ 188         | \$—        | \$ 188                       |
| Equity contracts                                     | —              | 10             | —          | 10                           |
| Interest rate contracts                              | —              | 8              | —          | 8                            |
| <b>Total liabilities</b>                             | <b>\$ —</b>    | <b>\$ 206</b>  | <b>\$—</b> | <b>\$ 206<sup>(7)</sup></b>  |

<sup>(1)</sup> Included within cash and cash equivalents in the Consolidated Statement of Financial Position

<sup>(2)</sup> U.S. government securities reported as marketable securities in the Consolidated Statement of Financial Position

<sup>(3)</sup> Included within investments and sundry assets in the Consolidated Statement of Financial Position

<sup>(4)</sup> The gross balances of derivative assets contained within prepaid expenses and other current assets, and investments and sundry assets in the Consolidated Statement of Financial Position at December 31, 2016 were \$532 million and \$594 million, respectively

<sup>(5)</sup> The gross balances of derivative liabilities contained within other accrued expenses and liabilities, and other liabilities in the Consolidated Statement of Financial Position at December 31, 2016 were \$145 million and \$61 million, respectively

<sup>(6)</sup> Available-for-sale securities with carrying values that approximate fair value

<sup>(7)</sup> If derivative exposures covered by a qualifying master netting agreement had been netted in the Consolidated Statement of Financial Position, the total derivative asset and liability positions each would have been reduced by \$116 million.

(\$ in millions)

| <b>At December 31, 2015:</b>                         | <b>Level 1</b> | <b>Level 2</b> | <b>Level 3</b> | <b>Total</b>                 |
|--|----------------|----------------|----------------|------------------------------|
| <b>Assets</b>  |                |                |                |                              |
| <b>Cash equivalents<sup>(1)</sup></b>                |                |                |                |                              |
| Time deposits and certificates of deposit            | \$ —           | \$2,856        | \$—            | \$2,856                      |
| Money market funds                                   | 2,069          | —              | —              | 2,069                        |
| Other securities                                     | —              | 18             | —              | 18                           |
| <b>Total</b>   | <b>2,069</b>   | <b>2,874</b>   | <b>—</b>       | <b>4,943<sup>(6)</sup></b>   |
| <b>Debt securities—current<sup>(2)</sup></b>         |                |                |                |                              |
| Debt securities—noncurrent <sup>(3)</sup>            | 1              | 6              | —              | 8                            |
| Trading security investments <sup>(3)</sup>          | 28             | —              | —              | 28                           |
| Available-for-sale equity investments <sup>(3)</sup> | 192            | —              | —              | 192                          |
| <b>Derivative assets<sup>(4)</sup></b>               |                |                |                |                              |
| Interest rate contracts                              | —              | 656            | —              | 656                          |
| Foreign exchange contracts                           | —              | 332            | —              | 332                          |
| Equity contracts                                     | —              | 6              | —              | 6                            |
| <b>Total</b>   | <b>—</b>       | <b>994</b>     | <b>—</b>       | <b>994<sup>(7)</sup></b>     |
| <b>Total assets</b>                                  | <b>\$2,290</b> | <b>\$4,381</b> | <b>\$—</b>     | <b>\$6,671<sup>(7)</sup></b> |
| <b>Liabilities</b>                                   |                |                |                |                              |
| <b>Derivative liabilities<sup>(5)</sup></b>          |                |                |                |                              |
| Foreign exchange contracts                           | \$ —           | \$ 164         | \$—            | \$ 164                       |
| Equity contracts                                     | —              | 19             | —              | 19                           |
| Interest rate contracts                              | —              | 3              | —              | 3                            |
| <b>Total liabilities</b>                             | <b>\$ —</b>    | <b>\$ 186</b>  | <b>\$—</b>     | <b>\$ 186<sup>(7)</sup></b>  |

<sup>(1)</sup> Included within cash and cash equivalents in the Consolidated Statement of Financial Position<sup>(2)</sup> Commercial paper and certificates of deposit reported as marketable securities in the Consolidated Statement of Financial Position<sup>(3)</sup> Included within investments and sundry assets in the Consolidated Statement of Financial Position<sup>(4)</sup> The gross balances of derivative assets contained within prepaid expenses and other current assets, and investments and sundry assets in the Consolidated Statement of Financial Position at December 31, 2015 were \$292 million and \$702 million, respectively<sup>(5)</sup> The gross balances of derivative liabilities contained within other accrued expenses and liabilities, and other liabilities in the Consolidated Statement of Financial Position at December 31, 2015 were \$164 million and \$22 million, respectively<sup>(6)</sup> Available-for-sale securities with carrying values that approximate fair value<sup>(7)</sup> If derivative exposures covered by a qualifying master netting agreement had been netted in the Consolidated Statement of Financial Position, the total derivative asset and liability positions would have been reduced by \$139 million each.

There were no transfers between Levels 1 and 2 for the years ended December 31, 2016 and 2015.

**Financial Assets and Liabilities Not Measured at Fair Value**

**Short-Term Receivables and Payables**

Notes and other accounts receivable and other investments are financial assets with carrying values that approximate fair value. Accounts payable, other accrued expenses and short-term debt (excluding the current portion of long-term debt) are financial liabilities with carrying values that approximate fair value. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy.

**Loans and Long-Term Receivables**

Fair values are based on discounted future cash flows using current interest rates offered for similar loans to clients with similar credit ratings for the same remaining maturities. At December 31, 2016 and 2015, the difference between the carrying amount and estimated fair value for loans and long-term receivables was immaterial. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy.

**Long-Term Debt**

Fair value of publicly traded long-term debt is based on quoted market prices for the identical liability when traded as an asset in an active market. For other long-term debt for which a quoted market price is not available, an expected present value technique that uses rates currently available to the company for debt with similar terms and remaining maturities is used to estimate fair value. The carrying amount of long-term debt is \$34,655 million and \$33,428 million and the estimated fair value is \$36,838 million and \$35,220 million at December 31, 2016 and 2015, respectively. If measured at fair value in the financial statements, long-term debt (including the current portion) would be classified as Level 2 in the fair value hierarchy.

**Debt and Marketable Equity Securities**

The company's cash equivalents and current debt securities are considered available for sale and recorded at fair value, which is not materially different from carrying value, in the Consolidated Statement of Financial Position.

The following tables summarize the company's noncurrent debt and marketable equity securities which are also considered available for sale and recorded at fair value in the Consolidated Statement of Financial Position.

(\$ in millions)

| <b>At December 31, 2016:</b>                         | <b>Adjusted Cost</b> | <b>Gross Unrealized Gains</b> | <b>Gross Unrealized Losses</b> | <b>Fair Value</b> |
|--|----------------------|-------------------------------|--------------------------------|-------------------|
| Debt securities—noncurrent <sup>(1)</sup>            | \$ 5                 | \$3                           | \$—                            | \$ 8              |
| Available-for-sale equity investments <sup>(1)</sup> | \$ 3                 | \$5                           | \$0                            | \$ 7              |

<sup>(1)</sup> Included within investments and sundry assets in the Consolidated Statement of Financial Position

(\$ in millions)

| <b>At December 31, 2015:</b>                         | <b>Adjusted Cost</b> | <b>Gross Unrealized Gains</b> | <b>Gross Unrealized Losses</b> | <b>Fair Value</b> |
|--|----------------------|-------------------------------|--------------------------------|-------------------|
| Debt securities—noncurrent <sup>(1)</sup>            | \$ 5                 | \$3                           | \$—                            | \$ 8              |
| Available-for-sale equity investments <sup>(1)</sup> | \$186                | \$6                           | \$0                            | \$192             |

<sup>(1)</sup> Included within investments and sundry assets in the Consolidated Statement of Financial Position

During the fourth quarter of 2014, the company acquired equity securities in conjunction with the sale of the System x business which were classified as available-for-sale securities. Based on an evaluation of available evidence as of December 31, 2015, the company recorded an other-than-temporary impairment loss of \$86 million resulting in an adjusted cost basis of \$185 million as of December 31, 2015. In the first quarter of 2016, the company recorded a gross realized loss of \$37 million (before taxes) related to the sale of all the outstanding shares. The loss on this sale was recorded in other (income) and expense in the Consolidated Statement of Earnings.

Sales of debt and available-for-sale equity investments during the period were as follows:

(\$ in millions)

| <b>For the year ended December 31:</b>  | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-------------|-------------|-------------|
| Proceeds                                | \$151       | \$8         | \$21        |
| Gross realized gains<br>(before taxes)  | 3           | 1           | 0           |
| Gross realized losses<br>(before taxes) | 37          | 1           | 5           |

The after-tax net unrealized gains/(losses) on available-for-sale debt and equity securities that have been included in other comprehensive income/(loss) and the after-tax net (gains)/losses reclassified from accumulated other comprehensive income/(loss) to net income were as follows:

| (\$ in millions)   | <b>2016</b> | <b>2015</b> |
|--|-------------|-------------|
| <b>For the year ended December 31:</b>                       |             |             |
| Net unrealized gains/(losses)<br>arising during the period   | \$(23)      | \$(33)      |
| Net unrealized (gains)/losses<br>reclassified to net income* | 21          | 53          |

\* Includes pre-tax writedowns of \$86 million in 2015. There were no writedowns in 2016.

The contractual maturities of substantially all available-for-sale debt securities are less than one year at December 31, 2016.

#### **Derivative Financial Instruments**

The company operates in multiple functional currencies and is a significant lender and borrower in the global markets. In the normal course of business, the company is exposed to the impact of interest rate changes and foreign currency fluctuations, and to a lesser extent equity and commodity price changes and client credit risk. The company limits these risks by following established risk management policies and procedures, including the use of derivatives, and, where cost effective, financing with debt in the currencies in which assets are denominated. For interest rate exposures, derivatives are used to better align rate movements between the interest rates associated with the company's lease and other financial assets and the interest rates associated with its financing debt. Derivatives are also used to manage the related cost of debt. For foreign currency exposures, derivatives are used to better manage the cash flow volatility arising from foreign exchange rate fluctuations.

As a result of the use of derivative instruments, the company is exposed to the risk that counterparties to derivative contracts will fail to meet their contractual obligations. To mitigate the counterparty credit risk, the company has a policy of only entering into contracts with carefully selected major financial institutions based upon their overall credit profile. The company's established policies and procedures for mitigating credit risk on principal transactions include reviewing and establishing limits for credit exposure and continually assessing the creditworthiness of counterparties. The right of set-off that exists under certain of these arrangements enables the legal entities of the company subject to the arrangement to net amounts due to and from the counterparty reducing the maximum loss from credit risk in the event of counterparty default.

The company is also a party to collateral security arrangements with most of its major derivative counterparties. These arrangements require the company to hold or post collateral (cash or U.S. Treasury securities) when the derivative fair values exceed contractually established thresholds. Posting thresholds can be fixed or can vary based on credit default swap pricing or credit ratings received from the major credit agencies. The aggregate fair value of all derivative instruments under these collateralized arrangements that were in a liability position at December 31, 2016 and 2015 was \$11 million and \$28 million,

respectively, for which no collateral was posted at either date. Full collateralization of these agreements would be required in the event that the company's credit rating falls below investment grade or if its credit default swap spread exceeds 250 basis points, as applicable, pursuant to the terms of the collateral security arrangements. The aggregate fair value of derivative instruments in asset positions as of December 31, 2016 and 2015 was \$1,126 million and \$994 million, respectively. This amount represents the maximum exposure to loss at the reporting date if the counterparties failed to perform as contracted. This exposure was reduced by \$116 million and \$139 million at December 31, 2016 and 2015, respectively, of liabilities included in master netting arrangements with those counterparties. Additionally, at December 31, 2016 and 2015, this exposure was reduced by \$141 million and \$90 million of cash collateral and \$35 million and \$40 million of non-cash collateral in U.S. Treasury securities, respectively, received by the company. At December 31, 2016 and 2015, the net exposure related to derivative assets recorded in the Consolidated Statement of Financial Position was \$834 million and \$726 million, respectively. At December 31, 2016 and 2015, the net exposure related to derivative liabilities recorded in the Consolidated Statement of Financial Position was \$90 million and \$47 million, respectively.

In the Consolidated Statement of Financial Position, the company does not offset derivative assets against liabilities in master netting arrangements nor does it offset receivables or payables recognized upon payment or receipt of cash collateral against the fair values of the related derivative instruments. No amount was recognized in other receivables at December 31, 2016 and 2015 for the right to reclaim cash collateral. The amount recognized in accounts payable for the obligation to return cash collateral was \$141 million and \$90 million at December 31, 2016 and 2015, respectively. The company restricts the use of cash collateral received to rehypothecation, and therefore reports it in prepaid expenses and other current assets in the Consolidated Statement of Financial Position. No amount was rehypothecated at December 31, 2016 and 2015.

The company may employ derivative instruments to hedge the volatility in stockholders' equity resulting from changes in currency exchange rates of significant foreign subsidiaries of the company with respect to the U.S. dollar. These instruments, designated as net investment hedges, expose the company to liquidity risk as the derivatives have an immediate cash flow impact upon maturity which is not offset by a cash flow from the translation of the underlying hedged equity. The company monitors this cash loss potential on an ongoing basis, and may discontinue some of these hedging relationships by de-designating or terminating the derivative instrument in order to manage the liquidity risk. Although not designated as accounting hedges, the company may utilize derivatives to offset the changes in the fair value of the de-designated instruments from the date of de-designation until maturity.

In its hedging programs, the company uses forward contracts, futures contracts, interest-rate swaps, cross-currency swaps and options depending upon the underlying exposure. The company is not a party to leveraged derivative instruments.

A brief description of the major hedging programs, categorized by underlying risk, follows.

### Interest Rate Risk

#### Fixed and Variable Rate Borrowings

The company issues debt in the global capital markets to fund its operations and financing business. Access to cost-effective financing can result in interest-rate mismatches with the underlying assets. To manage these mismatches and to reduce overall interest cost, the company uses interest-rate swaps to convert specific fixed-rate debt issuances into variable-rate debt (i.e., fair value hedges) and to convert specific variable-rate debt issuances into fixed-rate debt (i.e., cash flow hedges). At December 31, 2016 and 2015, the total notional amount of the company's interest-rate swaps was \$7.3 billion at both periods. The weighted-average remaining maturity of these instruments at December 31, 2016 and 2015 was approximately 6.2 years and 7.2 years, respectively.

#### Forecasted Debt Issuance

The company is exposed to interest rate volatility on future debt issuances. To manage this risk, the company may use forward-starting interest-rate swaps to lock in the rate on the interest payments related to the forecasted debt issuance. These swaps are accounted for as cash flow hedges. The company did not have any derivative instruments relating to this program outstanding at December 31, 2016 and 2015.

At December 31, 2016 and 2015, net gains of less than \$1 million (before taxes), respectively, were recorded in accumulated other comprehensive income/(loss) in connection with cash flow hedges of the company's borrowings. Within these amounts, less than \$1 million of gains, respectively, are expected to be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying transactions.

### Foreign Exchange Risk

#### Long-Term Investments in Foreign Subsidiaries (Net Investment)

A large portion of the company's foreign currency denominated debt portfolio is designated as a hedge of net investment in foreign subsidiaries to reduce the volatility in stockholders' equity caused by changes in foreign currency exchange rates in the functional currency of major foreign subsidiaries with respect to the U.S. dollar. The company also uses cross-currency swaps and foreign exchange forward contracts for this risk management purpose. At December 31, 2016 and 2015, the total notional amount of derivative instruments designated as net investment hedges was \$6.7 billion and \$5.5 billion, respectively. The weighted-average remaining maturity of these instruments at December 31, 2016 and 2015 was approximately 0.2 years at both periods.

#### Anticipated Royalties and Cost Transactions

The company's operations generate significant nonfunctional currency, third-party vendor payments and intercompany payments for royalties and goods and services among the company's non-U.S. subsidiaries and with the parent company. In anticipation of these foreign currency cash flows and in view of the volatility of the currency markets, the company selectively employs foreign exchange forward contracts to manage its currency risk. These forward contracts are accounted for as cash flow hedges. The maximum length of time over which the company has hedged its exposure to the variability in future cash flows is four years. At December 31, 2016 and 2015, the total notional amount of forward contracts designated as cash flow

hedges of forecasted royalty and cost transactions was \$8.3 billion and \$8.2 billion, respectively, with a weighted-average remaining maturity of 0.7 years at both periods.

At December 31, 2016 and 2015, in connection with cash flow hedges of anticipated royalties and cost transactions, the company recorded net gains of \$462 million and net gains of \$147 million (before taxes), respectively, in accumulated other comprehensive income/(loss). Within these amounts \$397 million of gains and \$121 million of gains, respectively, are expected to be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying anticipated transactions.

#### Foreign Currency Denominated Borrowings

The company is exposed to exchange rate volatility on foreign currency denominated debt. To manage this risk, the company employs cross-currency swaps to convert fixed-rate foreign currency denominated debt to fixed-rate debt denominated in the functional currency of the borrowing entity. These swaps are accounted for as cash flow hedges. The maximum length of time over which the company has hedged its exposure to the variability in future cash flows is approximately nine years. At December 31, 2016, the total notional amount of cross-currency swaps designated as cash flow hedges of foreign currency denominated debt was \$1.4 billion. At December 31, 2015, no amounts were outstanding under this program.

At December 31, 2016 and 2015, in connection with cash flow hedges of foreign currency denominated borrowings, the company recorded net gains of \$29 million and net losses of \$2 million (before taxes), respectively, in accumulated other comprehensive income/(loss). Within these amounts, \$27 million of gains and less than \$1 million of losses, respectively, are expected to be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying exposure.

#### Subsidiary Cash and Foreign Currency

#### Asset/Liability Management

The company uses its Global Treasury Centers to manage the cash of its subsidiaries. These centers principally use currency swaps to convert cash flows in a cost-effective manner. In addition, the company uses foreign exchange forward contracts to economically hedge, on a net basis, the foreign currency exposure of a portion of the company's nonfunctional currency assets and liabilities. The terms of these forward and swap contracts are generally less than one year. The changes in the fair values of these contracts and of the underlying hedged exposures are generally offsetting and are recorded in other (income) and expense in the Consolidated Statement of Earnings. At December 31, 2016 and 2015, the total notional amount of derivative instruments in economic hedges of foreign currency exposure was \$12.7 billion and \$11.7 billion, respectively.

#### Equity Risk Management

The company is exposed to market price changes in certain broad market indices and in the company's own stock primarily related to certain obligations to employees. Changes in the overall value of these employee compensation obligations are recorded in SG&A expense in the Consolidated Statement of Earnings. Although not designated as accounting hedges, the company utilizes derivatives, including equity swaps and futures,

to economically hedge the exposures related to its employee compensation obligations. The derivatives are linked to the total return on certain broad market indices or the total return on the company's common stock, and are recorded at fair value with gains or losses also reported in SG&A expense in the Consolidated Statement of Earnings. At December 31, 2016 and 2015, the total notional amount of derivative instruments in economic hedges of these compensation obligations was \$1.2 billion at both periods.

#### **Other Risks**

The company may hold warrants to purchase shares of common stock in connection with various investments that are deemed derivatives because they contain net share or net cash settlement provisions. The company records the changes in the fair value of these warrants in other (income) and expense in the Consolidated Statement of Earnings. The company did not have any warrants qualifying as derivatives outstanding at December 31, 2016 and 2015.

The company is exposed to a potential loss if a client fails to pay amounts due under contractual terms. The company may utilize

credit default swaps to economically hedge its credit exposures. The swaps are recorded at fair value with gains and losses reported in other (income) and expense in the Consolidated Statement of Earnings. The company did not have any derivative instruments relating to this program outstanding at December 31, 2016 and 2015.

The company is exposed to market volatility on certain investment securities. The company may utilize options or forwards to economically hedge its market exposure. The derivatives are recorded at fair value with gains and losses reported in other (income) and expense in the Consolidated Statement of Earnings. At December 31, 2016, the company did not have any derivative instruments relating to this program outstanding. At December 31, 2015, the total notional amount of derivative instruments in economic hedges of investment securities was less than \$0.1 billion.

The following tables provide a quantitative summary of the derivative and non-derivative instrument-related risk management activity as of December 31, 2016 and 2015, as well as for the years ended December 31, 2016, 2015 and 2014, respectively.

#### **Fair Values of Derivative Instruments in the Consolidated Statement of Financial Position**

(\$ in millions)

| <b>At December 31:</b>                              | <b>Fair Value of Derivative Assets</b>    |                |              | <b>Fair Value of Derivative Liabilities</b> |                |                |
|---|---|----------------|--------------|---|----------------|----------------|
|   | <b>Balance Sheet Classification</b>       | <b>2016</b>    | <b>2015</b>  | <b>Balance Sheet Classification</b>         | <b>2016</b>    | <b>2015</b>    |
| <b>Designated as hedging instruments</b>            |   |                |              |   |                |                |
| Interest rate contracts                             | Prepaid expenses and other current assets | \$ —           | \$ —         | Other accrued expenses and liabilities      | \$ —           | \$ —           |
|   | Investments and sundry assets             | 555            | 656          | Other liabilities                           | 8              | 3              |
| Foreign exchange contracts                          | Prepaid expenses and other current assets | 421            | 197          | Other accrued expenses and liabilities      | 46             | 70             |
|   | Investments and sundry assets             | 17             | 5            | Other liabilities                           | 35             | 19             |
|   | <b>Fair value of derivative assets</b>    | <b>\$ 993</b>  | <b>\$858</b> | <b>Fair value of derivative liabilities</b> | <b>\$ 89</b>   | <b>\$ 92</b>   |
| <b>Not designated as hedging instruments</b>        |   |                |              |   |                |                |
| Foreign exchange contracts                          | Prepaid expenses and other current assets | \$ 100         | \$ 90        | Other accrued expenses and liabilities      | \$ 89          | \$ 75          |
|   | Investments and sundry assets             | 22             | 40           | Other liabilities                           | 18             | —              |
| Equity contracts                                    | Prepaid expenses and other current assets | 11             | 6            | Other accrued expenses and liabilities      | 10             | 19             |
|   | Investments and sundry assets             | —              | —            | Other liabilities                           | —              | —              |
|   | <b>Fair value of derivative assets</b>    | <b>\$ 133</b>  | <b>\$136</b> | <b>Fair value of derivative liabilities</b> | <b>\$ 117</b>  | <b>\$ 94</b>   |
| <b>Total debt designated as hedging instruments</b> |   |                |              |   |                |                |
| Short-term debt                                     | N/A                                       | N/A            |              |   | \$1,125        | \$ —           |
| Long-term debt                                      | N/A                                       | N/A            |              |   | \$7,844        | \$7,945        |
| <b>Total</b>  |   | <b>\$1,126</b> | <b>\$994</b> |   | <b>\$9,175</b> | <b>\$8,131</b> |

N/A—Not applicable

**The Effect of Derivative Instruments in the Consolidated Statement of Earnings**

(\$ in millions)

| For the year ended December 31:                               | Consolidated Statement of Earnings Line Item | Gain/(Loss) Recognized in Earnings |              |                 |  |              |                |
|---|--|------------------------------------|--------------|-----------------|--|--------------|----------------|
|   |  | Recognized on Derivatives          |              |                 | Attributable to Risk Being Hedged <sup>(2)</sup> |              |                |
|   |  | 2016                               | 2015         | 2014            | 2016   | 2015         | 2014           |
| Derivative instruments in fair value hedges <sup>(1)(5)</sup> |  |                                    |              |                 |  |              |                |
| Interest rate contracts                                       | Cost of financing                            | \$ 28                              | \$108        | \$ 231          | \$ 58  | \$(1)        | \$(127)        |
|   | Interest expense                             | 31                                 | 94           | 206             | 63   | (1)          | (114)          |
| Derivative instruments not designated as hedging instruments  |  |                                    |              |                 |  |              |                |
| Foreign exchange contracts                                    | Other (income) and expense                   | (189)                              | 127          | (776)           | N/A  | N/A          | N/A            |
| Interest rate contracts                                       | Other (income) and expense                   | 0                                  | (1)          | 34              | N/A  | N/A          | N/A            |
| Equity contracts  | SG&A expense                                 | 112                                | (27)         | 51              | N/A  | N/A          | N/A            |
|   | Other (income) and expense                   | (1)                                | (9)          | (9)             | N/A  | N/A          | N/A            |
| <b>Total</b>  |  | <b>\$ (18)</b>                     | <b>\$291</b> | <b>\$ (263)</b> | <b>\$121</b>                                     | <b>\$(1)</b> | <b>\$(241)</b> |

(\$ in millions)

| For the year ended December 31:                     | Gain/(Loss) Recognized in Earnings and Other Comprehensive Income |                |                |  |  |                |             |  |             |              |      |      |      |
|---|---|----------------|----------------|--|--|----------------|-------------|--|-------------|--------------|------|------|------|
|   | Effective Portion Recognized in OCI                               |                |                | Consolidated Statement of Earnings Line Item | Effective Portion Reclassified from AOCI |                |             | Ineffectiveness and Amounts Excluded from Effectiveness Testing <sup>(3)</sup> |             |              | 2016 | 2015 | 2014 |
|   | 2016  | 2015           | 2014           |  | 2016                                     | 2015           | 2014        | 2016   | 2015        | 2014         |      |      |      |
| Derivative instruments in cash flow hedges          |   |                |                |  |  |                |             |  |             |              |      |      |      |
| Interest rate contracts                             | \$ —  | \$ —           | \$ —           | Interest expense                             | \$ (24)                                  | \$ 0           | \$ (1)      | \$ —   | \$ —        | \$ —         | 2016 | 2015 | 2014 |
| Foreign exchange contracts                          | 243   | 618            | 958            | Other (income) and expense                   | (68)                                     | 731            | 98          | (3)  | 5           | (1)          |      |      |      |
|   |   |                |                | Cost   | (13)                                     | 192            | (15)        | —  | —           | —            |      |      |      |
|   |   |                |                | SG&A expense                                 | 4  | 149            | 15          | —  | —           | —            |      |      |      |
| Instruments in net investment hedges <sup>(4)</sup> |   |                |                |  |  |                |             |  |             |              |      |      |      |
| Foreign exchange contracts                          | 311   | 889            | 1,136          | Interest expense                             | —  | —              | —           | 77   | 13          | 0            | 2016 | 2015 | 2014 |
| <b>Total</b>  | <b>\$555</b>  | <b>\$1,507</b> | <b>\$2,095</b> |  | <b>\$(102)</b>                           | <b>\$1,072</b> | <b>\$97</b> | <b>\$74</b>  | <b>\$18</b> | <b>\$(1)</b> |      |      |      |

<sup>(1)</sup> The amount includes changes in clean fair values of the derivative instruments in fair value hedging relationships and the periodic accrual for coupon payments required under these derivative contracts.

<sup>(2)</sup> The amount includes basis adjustments to the carrying value of the hedged item recorded during the period and amortization of basis adjustments recorded on de-designated hedging relationships during the period.

<sup>(3)</sup> The amount of gain/(loss) recognized in income represents ineffectiveness on hedge relationships.

<sup>(4)</sup> Instruments in net investment hedges include derivative and non-derivative instruments.

<sup>(5)</sup> For the years ended December 31, 2016, 2015 and 2014, fair value hedges resulted in a loss of \$4 million, a loss of \$2 million and a gain of \$4 million in ineffectiveness, respectively.

N/A—Not applicable

For the 12 months ending December 31, 2016, 2015 and 2014, there were no significant gains or losses recognized in earnings representing hedge ineffectiveness or excluded from the assessment of hedge effectiveness (for fair value hedges), or associated with an underlying exposure that did not or was not expected to occur (for cash flow hedges); nor are there any anticipated in the normal course of business.

#### **NOTE E. INVENTORIES**

(\$ in millions)

| <b>At December 31:</b>            | <b>2016</b>    | <b>2015</b>    |
|-----------------------------------|----------------|----------------|
| Finished goods                    | \$ 358         | \$ 352         |
| Work in process and raw materials | 1,195          | 1,199          |
| <b>Total</b>                      | <b>\$1,553</b> | <b>\$1,551</b> |

#### **NOTE F. FINANCING RECEIVABLES**

The following table presents financing receivables, net of allowances for credit losses, including residual values.

(\$ in millions)

| <b>At December 31:</b>                                   | <b>2016</b>     | <b>2015</b>     |
|--|-----------------|-----------------|
| <b>Current</b>   |                 |                 |
| Net investment in sales-type and direct financing leases | \$ 2,909        | \$ 3,057        |
| Commercial financing receivables                         | 9,706           | 8,948           |
| Client loan and installment payment receivables (loans)  | 6,390           | 7,015           |
| <b>Total</b>   | <b>\$19,006</b> | <b>\$19,020</b> |
| <b>Noncurrent</b>  |                 |                 |
| Net investment in sales-type and direct financing leases | \$ 3,950        | \$ 4,501        |
| Client loan and installment payment receivables (loans)  | 5,071           | 5,512           |
| <b>Total</b>   | <b>\$ 9,021</b> | <b>\$10,013</b> |

Net investment in sales-type and direct financing leases relates principally to the company's systems products and are for terms ranging generally from two to six years. Net investment in sales-type and direct financing leases includes unguaranteed residual values of \$585 million and \$645 million at December 31, 2016 and 2015, respectively, and is reflected net of unearned income of \$513 million and \$536 million, and net of the allowance for credit losses of \$133 million and \$213 million at those dates, respectively. Scheduled maturities of minimum lease payments outstanding at December 31, 2016, expressed as a percentage of the total, are approximately: 2017, 46 percent; 2018, 29 percent; 2019, 16 percent; 2020, 6 percent; and 2021 and beyond, 2 percent.

Commercial financing receivables, net of allowance for credit losses of \$28 million and \$19 million at December 31, 2016 and 2015, respectively, relate primarily to inventory and accounts receivable financing for dealers and remarketers of IBM and OEM products. Payment terms for inventory and accounts receivable financing generally range from 30 to 90 days.

Client loan and installment payment receivables (loans), net of allowance for credit losses of \$276 million and \$377 million at December 31, 2016 and 2015, respectively, are loans that are provided primarily to clients to finance the purchase of hardware, software and services. Payment terms on these financing arrangements are generally for terms up to seven years.

Client loan and installment payment financing contracts are priced independently at competitive market rates. The company has a history of enforcing these financing agreements.

The allowance for credit losses at December 31, 2016 reflects a write-off in the fourth quarter of \$188 million of previously reserved customer accounts as a result of recent experience and history across the portfolio, particularly in China. Of this total, \$41 million was in major markets and \$147 million in growth markets and \$73 million and \$115 million was in lease receivables and loan receivables, respectively.

The company utilizes certain of its financing receivables as collateral for nonrecourse borrowings. Financing receivables pledged as collateral for borrowings were \$689 million and \$545 million at December 31, 2016 and 2015, respectively. These borrowings are included in note J, "Borrowings," on pages 120 to 122.

The company did not have any financing receivables held for sale as of December 31, 2016 and 2015.

#### **Financing Receivables by Portfolio Segment**

The following tables present financing receivables on a gross basis, excluding the allowance for credit losses and residual value, by portfolio segment and by class, excluding current commercial financing receivables and other miscellaneous current financing receivables at December 31, 2016 and 2015. The company determines its allowance for credit losses based on two portfolio segments: lease receivables and loan receivables, and further segments the portfolio into two classes: major markets and growth markets.

(\$ in millions)

|   | Major Markets   | Growth Markets | Total           |
|---|-----------------|----------------|-----------------|
| <b>At December 31, 2016:</b>                |                 |                |                 |
| <b>Financing receivables</b>                |                 |                |                 |
| Lease receivables                           | \$ 5,013        | \$ 1,323       | \$ 6,336        |
| Loan receivables                            | 9,148           | 2,589          | 11,737          |
| <b>Ending balance</b>                       | <b>\$14,161</b> | <b>\$3,912</b> | <b>\$18,073</b> |
| Collectively evaluated for impairment       | \$14,119        | \$3,646        | \$17,765        |
| Individually evaluated for impairment       | \$ 43           | \$ 266         | \$ 309          |
| <b>Allowance for credit losses</b>          |                 |                |                 |
| <b>Beginning balance at January 1, 2016</b> |                 |                |                 |
| Lease receivables                           | \$ 25           | \$ 188         | \$ 213          |
| Loan receivables                            | 83              | 293            | 377             |
| <b>Total</b>                                | <b>\$ 109</b>   | <b>\$ 481</b>  | <b>\$ 590</b>   |
| Write-offs                                  | (59)            | (176)          | (235)           |
| Provision                                   | 7               | 51             | 58              |
| Other                                       | 0               | (3)            | (3)             |
| <b>Ending balance at December 31, 2016</b>  | <b>\$ 57</b>    | <b>\$ 353</b>  | <b>\$ 410</b>   |
| Lease receivables                           | \$ 6            | \$ 127         | \$ 133          |
| Loan receivables                            | \$ 51           | \$ 225         | \$ 276          |
| Collectively evaluated for impairment       | \$ 30           | \$ 98          | \$ 128          |
| Individually evaluated for impairment       | \$ 27           | \$ 255         | \$ 281          |

(\$ in millions)

|   | Major Markets   | Growth Markets | Total           |
|---|-----------------|----------------|-----------------|
| <b>At December 31, 2015:</b>                |                 |                |                 |
| <b>Financing receivables</b>                |                 |                |                 |
| Lease receivables                           | \$ 5,517        | \$ 1,524       | \$ 7,041        |
| Loan receivables                            | 9,739           | 3,165          | 12,904          |
| <b>Ending balance</b>                       | <b>\$15,256</b> | <b>\$4,689</b> | <b>\$19,945</b> |
| Collectively evaluated for impairment       | \$15,180        | \$4,227        | \$19,406        |
| Individually evaluated for impairment       | \$ 76           | \$ 462         | \$ 539          |
| <b>Allowance for credit losses</b>          |                 |                |                 |
| <b>Beginning balance at January 1, 2015</b> |                 |                |                 |
| Lease receivables                           | \$ 32           | \$ 133         | \$ 165          |
| Loan receivables                            | 79              | 317            | 396             |
| <b>Total</b>                                | <b>\$ 111</b>   | <b>\$ 450</b>  | <b>\$ 561</b>   |
| Write-offs                                  | (14)            | (48)           | (62)            |
| Provision                                   | 20              | 122            | 141             |
| Other                                       | (8)             | (43)           | (51)            |
| <b>Ending balance at December 31, 2015</b>  | <b>\$ 109</b>   | <b>\$ 481</b>  | <b>\$ 590</b>   |
| Lease receivables                           | \$ 25           | \$ 188         | \$ 213          |
| Loan receivables                            | \$ 83           | \$ 293         | \$ 377          |
| Collectively evaluated for impairment       | \$ 43           | \$ 36          | \$ 79           |
| Individually evaluated for impairment       | \$ 65           | \$ 445         | \$ 511          |

When determining the allowances, financing receivables are evaluated either on an individual or a collective basis. For individually evaluated receivables, the company determines the expected cash flow for the receivable and calculates an estimate of the potential loss and the probability of loss. For those accounts in which the loss is probable, the company records a specific reserve. In addition, the company records an unallocated reserve that is calculated by applying a reserve rate to its different portfolios, excluding accounts that have been specifically reserved. This reserve rate is based upon credit rating, probability of default, term, characteristics (lease/loan) and loss history.

**Financing Receivables on Non-Accrual Status**

The following table presents the recorded investment in financing receivables which were on non-accrual status at December 31, 2016 and 2015.

| (\$ in millions)               | <b>2016</b>  | <b>2015</b>  |
|--------------------------------|--------------|--------------|
| <b>At December 31:</b>         |              |              |
| Major markets                  | \$ 2         | \$ 2         |
| Growth markets                 | 38           | 63           |
| <b>Total lease receivables</b> | <b>\$ 40</b> | <b>\$ 65</b> |
| Major markets                  | \$ 19        | \$ 13        |
| Growth markets                 | 127          | 91           |
| <b>Total loan receivables</b>  | <b>\$145</b> | <b>\$104</b> |
| <b>Total receivables</b>       | <b>\$185</b> | <b>\$168</b> |

**Impaired Loans**

The company considers any loan with an individually evaluated reserve as an impaired loan. Depending on the level of impairment, loans will also be placed on a non-accrual status. The following tables present impaired client loan receivables at December 31, 2016 and 2015.

| (\$ in millions)             | <b>Recorded Investment</b> | <b>Related Allowance</b> |
|------------------------------|----------------------------|--------------------------|
| <b>At December 31, 2016:</b> |                            |                          |
| Major markets                | \$ 31                      | \$ 28                    |
| Growth markets               | 191                        | 185                      |
| <b>Total</b>                 | <b>\$223</b>               | <b>\$213</b>             |

| (\$ in millions)             | <b>Recorded Investment</b> | <b>Related Allowance</b> |
|------------------------------|----------------------------|--------------------------|
| <b>At December 31, 2015:</b> |                            |                          |
| Major markets                | \$ 50                      | \$ 47                    |
| Growth markets               | 297                        | 284                      |
| <b>Total</b>                 | <b>\$347</b>               | <b>\$331</b>             |

(\$ in millions)

| <b>For the year ended December 31, 2016:</b> | <b>Average Recorded Investment</b> | <b>Interest Income Recognized</b> | <b>Interest Income Recognized on Cash Basis</b> |
|--|------------------------------------|-----------------------------------|---|
| Major markets                                | \$ 55                              | \$0                               | \$—   |
| Growth markets                               | 284                                | 0                                 | —   |
| <b>Total</b>                                 | <b>\$339</b>                       | <b>\$0</b>                        | <b>\$—</b>                                      |

(\$ in millions)

| <b>For the year ended December 31, 2015:</b> | <b>Average Recorded Investment</b> | <b>Interest Income Recognized</b> | <b>Interest Income Recognized on Cash Basis</b> |
|--|------------------------------------|-----------------------------------|---|
| Major markets                                | \$ 51                              | \$0                               | \$—   |
| Growth markets                               | 315                                | 0                                 | —   |
| <b>Total</b>                                 | <b>\$367</b>                       | <b>\$0</b>                        | <b>\$—</b>                                      |

**Credit Quality Indicators**

The company's credit quality indicators, which are based on rating agency data, publicly available information and information provided by customers, are reviewed periodically based on the relative level of risk. The resulting indicators are a numerical rating system that maps to Moody's Investors Service credit ratings as shown below. The company uses information provided by Moody's, where available, as one of many inputs in its determination of customer credit rating.

The tables present the net recorded investment for each class of receivables, by credit quality indicator, at December 31, 2016 and 2015. Receivables with a credit quality indicator ranging from Aaa to Baa3 are considered investment grade. All others are considered non-investment grade. The credit quality indicators do not reflect mitigation actions that the company may take to transfer credit risk to third parties.

**Lease Receivables**

(\$ in millions)

| <b>At December 31, 2016:</b> | <b>Major Markets</b> | <b>Growth Markets</b> |
|------------------------------|----------------------|-----------------------|
| Credit rating                |                      |                       |
| Aaa–Aa3                      | \$ 496               | \$ 44                 |
| A1–A3                        | 1,162                | 181                   |
| Baa1–Baa3                    | 1,381                | 140                   |
| Ba1–Ba2                      | 1,144                | 246                   |
| Ba3–B1                       | 566                  | 313                   |
| B2–B3                        | 271                  | 163                   |
| Caa–D                        | 26                   | 69                    |
| <b>Total</b>                 | <b>\$5,047</b>       | <b>\$1,156</b>        |

**Loan Receivables**

(\$ in millions)

| At December 31, 2016: | Major Markets  | Growth Markets |
|-----------------------|----------------|----------------|
| Credit rating         |                |                |
| Aaa–Aa3               | \$ 904         | \$ 87          |
| A1–A3                 | 2,117          | 355            |
| Baa1–Baa3             | 2,515          | 274            |
| Ba1–Ba2               | 2,084          | 483            |
| Ba3–B1                | 1,031          | 613            |
| B2–B3                 | 494            | 320            |
| Caa–D                 | 48             | 135            |
| <b>Total</b>          | <b>\$9,193</b> | <b>\$2,268</b> |

At December 31, 2016, the industries which made up Global Financing's receivables portfolio consisted of: Financial (34 percent), Government (14 percent), Manufacturing (13 percent), Services (12 percent), Retail (8 percent), Communications (7 percent), Healthcare (6 percent) and Other (6 percent).

**Lease Receivables**

(\$ in millions)

| At December 31, 2015:* | Major Markets  | Growth Markets |
|------------------------|----------------|----------------|
| Credit rating          |                |                |
| Aaa–Aa3                | \$ 535         | \$ 34          |
| A1–A3                  | 1,318          | 142            |
| Baa1–Baa3              | 1,486          | 343            |
| Ba1–Ba2                | 1,208          | 309            |
| Ba3–B1                 | 510            | 243            |
| B2–B3                  | 401            | 189            |
| Caa–D                  | 33             | 76             |
| <b>Total</b>           | <b>\$5,492</b> | <b>\$1,336</b> |

\* Reclassified to conform to 2016 presentation

**Loan Receivables**

(\$ in millions)

| At December 31, 2015:* | Major Markets  | Growth Markets |
|------------------------|----------------|----------------|
| Credit rating          |                |                |
| Aaa–Aa3                | \$ 941         | \$ 73          |
| A1–A3                  | 2,318          | 305            |
| Baa1–Baa3              | 2,613          | 738            |
| Ba1–Ba2                | 2,125          | 664            |
| Ba3–B1                 | 897            | 522            |
| B2–B3                  | 705            | 406            |
| Caa–D                  | 58             | 164            |
| <b>Total</b>           | <b>\$9,656</b> | <b>\$2,872</b> |

\* Reclassified to conform to 2016 presentation

At December 31, 2015, the industries which made up Global Financing's receivables portfolio consisted of: Financial (36 percent), Manufacturing (14 percent), Government (11 percent), Services (11 percent), Retail (9 percent), Communications (7 percent), Healthcare (6 percent) and Other (6 percent).

**Past Due Financing Receivables**

(\$ in millions)

| <b>At December 31, 2016:</b>   | Total<br>Past Due<br>> 90 Days <sup>(1)</sup> | Fully<br>Reserved<br>Financing<br>Receivables | <90 Days<br>or Unbilled<br>Financing<br>Receivables | Total<br>Financing<br>Receivables | Recorded<br>Investment<br>>90 Days and<br>Accruing <sup>(2)</sup> |
|--------------------------------|---|---|---|-----------------------------------|---|
| Major markets                  | \$ 8  | \$ 11   | \$ 4,994  | \$ 5,013                          | \$ 34   |
| Growth markets                 | 23  | 78  | 1,222   | 1,323                             | 77  |
| <b>Total lease receivables</b> | <b>\$31</b>                                   | <b>\$ 89</b>                                  | <b>\$ 6,216</b>                                     | <b>\$ 6,336</b>                   | <b>\$111</b>  |
| Major markets                  | \$15  | \$ 5  | \$ 9,129  | \$ 9,148                          | \$ 62   |
| Growth markets                 | 16  | 177   | 2,396   | 2,589                             | 80  |
| <b>Total loan receivables</b>  | <b>\$31</b>                                   | <b>\$182</b>                                  | <b>\$11,524</b>                                     | <b>\$11,737</b>                   | <b>\$141</b>  |
| <b>Total</b>                   | <b>\$62</b>                                   | <b>\$271</b>                                  | <b>\$17,740</b>                                     | <b>\$18,073</b>                   | <b>\$253</b>  |

<sup>(1)</sup> Only the portion of a financing receivable which is greater than 90 days past due, excluding amounts that are fully reserved.<sup>(2)</sup> At a contract level, which includes total billed and unbilled amounts for aged financing receivables greater than 90 days

(\$ in millions)

| <b>At December 31, 2015:*</b>  | Total<br>Past Due<br>> 90 Days <sup>(1)</sup> | Fully<br>Reserved<br>Financing<br>Receivables | <90 Days<br>or Unbilled<br>Financing<br>Receivables | Total<br>Financing<br>Receivables | Recorded<br>Investment<br>>90 Days and<br>Accruing <sup>(2)</sup> |
|--------------------------------|---|---|---|-----------------------------------|---|
| Major markets                  | \$ 5  | \$ 33   | \$ 5,479  | \$ 5,517                          | \$108   |
| Growth markets                 | 30  | 140   | 1,355   | 1,524                             | 60  |
| <b>Total lease receivables</b> | <b>\$35</b>                                   | <b>\$173</b>                                  | <b>\$ 6,834</b>                                     | <b>\$ 7,041</b>                   | <b>\$168</b>  |
| Major markets                  | \$ 7  | \$ 35   | \$ 9,696  | \$ 9,739                          | \$134   |
| Growth markets                 | 31  | 309   | 2,825   | 3,165                             | 86  |
| <b>Total loan receivables</b>  | <b>\$38</b>                                   | <b>\$344</b>                                  | <b>\$12,521</b>                                     | <b>\$12,904</b>                   | <b>\$220</b>  |
| <b>Total</b>                   | <b>\$73</b>                                   | <b>\$517</b>                                  | <b>\$19,355</b>                                     | <b>\$19,945</b>                   | <b>\$388</b>  |

<sup>(1)</sup> Only the portion of a financing receivable which is greater than 90 days past due, excluding amounts that are fully reserved.<sup>(2)</sup> At a contract level, which includes total billed and unbilled amounts for aged financing receivables greater than 90 days

\* Reclassified to conform to 2016 presentation

**Troubled Debt Restructurings**

The company assessed all restructurings that occurred on or after January 1, 2015 and determined that there were no significant troubled debt restructurings for the years ended December 31, 2016 and 2015.

**NOTE G. PROPERTY, PLANT AND EQUIPMENT**

(\$ in millions)

| <b>At December 31:</b>                 | <b>2016</b>     | <b>2015</b>     |
|--|-----------------|-----------------|
| Land and land improvements             | \$ 506          | \$ 558          |
| Buildings and building improvements    | 6,326           | 6,552           |
| Plant, laboratory and office equipment | 22,318          | 21,116          |
| Plant and other property—gross         | 29,150          | 28,226          |
| Less: Accumulated depreciation         | 18,842          | 18,051          |
| Plant and other property—net           | 10,308          | 10,176          |
| Rental machines                        | 984             | 1,115           |
| Less: Accumulated depreciation         | 461             | 565             |
| Rental machines—net                    | 523             | 551             |
| <b>Total—net</b>                       | <b>\$10,830</b> | <b>\$10,727</b> |

In 2016, the company recorded a pre-tax impairment charge related to certain property, plant and equipment of \$215 million. The remaining fair value of these assets is not material. There were no material pre-tax impairment charges related to property, plant and equipment in 2015.

**NOTE H. INVESTMENTS AND SUNDY ASSETS**

| (\$ in millions)   | <b>2016</b>    | <b>2015</b>    |
|--|----------------|----------------|
| <b>At December 31:</b>   |                |                |
| Deferred transition and setup costs and other deferred arrangements* | \$1,497        | \$1,624        |
| Derivatives—noncurrent   | 594            | 702            |
| Alliance investments   |                |                |
| Equity method  | 85             | 82             |
| Non-equity method  | 19             | 393            |
| Prepaid software   | 230            | 273            |
| Long-term deposits   | 267            | 256            |
| Other receivables  | 416            | 516            |
| Employee benefit-related   | 272            | 273            |
| Prepaid income taxes   | 477            | 496            |
| Other assets   | 729            | 571            |
| <b>Total</b>   | <b>\$4,585</b> | <b>\$5,187</b> |

\* Deferred transition and setup costs and other deferred arrangements are related to services client arrangements. Refer to note A, "Significant Accounting Policies," on page 93 for additional information.

**NOTE I. INTANGIBLE ASSETS INCLUDING GOODWILL**

**Intangible Assets**

The following table details the company's intangible asset balances by major asset class.

| (\$ in millions)             | <b>Gross Carrying Amount</b> | <b>Accumulated Amortization</b> | <b>Net Carrying Amount</b> |
|------------------------------|------------------------------|---------------------------------|----------------------------|
| <b>At December 31, 2016:</b> |                              |                                 |                            |
| Intangible asset class       |                              |                                 |                            |
| Capitalized software         | \$1,537                      | \$ (661)                        | \$ 876                     |
| Client relationships         | 2,831                        | (1,228)                         | 1,602                      |
| Completed technology         | 3,322                        | (1,668)                         | 1,654                      |
| Patents/trademarks           | 730                          | (205)                           | 525                        |
| Other*                       | 46                           | (15)                            | 31                         |
| <b>Total</b>                 | <b>\$8,466</b>               | <b>\$(3,778)</b>                | <b>\$4,688</b>             |

\* Other intangibles are primarily acquired proprietary and nonproprietary business processes, methodologies and systems.

(\$ in millions)

| <b>At December 31, 2015:</b> | <b>Gross Carrying Amount</b> | <b>Accumulated Amortization</b> | <b>Net Carrying Amount</b> |
|------------------------------|------------------------------|---------------------------------|----------------------------|
| Intangible asset class       |                              |                                 |                            |
| Capitalized software         | \$1,348                      | \$ (581)                        | \$ 767                     |
| Client relationships         | 1,856                        | (927)                           | 929                        |
| Completed technology         | 2,960                        | (1,397)                         | 1,563                      |
| Patents/trademarks           | 335                          | (142)                           | 193                        |
| Other*                       | 44                           | (10)                            | 35                         |
| <b>Total</b>                 | <b>\$6,543</b>               | <b>\$(3,057)</b>                | <b>\$3,487</b>             |

\* Other intangibles are primarily acquired proprietary and nonproprietary business processes, methodologies and systems.

The net carrying amount of intangible assets increased \$1,201 million during the year ended December 31, 2016, primarily due to intangible asset additions resulting from acquisitions, partially offset by amortization. There was no impairment of intangible assets recorded in 2016 and 2015. The aggregate intangible amortization expense was \$1,544 million and \$1,193 million for the years ended December 31, 2016 and 2015, respectively. In addition, in 2016 and 2015, respectively, the company retired \$817 million and \$1,809 million of fully amortized intangible assets, impacting both the gross carrying amount and accumulated amortization by this amount.

The amortization expense for each of the five succeeding years relating to intangible assets currently recorded in the Consolidated Statement of Financial Position is estimated to be the following at December 31, 2016:

| (\$ in millions) | <b>Capitalized Software</b> | <b>Acquired Intangibles</b> | <b>Total</b> |
|------------------|-----------------------------|-----------------------------|--------------|
| 2017             | \$494                       | \$957                       | \$1,450      |
| 2018             | 300                         | 809                         | 1,109        |
| 2019             | 83                          | 646                         | 729          |
| 2020             | —                           | 547                         | 547          |
| 2021             | —                           | 435                         | 435          |

**Goodwill**

As described in note T, "Segment Information," the company changed its reportable segments in January 2016. Goodwill was assigned to the new reportable segments on a fair value allocation basis. The changes in the goodwill balances by reportable segment, for the years ended December 31, 2016 and 2015, are as follows:

(\$ in millions)

| Segment                               | Balance<br>January 1,<br>2016 | Goodwill<br>Additions | Purchase<br>Price<br>Adjustments | Divestitures  | Foreign<br>Currency<br>Translation<br>and Other<br>Adjustments* | Balance<br>December<br>31, 2016 |
|---------------------------------------|-------------------------------|-----------------------|----------------------------------|---------------|---|---------------------------------|
| Cognitive Solutions                   | \$15,621                      | \$3,821               | \$ 5                             | \$(12)        | \$ 48   | \$19,484                        |
| Global Business Services              | 4,396                         | 303                   | 4                                | (1)           | (95)  | 4,607                           |
| Technology Services & Cloud Platforms | 10,156                        | 119                   | (12)                             | (5)           | (1)   | 10,258                          |
| Systems                               | 1,848                         | —                     | (4)                              | —             | 5   | 1,850                           |
| <b>Total</b>                          | <b>\$32,021</b>               | <b>\$4,244</b>        | <b>\$ (7)</b>                    | <b>\$(18)</b> | <b>\$(42)</b>   | <b>\$36,199</b>                 |

\* Primarily driven by foreign currency translation

(\$ in millions)

| Segment                               | Balance<br>January 1,<br>2015 | Goodwill<br>Additions | Purchase<br>Price<br>Adjustments | Divestitures  | Foreign<br>Currency<br>Translation<br>and Other<br>Adjustments* | Balance<br>December<br>31, 2015 |
|---------------------------------------|-------------------------------|-----------------------|----------------------------------|---------------|---|---------------------------------|
| Cognitive Solutions                   | \$15,156                      | \$1,020               | \$(2)                            | \$(18)        | \$ (535)  | \$15,621                        |
| Global Business Services              | 4,555                         | 74                    | 0                                | (1)           | (232)   | 4,396                           |
| Technology Services & Cloud Platforms | 9,373                         | 1,087                 | (1)                              | (7)           | (296)   | 10,156                          |
| Systems                               | 1,472                         | 410                   | 0                                | —             | (33)  | 1,848                           |
| <b>Total</b>                          | <b>\$30,556</b>               | <b>\$2,590</b>        | <b>\$(3)</b>                     | <b>\$(26)</b> | <b>\$(1,096)</b>  | <b>\$32,021</b>                 |

\* Primarily driven by foreign currency translation

There were no goodwill impairment losses recorded during the full year of 2016 or 2015 and the company has no accumulated impairment losses.

Purchase price adjustments recorded in 2016 and 2015 were related to acquisitions that were completed on or prior to September 30, 2016 or December 31, 2014, respectively, and were still subject to the measurement period that ends at the earlier of 12 months from the acquisition date or when information becomes available. Net purchase price adjustments of \$7 million were recorded during 2016 with the primary drivers being deferred tax assets, accounts receivable, deferred income, inventory and other current liabilities.

**NOTE J. BORROWINGS****Short-Term Debt**

(\$ in millions)

| At December 31:                   | 2016           | 2015           |
|-----------------------------------|----------------|----------------|
| Commercial paper                  | \$ 899         | \$ 600         |
| Short-term loans                  | 375            | 590            |
| Long-term debt—current maturities | 6,239          | 5,271          |
| <b>Total</b>                      | <b>\$7,513</b> | <b>\$6,461</b> |

The weighted-average interest rate for commercial paper at December 31, 2016 and 2015 was 0.7 percent and 0.4 percent, respectively. The weighted-average interest rates for short-term loans were 9.5 percent and 5.2 percent at December 31, 2016 and 2015, respectively.

**Long-Term Debt**  
**Pre-Swap Borrowing**

(\$ in millions)

| <b>At December 31:</b>   | <b>Maturities</b> | <b>2016</b>     | <b>2015</b>     |
|--|-------------------|-----------------|-----------------|
| U.S. dollar notes and debentures (average interest rate at December 31, 2016): |                   |                 |                 |
| 3.98%  | 2017              | \$ 5,104        | \$ 9,351        |
| 3.21%  | 2018–2019         | 8,856           | 7,591           |
| 1.84%  | 2020–2021         | 4,941           | 3,717           |
| 2.35%  | 2022              | 1,901           | 1,900           |
| 3.38%  | 2023              | 1,500           | 1,500           |
| 3.63%  | 2024              | 2,000           | 2,000           |
| 7.00%  | 2025              | 600             | 600             |
| 3.45%  | 2026              | 1,350           | —               |
| 6.22%  | 2027              | 469             | 469             |
| 6.50%  | 2028              | 313             | 313             |
| 5.88%  | 2032              | 600             | 600             |
| 8.00%  | 2038              | 83              | 83              |
| 5.60%  | 2039              | 745             | 745             |
| 4.00%  | 2042              | 1,107           | 1,107           |
| 7.00%  | 2045              | 27              | 27              |
| 4.70%  | 2046              | 650             | —               |
| 7.13%  | 2096              | 316             | 316             |
|  |                   | 30,563          | 30,319          |
| Other currencies (average interest rate at December 31, 2016, in parentheses): |                   |                 |                 |
| Euros (1.6%)   | 2019–2028         | 7,122           | 4,892           |
| Pound sterling (2.7%)  | 2020–2022         | 1,296           | 1,555           |
| Japanese yen (0.9%)  | 2017–2026         | 1,576           | 1,180           |
| Swiss francs (6.3%)  | 2020              | 7               | 9               |
| Canadian (2.2%)  | 2017              | 373             | 360             |
| Other (11.0%)  | 2017–2020         | 208             | 506             |
|  |                   | 41,145          | 38,820          |
| Less: net unamortized discount   |                   | 839             | 838             |
| Less: net unamortized debt issuance costs                                      |                   | 82              | 74              |
| Add: fair value adjustment*  |                   | 669             | 790             |
|  |                   | 40,893          | 38,699          |
| Less: current maturities   |                   | 6,239           | 5,271           |
| <b>Total</b>   |                   | <b>\$34,655</b> | <b>\$33,428</b> |

\* The portion of the company's fixed-rate debt obligations that is hedged is reflected in the Consolidated Statement of Financial Position as an amount equal to the sum of the debt's carrying value plus a fair value adjustment representing changes in the fair value of the hedged debt obligations attributable to movements in benchmark interest rates.

There are no debt securities issued and outstanding by IBM International Group Capital LLC, which is an indirect, 100 percent owned finance subsidiary of International Business Machines Corporation, the parent. Any debt securities issued by IBM International Group Capital LLC, would be fully and unconditionally guaranteed by the parent.

The company's indenture governing its debt securities and its various credit facilities each contain significant covenants which obligate the company to promptly pay principal and interest, limit the aggregate amount of secured indebtedness and sale and leaseback transactions to 10 percent of the company's consolidated net tangible assets, and restrict the company's ability to merge or consolidate unless certain conditions are met. The credit facilities also include a covenant on the company's consolidated net interest expense ratio, which cannot be less

than 2.20 to 1.0, as well as a cross default provision with respect to other defaulted indebtedness of at least \$500 million.

The company is in compliance with all of its significant debt covenants and provides periodic certifications to its lenders. The failure to comply with its debt covenants could constitute an event of default with respect to the debt to which such provisions apply. If certain events of default were to occur, the principal and interest on the debt to which such event of default applied would become immediately due and payable.

**Post-Swap Borrowing (Long-Term Debt, Including Current Portion)**

(\$ in millions)

| <b>For the year ended December 31:</b> | <b>2016</b>     |                     | <b>2015</b>     |                     |
|--|-----------------|---------------------|-----------------|---------------------|
|  | <b>Amount</b>   | <b>Average Rate</b> | <b>Amount</b>   | <b>Average Rate</b> |
| Fixed-rate debt                        | \$27,414        | 3.18%               | \$25,499        | 3.41%               |
| Floating-rate debt*                    | 13,480          | 1.59%               | 13,199          | 0.96%               |
| <b>Total</b>                           | <b>\$40,893</b> |                     | <b>\$38,699</b> |                     |

\* Includes \$7,338 million in 2016 and 2015 of notional interest rate swaps that effectively convert fixed-rate long-term debt into floating-rate debt. (See note D, "Financial Instruments," on pages 110 through 114.)

Pre-swap annual contractual maturities of long-term debt outstanding at December 31, 2016, are as follows:

| (\$ in millions) | <b>Total</b>    |
|------------------|-----------------|
| 2017             | \$ 6,239        |
| 2018             | 4,918           |
| 2019             | 5,196           |
| 2020             | 4,593           |
| 2021             | 3,914           |
| 2022 and beyond  | 16,284          |
| <b>Total</b>     | <b>\$41,145</b> |

**Interest on Debt**

(\$ in millions)

| <b>For the year ended December 31:</b> | <b>2016</b>    | <b>2015</b>    | <b>2014</b>    |
|--|----------------|----------------|----------------|
| Cost of financing                      | \$ 576         | \$ 540         | \$ 542         |
| Interest expense                       | 706            | 481            | 484            |
| Net investment derivative activity     | (77)           | (13)           | 0              |
| Interest capitalized                   | 2              | 0              | 4              |
| <b>Total interest paid and accrued</b> | <b>\$1,208</b> | <b>\$1,008</b> | <b>\$1,030</b> |

Refer to the related discussion on page 152 in note T, "Segment Information," for total interest expense of the Global Financing segment. See note D, "Financial Instruments," on pages 110 through 114 for a discussion of the use of currency and interest rate swaps in the company's debt risk management program.

**Lines of Credit**

In 2016, the company increased the size of its five-year Credit Agreement (the "Credit Agreement") to \$10.25 billion and extended the term by one year to November 10, 2021. The total expense recorded by the company related to this global credit facility was \$5.5 million in 2016, \$5.3 million in 2015 and \$5.4 million in 2014. The Credit Agreement permits the company and its Subsidiary Borrowers to borrow up to \$10.25 billion on a revolving basis. Borrowings of the Subsidiary Borrowers will be unconditionally backed by the company. The company may also, upon the agreement of either existing lenders, or of the additional banks not currently party to the Credit Agreement, increase the commitments under the Credit Agreement up to an additional \$1.75 billion. Subject to certain terms of the Credit Agreement, the company and Subsidiary Borrowers may borrow, prepay and reborrow amounts under the Credit Agreement at any time during the Credit Agreement. Interest rates on borrowings under the Credit Agreement will be based on prevailing market interest rates, as further described in the Credit Agreement. The Credit Agreement contains customary representations and warranties, covenants, events of default, and indemnification provisions. The company believes that circumstances that might give rise to breach of these covenants or an event of default, as specified in the Credit Agreement, are remote. As of December 31, 2016, there were no borrowings by the company, or its subsidiaries, under the Credit Agreement.

The company also has other committed lines of credit in some of the geographies which are not significant in the aggregate. Interest rates and other terms of borrowing under these lines of credit vary from country to country, depending on local market conditions.

#### NOTE K. OTHER LIABILITIES

|                               | (\$ in millions) |                |
|-------------------------------|------------------|----------------|
| At December 31:               | 2016             | 2015           |
| Income tax reserves           | \$2,621          | \$3,150        |
| Excess 401(k) Plus Plan       | 1,494            | 1,445          |
| Disability benefits           | 538              | 590            |
| Derivative liabilities        | 61               | 22             |
| Special restructuring actions | 358              | 362            |
| Workforce reductions          | 424              | 407            |
| Deferred taxes                | 424              | 253            |
| Other taxes payable           | 90               | 89             |
| Environmental accruals        | 262              | 270            |
| Warranty accruals             | 68               | 83             |
| Asset retirement obligations  | 142              | 134            |
| Acquisition related           | 111              | 200            |
| Divestiture related*          | 270              | 575            |
| Other                         | 613              | 519            |
| <b>Total</b>                  | <b>\$7,477</b>   | <b>\$8,099</b> |

\* Primarily related to the divestiture of the Microelectronics business

In response to changing business needs, the company periodically takes workforce reduction actions to improve productivity, cost competitiveness and to rebalance skills. The noncurrent contractually obligated future payments associated with these activities are reflected in the workforce reductions caption in the previous table.

In addition, the company executed certain special restructuring-related actions prior to 2006. The previous table provides the noncurrent liabilities associated with these special actions. Current liabilities are included in other accrued expenses and liabilities in the Consolidated Statement of Financial Position and were immaterial at December 31, 2016.

The noncurrent liabilities are workforce accruals related to terminated employees who are no longer working for the company who were granted annual payments to supplement their incomes in certain countries. Depending on the individual country's legal requirements, these required payments will continue until the former employee begins receiving pension benefits or passes away.

The company employs extensive internal environmental protection programs that primarily are preventive in nature. The company also participates in environmental assessments and cleanups at a number of locations, including operating facilities, previously owned facilities and Superfund sites. The company's maximum exposure for all environmental liabilities cannot be estimated and no amounts have been recorded for non-ARO environmental liabilities that are not probable or estimable. The

total amounts accrued for non-ARO environmental liabilities, including amounts classified as current in the Consolidated Statement of Financial Position, that do not reflect actual or anticipated insurance recoveries, were \$272 million and \$283 million at December 31, 2016 and 2015, respectively. Estimated environmental costs are not expected to materially affect the consolidated financial position or consolidated results of the company's operations in future periods. However, estimates of future costs are subject to change due to protracted cleanup periods and changing environmental remediation regulations.

As of December 31, 2016, the company was unable to estimate the range of settlement dates and the related probabilities for certain asbestos remediation AROs. These conditional AROs are primarily related to the encapsulated structural fireproofing that is not subject to abatement unless the buildings are demolished and non-encapsulated asbestos that the company would remediate only if it performed major renovations of certain existing buildings. Because these conditional obligations have indeterminate settlement dates, the company could not develop a reasonable estimate of their fair values. The company will continue to assess its ability to estimate fair values at each future reporting date. The related liability will be recognized once sufficient additional information becomes available. The total amounts accrued for ARO liabilities, including amounts classified as current in the Consolidated Statement of Financial Position were \$173 million and \$166 million at December 31, 2016 and 2015, respectively.

#### NOTE L. EQUITY ACTIVITY

The authorized capital stock of IBM consists of 4,687,500,000 shares of common stock with a \$.20 per share par value, of which 945,867,403 shares were outstanding at December 31, 2016 and 150,000,000 shares of preferred stock with a \$.01 per share par value, none of which were outstanding at December 31, 2016.

##### Stock Repurchases

The Board of Directors authorizes the company to repurchase IBM common stock. The company repurchased 23,283,400 common shares at a cost of \$3,455 million, 30,338,647 common shares at a cost of \$4,701 million and 71,504,867 common shares at a cost of \$13,395 million in 2016, 2015 and 2014, respectively. These amounts reflect transactions executed through December 31 of each year. Actual cash disbursements for repurchased shares may differ due to varying settlement dates for these transactions. At December 31, 2016, \$5,109 million of Board common stock repurchase authorization was available. The company plans to purchase shares on the open market or in private transactions from time to time, depending on market conditions.

**Other Stock Transactions**

The company issued the following shares of common stock as part of its stock-based compensation plans and employees stock purchase plan: 3,893,366 shares in 2016, 6,013,875 shares in 2015, and 7,687,026 shares in 2014. The company issued 383,077 treasury shares in 2016, 1,155,558 treasury shares in 2015 and 1,264,232 treasury shares in 2014, as a result of restricted stock unit releases and exercises of stock options by employees of certain acquired businesses and by non-U.S. employees. Also, as part of the company's

stock-based compensation plans, 854,365 common shares at a cost of \$126 million, 1,625,820 common shares at a cost of \$248 million, and 1,313,569 common shares at a cost of \$236 million in 2016, 2015 and 2014, respectively, were remitted by employees to the company in order to satisfy minimum statutory tax withholding requirements. These amounts are included in the treasury stock balance in the Consolidated Statement of Financial Position and the Consolidated Statement of Changes in Equity.

**Reclassifications and Taxes Related to Items of Other Comprehensive Income**

(\$ in millions)

|   | Before Tax<br>Amount | Tax (Expense)/<br>Benefit | Net of Tax<br>Amount |
|---|----------------------|---------------------------|----------------------|
| <b>For the year ended December 31, 2016:</b>                      |                      |                           |                      |
| <b>Other comprehensive income/(loss)</b>                          |                      |                           |                      |
| <b>Foreign currency translation adjustments</b>                   | \$ (20)              | \$(120)                   | \$ (140)             |
| <b>Net changes related to available-for-sale securities</b>       |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ (38)              | \$ 14                     | \$ (23)              |
| Reclassification of (gains)/losses to other (income) and expense  | 34                   | (13)                      | 21                   |
| <b>Total net changes related to available-for-sale securities</b> | <b>\$ (3)</b>        | <b>\$ 1</b>               | <b>\$ (2)</b>        |
| <b>Unrealized gains/(losses) on cash flow hedges</b>              |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ 243               | \$ (80)                   | \$ 163               |
| Reclassification of (gains)/losses to:                            |                      |                           |                      |
| Cost of sales   | 13                   | (8)                       | 6                    |
| SG&A expense  | (4)                  | (2)                       | (7)                  |
| Other (income) and expense  | 68                   | (26)                      | 42                   |
| Interest expense  | 24                   | (9)                       | 15                   |
| <b>Total unrealized gains/(losses) on cash flow hedges</b>        | <b>\$ 345</b>        | <b>\$ (126)</b>           | <b>\$ 219</b>        |
| <b>Retirement-related benefit plans<sup>(1)</sup></b>             |                      |                           |                      |
| Net (losses)/gains arising during the period                      | \$(2,490)            | \$ 924                    | \$(1,566)            |
| Curtailments and settlements                                      | (16)                 | 1                         | (15)                 |
| Amortization of prior service (credits)/costs                     | (107)                | 34                        | (74)                 |
| Amortization of net (gains)/losses                                | 2,764                | (976)                     | 1,788                |
| <b>Total retirement-related benefit plans</b>                     | <b>\$ 150</b>        | <b>\$ (19)</b>            | <b>\$ 132</b>        |
| <b>Other comprehensive income/(loss)</b>                          | <b>\$ 472</b>        | <b>\$ (263)</b>           | <b>\$ 209</b>        |

<sup>(1)</sup> These AOCI components are included in the computation of net periodic pension cost. (See note S, "Retirement-Related Benefits," for additional information.)

(\$ in millions)

| For the year ended December 31, 2015:                             | Before Tax<br>Amount | Tax (Expense)/<br>Benefit | Net of Tax<br>Amount |
|---|----------------------|---------------------------|----------------------|
| <b>Other comprehensive income/(loss)</b>                          |                      |                           |                      |
| <b>Foreign currency translation adjustments</b>                   | \$(1,379)            | \$ (342)                  | \$(1,721)            |
| <b>Net changes related to available-for-sale securities</b>       |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ (54)              | \$ 21                     | \$ (33)              |
| Reclassification of (gains)/losses to other (income) and expense  | 86                   | (33)                      | 53                   |
| <b>Total net changes related to available-for-sale securities</b> | <b>\$ 32</b>         | <b>\$ (12)</b>            | <b>\$ 20</b>         |
| <b>Unrealized gains/(losses) on cash flow hedges</b>              |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ 618               | \$ (218)                  | \$ 399               |
| Reclassification of (gains)/losses to:                            |                      |                           |                      |
| Cost of sales   | (192)                | 57                        | (135)                |
| SG&A expense  | (149)                | 43                        | (105)                |
| Other (income) and expense  | (731)                | 281                       | (451)                |
| Interest expense  | 0                    | 0                         | 0                    |
| <b>Total unrealized gains/(losses) on cash flow hedges</b>        | <b>\$ (454)</b>      | <b>\$ 162</b>             | <b>\$ (292)</b>      |
| <b>Retirement-related benefit plans<sup>(1)</sup></b>             |                      |                           |                      |
| Prior service costs/(credits)                                     | \$ 6                 | \$ (2)                    | \$ 4                 |
| Net (losses)/gains arising during the period                      | (2,963)              | 1,039                     | (1,925)              |
| Curtailments and settlements                                      | 33                   | (9)                       | 24                   |
| Amortization of prior service (credits)/costs                     | (100)                | 36                        | (65)                 |
| Amortization of net (gains)/losses                                | 3,304                | (1,080)                   | 2,223                |
| <b>Total retirement-related benefit plans</b>                     | <b>\$ 279</b>        | <b>\$ (17)</b>            | <b>\$ 262</b>        |
| <b>Other comprehensive income/(loss)</b>                          | <b>\$ (1,523)</b>    | <b>\$ (208)</b>           | <b>\$ (1,731)</b>    |

<sup>(1)</sup> These AOCI components are included in the computation of net periodic pension cost. (See note S, "Retirement-Related Benefits," for additional information.)

**Notes to Consolidated Financial Statements**

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

|   | Before Tax<br>Amount | Tax (Expense)/<br>Benefit | Net of Tax<br>Amount |
|---|----------------------|---------------------------|----------------------|
| <b>For the year ended December 31, 2014:</b>                      |                      |                           |                      |
| <b>Other comprehensive income/(loss)</b>                          |                      |                           |                      |
| <b>Foreign currency translation adjustments</b>                   | \$(1,636)            | \$ (438)                  | \$(2,074)            |
| <b>Net changes related to available-for-sale securities</b>       |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ (29)              | \$ 11                     | \$ (18)              |
| Reclassification of (gains)/losses to other (income) and expense  | 5                    | (2)                       | 3                    |
| <b>Total net changes related to available-for-sale securities</b> | \$ (24)              | \$ 9                      | \$ (15)              |
| <b>Unrealized gains/(losses) on cash flow hedges</b>              |                      |                           |                      |
| Unrealized gains/(losses) arising during the period               | \$ 958               | \$ (341)                  | \$ 618               |
| Reclassification of (gains)/losses to:                            |                      |                           |                      |
| Cost of sales   | 15                   | (7)                       | 9                    |
| SG&A expense  | (15)                 | 6                         | (9)                  |
| Other (income) and expense  | (98)                 | 38                        | (60)                 |
| Interest expense  | 1                    | 0                         | 0                    |
| <b>Total unrealized gains/(losses) on cash flow hedges</b>        | \$ 861               | \$ (304)                  | \$ 557               |
| <b>Retirement-related benefit plans<sup>(1)</sup></b>             |                      |                           |                      |
| Prior service costs/(credits)                                     | \$ 1                 | \$ 0                      | \$ 1                 |
| Net (losses)/gains arising during the period                      | (9,799)              | 3,433                     | (6,366)              |
| Curtailments and settlements                                      | 24                   | (7)                       | 17                   |
| Amortization of prior service (credits)/costs                     | (114)                | 41                        | (73)                 |
| Amortization of net (gains)/losses                                | 2,531                | (852)                     | 1,678                |
| <b>Total retirement-related benefit plans</b>                     | \$ (7,357)           | \$ 2,615                  | \$ (4,742)           |
| <b>Other comprehensive income/(loss)</b>                          | <b>\$ (8,156)</b>    | <b>\$ 1,883</b>           | <b>\$ (6,274)</b>    |

<sup>(1)</sup> These AOCI components are included in the computation of net periodic pension cost. (See note S, "Retirement-Related Benefits," for additional information.)

**Accumulated Other Comprehensive Income/(Loss) (net of tax)**

(\$ in millions)

|  | Net Unrealized<br>Gains/(Losses)<br>on Cash Flow<br>Hedges | Foreign<br>Currency<br>Translation<br>Adjustments* | Net Change<br>Retirement-<br>Related<br>Benefit<br>Plans | Net Unrealized<br>Gains/(Losses)<br>on Available-<br>For-Sale<br>Securities | Accumulated<br>Other<br>Comprehensive<br>Income/(Loss) |
|--|--|--|--|---|--|
| December 31, 2013  | \$(165)  | \$ 332   | \$(21,767)   | \$ (1)  | \$(21,602)   |
| Other comprehensive income before reclassifications                | 618  | (2,074)  | (6,348)  | (18)  | (7,822)  |
| Amount reclassified from accumulated other<br>comprehensive income | (60)   | 0  | 1,605  | 3   | 1,548  |
| <b>Total change for the period</b>                                 | <b>557</b>   | <b>(2,074)</b>                                     | <b>(4,742)</b>   | <b>(15)</b>   | <b>(6,274)</b>   |
| December 31, 2014  | 392  | (1,742)  | (26,509)   | (15)  | (27,875)   |
| Other comprehensive income before reclassifications                | 399  | (1,721)  | (1,897)  | (33)  | (3,252)  |
| Amount reclassified from accumulated other<br>comprehensive income | (691)  | 0  | 2,158  | 53  | 1,520  |
| <b>Total change for the period</b>                                 | <b>(292)</b>   | <b>(1,721)</b>                                     | <b>262</b>   | <b>20</b>   | <b>(1,731)</b>   |
| December 31, 2015  | 100  | (3,463)  | (26,248)   | 5   | (29,607)   |
| Other comprehensive income before reclassifications                | 163  | (140)  | (1,581)  | (23)  | (1,581)  |
| Amount reclassified from accumulated other<br>comprehensive income | 56   | 0  | 1,714  | 21  | 1,791  |
| <b>Total change for the period</b>                                 | <b>219</b>   | <b>(140)</b>                                       | <b>132</b>   | <b>(2)</b>  | <b>209</b>   |
| December 31, 2016  | \$ 319   | \$(3,603)  | \$(26,116)   | \$ 2  | \$(29,398)   |

\* Foreign currency translation adjustments are presented gross except for any associated hedges which are presented net of tax.

## **NOTE M. CONTINGENCIES AND COMMITMENTS**

### **Contingencies**

As a company with a substantial employee population and with clients in more than 175 countries, IBM is involved, either as plaintiff or defendant, in a variety of ongoing claims, demands, suits, investigations, tax matters and proceedings that arise from time to time in the ordinary course of its business. The company is a leader in the information technology industry and, as such, has been and will continue to be subject to claims challenging its IP rights and associated products and offerings, including claims of copyright and patent infringement and violations of trade secrets and other IP rights. In addition, the company enforces its own IP against infringement, through license negotiations, lawsuits or otherwise. Also, as is typical for companies of IBM's scope and scale, the company is party to actions and proceedings in various jurisdictions involving a wide range of labor and employment issues (including matters related to contested employment decisions, country-specific labor and employment laws, and the company's pension, retirement and other benefit plans), as well as actions with respect to contracts, product liability, securities, foreign operations, competition law and environmental matters. These actions may be commenced by a number of different parties, including competitors, clients, current or former employees, government and regulatory agencies, stockholders and representatives of the locations in which the company does business. Some of the actions to which the company is party may involve particularly complex technical issues, and some actions may raise novel questions under the laws of the various jurisdictions in which these matters arise.

The company records a provision with respect to a claim, suit, investigation or proceeding when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Any recorded liabilities, including any changes to such liabilities for the years ended December 31, 2016, 2015 and 2014 were not material to the Consolidated Financial Statements.

In accordance with the relevant accounting guidance, the company provides disclosures of matters for which the likelihood of material loss is at least reasonably possible. In addition, the company also discloses matters based on its consideration of other matters and qualitative factors, including the experience of other companies in the industry, and investor, customer and employee relations considerations.

With respect to certain of the claims, suits, investigations and proceedings discussed herein, the company believes at this time that the likelihood of any material loss is remote, given, for example, the procedural status, court rulings, and/or the strength of the company's defenses in those matters. With respect to the remaining claims, suits, investigations and proceedings discussed in this note, except as specifically discussed herein, the company is unable to provide estimates of reasonably possible losses or range of losses, including losses in excess of amounts accrued, if any, for the following reasons. Claims, suits, investigations and proceedings are inherently

uncertain, and it is not possible to predict the ultimate outcome of these matters. It is the company's experience that damage amounts claimed in litigation against it are unreliable and unrelated to possible outcomes, and as such are not meaningful indicators of the company's potential liability. Further, the company is unable to provide such an estimate due to a number of other factors with respect to these claims, suits, investigations and proceedings, including considerations of the procedural status of the matter in question, the presence of complex or novel legal theories, and/or the ongoing discovery and development of information important to the matters. The company reviews claims, suits, investigations and proceedings at least quarterly, and decisions are made with respect to recording or adjusting provisions and disclosing reasonably possible losses or range of losses (individually or in the aggregate), to reflect the impact and status of settlement discussions, discovery, procedural and substantive rulings, reviews by counsel and other information pertinent to a particular matter.

Whether any losses, damages or remedies finally determined in any claim, suit, investigation or proceeding could reasonably have a material effect on the company's business, financial condition, results of operations or cash flows will depend on a number of variables, including: the timing and amount of such losses or damages; the structure and type of any such remedies; the significance of the impact any such losses, damages or remedies may have in the Consolidated Financial Statements; and the unique facts and circumstances of the particular matter that may give rise to additional factors. While the company will continue to defend itself vigorously, it is possible that the company's business, financial condition, results of operations or cash flows could be affected in any particular period by the resolution of one or more of these matters.

The following is a summary of the more significant legal matters involving the company.

The company is a defendant in an action filed on March 6, 2003 in state court in Salt Lake City, Utah by the SCO Group (SCO v. IBM). The company removed the case to Federal Court in Utah. Plaintiff is an alleged successor in interest to some of AT&T's UNIX IP rights, and alleges copyright infringement, unfair competition, interference with contract and breach of contract with regard to the company's distribution of AIX and Dynix and contribution of code to Linux and the company has asserted counterclaims. On September 14, 2007, plaintiff filed for bankruptcy protection, and all proceedings in this case were stayed. The court in another suit, the SCO Group, Inc. v. Novell, Inc., held a trial in March 2010. The jury found that Novell is the owner of UNIX and UnixWare copyrights; the judge subsequently ruled that SCO is obligated to recognize Novell's waiver of SCO's claims against IBM and Sequent for breach of UNIX license agreements. On August 30, 2011, the Tenth Circuit Court of Appeals affirmed the district court's ruling and denied SCO's appeal of this matter. In June 2013, the Federal Court in Utah granted SCO's motion to reopen the SCO v. IBM case.

In February 2016, the Federal Court ruled in favor of IBM on all of SCO's remaining claims, and in March 2016, SCO filed a notice of appeal to the Tenth Circuit Court of Appeals.

On May 13, 2010, IBM and the State of Indiana (acting on behalf of the Indiana Family and Social Services Administration) sued one another in a dispute over a 2006 contract regarding the modernization of social service program processing in Indiana. After six weeks of trial, on July 18, 2012, the Indiana Superior Court in Marion County rejected the State's claims in their entirety and awarded IBM \$52 million plus interest and costs. On February 13, 2014, the Indiana Court of Appeals reversed portions of the trial judge's findings, found IBM in material breach, and ordered the case remanded to the trial judge to determine the State's damages, if any. The Indiana Court of Appeals also affirmed approximately \$50 million of the trial court's award of damages to IBM. On March 22, 2016, the Indiana Supreme Court affirmed the outcome of the Indiana Court of Appeals and remanded the case to the Indiana Superior Court.

On April 16, 2014, Iusacell SA de C.V. (Iusacell) sued IBM, claiming that IBM made fraudulent misrepresentations that induced Iusacell to enter into an agreement with IBM Mexico. Iusacell claims damages for lost profits. Iusacell's complaint relates to a contractual dispute in Mexico, which is the subject of a pending arbitration proceeding in Mexico initiated by IBM Mexico against Iusacell for breach of the underlying agreement. On November 14, 2014, the District Court in the Southern District of New York granted IBM's motion to stay Iusacell's action against the company pending the arbitration in Mexico between Iusacell and IBM Mexico.

IBM United Kingdom Limited (IBM UK) initiated legal proceedings in May 2010 before the High Court in London against the IBM UK Pensions Trust (the UK Trust) and two representative beneficiaries of the UK Trust membership. IBM UK is seeking a declaration that it acted lawfully both in notifying the Trustee of the UK Trust that it was closing its UK defined benefit plans to future accruals for most participants and in implementing the company's new retirement policy. In April 2014, the High Court acknowledged that the changes made to its UK defined benefit plans were within IBM's discretion, but ruled that IBM breached its implied duty of good faith both in implementing these changes and in the manner in which it consulted with employees. Proceedings to determine remedies were held in July 2014, and in February 2015 the High Court held that for IBM to make changes to accruals under the plan would require a new consultation of the participants, but other changes (including to early retirement policy) would not require such consultation. IBM UK has appealed both the breach and remedies judgments. If the appeal is unsuccessful, the Court's rulings would require IBM to reverse the changes made to the UK defined benefit plans retroactive to their effective dates. This could result in an estimated non-operating one-time pre-tax charge of approximately \$290 million, plus ongoing defined benefit related accruals. In addition, IBM UK is a defendant in

approximately 290 individual actions brought since early 2010 by participants of the defined benefits plans who left IBM UK. These actions, which allege constructive dismissal and age discrimination, are pending before the Employment Tribunal in Southampton UK.

In March 2011, the company announced that it had agreed to settle a civil enforcement action with the Securities and Exchange Commission (SEC) relating to alleged violations of the Foreign Corrupt Practices Act of 1977 (FCPA). On July 25, 2013, the court approved that 2011 settlement and required that for a two-year period IBM make reports to the SEC and the court on certain matters, including those relating to compliance with the FCPA. The two-year period expired in July 2015. In early 2012, IBM notified the SEC of an investigation by the Polish Central Anti-Corruption Bureau involving allegations of illegal activity by a former IBM Poland employee in connection with sales to the Polish government. IBM is cooperating with the SEC and Polish authorities in this matter. In April 2013, IBM learned that the U.S. Department of Justice (DOJ) is also investigating allegations related to the Poland matter, as well as allegations relating to transactions in Argentina, Bangladesh and Ukraine. The DOJ is also seeking information regarding the company's global FCPA compliance program and its public sector business. The company is cooperating with the DOJ in this matter.

In March 2015, putative class action litigation was commenced in the United States District Court for the Southern District of New York related to the company's October 2014 announcement that it was divesting its global commercial semiconductor technology business. The company and three of its officers were named as defendants. Plaintiffs allege that defendants violated Sections 20(a) and 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder. In May 2015, a related putative class action was also commenced in the United States District Court for the Southern District of New York based on the same underlying facts, alleging violations of the Employee Retirement Income Security Act ("ERISA"). The company, management's Retirement Plans Committee, and three current or former IBM executives were named as defendants. On September 7, 2016, the Court granted the company's motions to dismiss the plaintiffs' claims in both actions. On October 21, 2016, the ERISA plaintiffs filed an amended complaint, dropping the company as a defendant. The matter remains pending in the United States District Court.

In August 2015, IBM learned that the SEC is conducting an investigation relating to revenue recognition with respect to the accounting treatment of certain transactions in the U.S., UK and Ireland. The company is cooperating with the SEC in this matter.

The company is party to, or otherwise involved in, proceedings brought by U.S. federal or state environmental agencies under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), known as "Superfund," or laws similar to CERCLA. Such statutes require potentially responsible parties to participate in remediation activities regardless of fault or ownership of sites. The company is also conducting

environmental investigations, assessments or remediations at or in the vicinity of several current or former operating sites globally pursuant to permits, administrative orders or agreements with country, state or local environmental agencies, and is involved in lawsuits and claims concerning certain current or former operating sites.

The company is also subject to ongoing tax examinations and governmental assessments in various jurisdictions. Along with many other U.S. companies doing business in Brazil, the company is involved in various challenges with Brazilian tax authorities regarding non-income tax assessments and non-income tax litigation matters. In 2016, the company also received new non-income tax assessments from the municipality of Rio de Janeiro. The total potential amount related to all these matters for all applicable years is approximately \$980 million. The company believes it will prevail on these matters and that this amount is not a meaningful indicator of liability.

#### **Commitments**

The company's extended lines of credit to third-party entities include unused amounts of \$6,542 million and \$5,477 million at December 31, 2016 and 2015, respectively. A portion of these amounts was available to the company's business partners to support their working capital needs. In addition, the company has committed to provide future financing to its clients in connection with client purchase agreements for approximately \$2,463 million and \$2,097 million at December 31, 2016 and 2015, respectively.

The company has applied the guidance requiring a guarantor to disclose certain types of guarantees, even if the likelihood of requiring the guarantor's performance is remote. The following is a description of arrangements in which the company is the guarantor.

The company is a party to a variety of agreements pursuant to which it may be obligated to indemnify the other party with respect to certain matters. Typically, these obligations arise in the context of contracts entered into by the company, under which the company customarily agrees to hold the other party harmless against losses arising from a breach of representations and covenants related to such matters as title to assets sold, certain IP rights, specified environmental matters, third-party performance of nonfinancial contractual obligations and certain income taxes. In each of these circumstances, payment by the company is conditioned on the other party making a claim pursuant to the procedures specified in the particular contract, the procedures of which typically allow the company to challenge the other party's claims. While typically indemnification provisions do not include a contractual maximum on the company's payment, the company's obligations under these agreements may be limited in terms of time and/or nature of claim, and in some instances, the company may have recourse against third parties for certain payments made by the company.

It is not possible to predict the maximum potential amount of future payments under these or similar agreements due to the conditional nature of the company's obligations and the unique facts and circumstances involved in each particular agreement. Historically, payments made by the company under these agreements have not had a material effect on the company's business, financial condition or results of operations.

In addition, the company guarantees certain loans and financial commitments. The maximum potential future payment under these financial guarantees was \$34 million and \$34 million at December 31, 2016 and 2015, respectively. The fair value of the guarantees recognized in the Consolidated Statement of Financial Position was immaterial.

#### **NOTE N. TAXES**

(\$ in millions)

| For the year ended<br>December 31:   | 2016            | 2015            | 2014            |
|--|-----------------|-----------------|-----------------|
| Income from continuing<br>operations before<br>income taxes                |                 |                 |                 |
| U.S. operations  | \$ 3,650        | \$ 5,915        | \$ 7,509        |
| Non-U.S. operations  | 8,680           | 10,030          | 12,477          |
| <b>Total income from<br/>continuing operations<br/>before income taxes</b> | <b>\$12,330</b> | <b>\$15,945</b> | <b>\$19,986</b> |

The income from continuing operations provision for income taxes by geographic operations is as follows:

(\$ in millions)

| For the year ended<br>December 31:                                    | 2016         | 2015           | 2014           |
|---|--------------|----------------|----------------|
| U.S. operations   | \$ 38        | \$ 849         | \$2,093        |
| Non-U.S. operations   | 411          | 1,732          | 2,141          |
| <b>Total continuing<br/>operations provision for<br/>income taxes</b> | <b>\$449</b> | <b>\$2,581</b> | <b>\$4,234</b> |

**Notes to Consolidated Financial Statements**

International Business Machines Corporation and Subsidiary Companies

The components of the income from continuing operations provision for income taxes by taxing jurisdiction are as follows:

(\$ in millions)

| <b>For the year ended<br/>December 31:</b>   | <b>2016</b>     | <b>2015</b>     | <b>2014</b>     |
|--|-----------------|-----------------|-----------------|
| <b>U.S. federal</b>  |                 |                 |                 |
| Current  | \$ 186          | \$ (321)        | \$ 1,134        |
| Deferred   | (746)           | 553             | 105             |
|  | <b>\$ (560)</b> | <b>\$ 232</b>   | <b>\$ 1,239</b> |
| <b>U.S. state and local</b>  |                 |                 |                 |
| Current  | \$ 244          | \$ 128          | \$ 541          |
| Deferred   | (44)            | 116             | (105)           |
|  | <b>\$ 200</b>   | <b>\$ 244</b>   | <b>\$ 436</b>   |
| <b>Non-U.S.</b>  |                 |                 |                 |
| Current  | \$ 988          | \$ 2,101        | \$ 2,825        |
| Deferred   | (179)           | 4               | (266)           |
|  | <b>\$ 809</b>   | <b>\$ 2,105</b> | <b>\$ 2,559</b> |
| <b>Total continuing<br/>operations provision<br/>for income taxes</b>                            | <b>\$ 449</b>   | <b>\$ 2,581</b> | <b>\$ 4,234</b> |
| <b>Discontinued operations<br/>provision for income<br/>taxes</b>                                | <b>(2)</b>      | <b>(117)</b>    | <b>(1,617)</b>  |
| <b>Provision for social<br/>security, real estate,<br/>personal property<br/>and other taxes</b> | <b>3,417</b>    | <b>3,497</b>    | <b>4,068</b>    |
| <b>Total taxes included in<br/>net income</b>  | <b>\$3,864</b>  | <b>\$5,961</b>  | <b>\$ 6,685</b> |

A reconciliation of the statutory U.S. federal tax rate to the company's effective tax rate from continuing operations is as follows:

| <b>For the year ended<br/>December 31:</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| Statutory rate                             | 35%         | 35%         | 35%         |
| Foreign tax differential                   | (21)        | (17)        | (14)        |
| Japan resolution                           | (10)        | 0           | 0           |
| State and local                            | 1           | 1           | 1           |
| Domestic incentives                        | (1)         | (2)         | (2)         |
| Other                                      | 0           | (1)         | 1           |
| <b>Effective rate</b>                      | <b>4%</b>   | <b>16%</b>  | <b>21%</b>  |

Percentages rounded for disclosure purposes.

The significant components reflected within the tax rate reconciliation labeled "Foreign tax differential" include the effects of foreign subsidiaries' earnings taxed at rates other than the U.S. statutory rate, foreign export incentives, the U.S. tax impacts of non-U.S. earnings repatriation and any net impacts of intercompany transactions. These items also reflect audit settlements, excluding Japan, or changes in the amount of unrecognized tax benefits associated with each of these items.

In 2016, the company favorably settled the remaining open items on the company's U.S. income tax returns for 2011 and 2012 resulting in no further adjustments.

In April 2010, the company appealed the determination of the Japanese Tax Authorities with respect to certain foreign tax losses. The tax benefit of these losses, approximately \$1.0 billion adjusted for currency, had been included in unrecognized tax benefits as of December 2015. In April 2011, the company received notification that the appeal was denied, and in June 2011, the company filed a lawsuit challenging this decision. In May 2014, the Tokyo District Court ruled in favor of the company. The Japanese government appealed the ruling to the Tokyo High Court. On March 25, 2015, the Tokyo High Court ruled in favor of IBM and, on April 7, 2015, the Japanese government appealed the ruling to the Japan Supreme Court. On February 18, 2016, the Supreme Court denied the government appeal thereby upholding the Tokyo High Court's decision in favor of the company as the final judgment in this matter. This led to a refund of the taxes previously paid of \$1.0 billion, which the company received in the first-quarter 2016 and included in the effective tax rate. Interest of \$0.2 billion was also received.

The 2016 continuing operations effective tax rate decreased 12.5 points from 2015 driven by: the favorable resolution of the Japan tax matter described above (9.5 points), a benefit due to the year-to-year decrease in tax charges related to intercompany payments made by foreign subsidiaries and the intercompany licensing of certain IP (5.7 points), and a benefit from the geographic mix of pre-tax earnings year over year. These benefits were partially offset by a reduced benefit year to year related to audit settlements (2.3 points) and a decreased benefit year to year in the utilization of foreign tax credits (0.6 points).

The effect of tax law changes on deferred tax assets and liabilities did not have a material impact on the company's effective tax rate.

The significant components of deferred tax assets and liabilities recorded in the Consolidated Statement of Financial Position were:

**Deferred Tax Assets**

(\$ in millions)

| <b>At December 31:</b>                    | <b>2016</b>     | <b>2015*</b>    |
|---|-----------------|-----------------|
| Retirement benefits                       | \$ 4,671        | \$ 4,621        |
| Share-based and other compensation        | 1,132           | 963             |
| Domestic tax loss/credit carryforwards    | 1,676           | 1,055           |
| Deferred income                           | 741             | 762             |
| Foreign tax loss/credit carryforwards     | 816             | 767             |
| Bad debt, inventory and warranty reserves | 473             | 528             |
| Depreciation                              | 270             | 329             |
| Accruals                                  | 624             | 904             |
| Other                                     | 1,503           | 1,000           |
| Gross deferred tax assets                 | 11,906          | 10,929          |
| Less: valuation allowance                 | 916             | 740             |
| <b>Net deferred tax assets</b>            | <b>\$10,990</b> | <b>\$10,189</b> |

\* Reclassified to conform to 2016 presentation

**Deferred Tax Liabilities**

(\$ in millions)

| At December 31:                       | 2016           | 2015           |
|---------------------------------------|----------------|----------------|
| Depreciation                          | \$ 856         | \$ 919         |
| Retirement benefits                   | 406            | 252            |
| Goodwill and intangible assets        | 1,800          | 1,407          |
| Leases                                | 651            | 916            |
| Software development costs            | 672            | 554            |
| Deferred transition costs             | 351            | 395            |
| Other                                 | 1,455          | 1,177          |
| <b>Gross deferred tax liabilities</b> | <b>\$6,191</b> | <b>\$5,620</b> |

For income tax return purposes, the company has foreign and domestic loss carryforwards, the tax effect of which is \$855 million, as well as domestic and foreign credit carryforwards of \$1,982 million. Substantially all of these carryforwards are available for at least two years and the majority are available for 10 years or more.

The valuation allowances as of December 31, 2016, 2015 and 2014 were \$916 million, \$740 million and \$646 million, respectively. The amounts principally apply to certain foreign, state and local loss carryforwards and credits. In the opinion of management, it is more likely than not that these assets will not be realized. However, to the extent that tax benefits related to these carryforwards are realized in the future, the reduction in the valuation allowance will reduce income tax expense.

The amount of unrecognized tax benefits at December 31, 2016 decreased by \$834 million in 2016 to \$3,740 million. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(\$ in millions)

|   | 2016            | 2015            | 2014           |
|---|-----------------|-----------------|----------------|
| Balance at January 1  | \$ 4,574        | \$ 5,104        | \$4,458        |
| Additions based on tax positions related to the current year                              | 560             | 464             | 697            |
| Additions for tax positions of prior years  | 334             | 569             | 586            |
| Reductions for tax positions of prior years (including impacts due to a lapse in statute) | (1,443)         | (1,348)         | (579)          |
| Settlements   | (285)           | (215)           | (58)           |
| <b>Balance at December 31</b>   | <b>\$ 3,740</b> | <b>\$ 4,574</b> | <b>\$5,104</b> |

The additions to unrecognized tax benefits related to the current and prior years are primarily attributable to non-U.S. issues, certain tax incentives and credits and state issues. The settlements and reductions to unrecognized tax benefits for tax positions of prior years are primarily attributable to the favorable resolution of the Japan tax matter, currency, non-U.S. audits and impacts due to lapses in statutes of limitation.

The liability at December 31, 2016 of \$3,740 million can be reduced by \$775 million of offsetting tax benefits associated with the correlative effects of potential transfer pricing adjustments, U.S. tax credits, state income taxes and timing adjustments. The net amount of \$2,965 million, if recognized, would favorably affect the company's effective tax rate. The net amounts at December 31, 2015 and 2014 were \$3,724 million and \$4,229 million, respectively.

Interest and penalties related to income tax liabilities are included in income tax expense. During the year ended December 31, 2016, the company recognized \$62 million in interest expense and penalties; in 2015, the company recognized \$141 million in interest expense and penalties; and, in 2014, the company recognized \$216 million in interest expense and penalties. The company has \$625 million for the payment of interest and penalties accrued at December 31, 2016, and had \$613 million accrued at December 31, 2015.

Within the next 12 months, the company believes it is reasonably possible that the total amount of unrecognized tax benefits associated with certain positions may be reduced. The potential decrease in the amount of unrecognized tax benefits is associated with the anticipated resolution of the company's U.S. income tax audit for 2013 and 2014, as well as various non-U.S. audits. The company estimates that the unrecognized tax benefits at December 31, 2016 could be reduced by \$966 million.

The company is subject to taxation in the U.S. and various state and foreign jurisdictions. With respect to major U.S. state and foreign taxing jurisdictions, the company is generally no longer subject to tax examinations for years prior to 2012. With limited exception, the company is no longer subject to income tax examination of its U.S. federal tax return for years prior to 2013. The open years contain matters that could be subject to differing interpretations of applicable tax laws and regulations related to the amount and/or timing of income, deductions and tax credits. Although the outcome of tax audits is always uncertain, the company believes that adequate amounts of tax and interest have been provided for any significant adjustments that are expected to result for these years.

In the fourth quarter of 2013, the company received a draft tax assessment notice for approximately \$866 million (approximately \$789 million at 2016 year-end currency rates) from the Indian Tax Authorities for 2009. In July 2016, the Karnataka High Court in Bangalore set aside this assessment by way of court order and the company reached a mutual agreement with the Income Tax Department for a new assessment, which will take place over an 18-month period. At December 31, 2016, the company has recorded \$568 million as prepaid income taxes in India. A significant portion of this balance represents cash tax deposits paid over time to protect the company's right to appeal various income tax assessments made by the Indian Tax Authorities. The company believes it will prevail on these matters.

In the first quarter of 2016, the U.S. Internal Revenue Service commenced its audit of the company's U.S. tax returns for 2013 and 2014. The company anticipates that this audit will be completed by the end of 2017.

The company has not provided deferred taxes on \$71.4 billion of undistributed earnings of non-U.S. subsidiaries at December 31, 2016, as it is the company's policy to indefinitely reinvest these earnings in non-U.S. operations. However, the company periodically repatriates a portion of these earnings to the extent that it does not incur an additional U.S. tax liability. Quantification of the deferred tax liability, if any, associated with indefinitely reinvested earnings is not practicable.

#### **NOTE O. RESEARCH, DEVELOPMENT AND ENGINEERING**

RD&E expense was \$5,751 million in 2016, \$5,247 million in 2015 and \$5,437 million in 2014. In addition, RD&E expense included in discontinued operations was \$1 million in 2016, \$197 million in 2015 and \$368 million in 2014.

The company incurred total expense of \$5,421 million, \$5,178 million and \$5,595 million in 2016, 2015 and 2014, respectively, for scientific research and the application of scientific advances to the development of new and improved products and their uses, as well as services and their application. Within these amounts, software-related expense was \$3,470 million, \$3,064 million and \$3,064 million in 2016, 2015 and 2014, respectively.

Expense for product-related engineering was \$332 million, \$267 million and \$211 million in 2016, 2015 and 2014, respectively.

#### **NOTE P. EARNINGS PER SHARE OF COMMON STOCK**

The following table presents the computation of basic and diluted earnings per share of common stock.

(\$ in millions except per share amounts)

| <b>For the year ended December 31:</b>  | <b>2016</b>        | <b>2015</b>        | <b>2014</b>          |
|---|--------------------|--------------------|----------------------|
| Weighted-average number of shares on which earnings per share calculations are based                              |                    |                    |                      |
| <b>Basic</b>  | <b>955,422,530</b> | <b>978,744,523</b> | <b>1,004,272,584</b> |
| Add—incremental shares under stock-based compensation plans   | 2,416,940          | 3,037,001          | 4,332,155            |
| Add—incremental shares associated with contingently issuable shares   | 874,626            | 918,744            | 1,395,741            |
| <b>Assuming dilution</b>  | <b>958,714,097</b> | <b>982,700,267</b> | <b>1,010,000,480</b> |
| Income from continuing operations   | \$11,881           | \$13,364           | \$15,751             |
| Loss from discontinued operations, net of tax   | (9)                | (174)              | (3,729)              |
| <b>Net income on which basic earnings per share is calculated</b>   | <b>\$11,872</b>    | <b>\$13,190</b>    | <b>\$12,022</b>      |
| Income from continuing operations   | \$11,881           | \$13,364           | \$15,751             |
| Net income applicable to contingently issuable shares   | 0                  | (1)                | (3)                  |
| <b>Income from continuing operations on which diluted earnings per share is calculated</b>                        | <b>\$11,881</b>    | <b>\$13,363</b>    | <b>\$15,749</b>      |
| <b>Loss from discontinued operations, net of tax, on which basic and diluted earnings per share is calculated</b> | <b>(9)</b>         | <b>(174)</b>       | <b>(3,729)</b>       |
| <b>Net income on which diluted earnings per share is calculated</b>   | <b>\$11,872</b>    | <b>\$13,189</b>    | <b>\$12,020</b>      |
| Earnings/(loss) per share of common stock   |                    |                    |                      |
| <b>Assuming dilution</b>  |                    |                    |                      |
| Continuing operations   | \$ 12.39           | \$ 13.60           | \$ 15.59             |
| Discontinued operations   | (0.01)             | (0.18)             | (3.69)               |
| <b>Total</b>  | <b>\$ 12.38</b>    | <b>\$ 13.42</b>    | <b>\$ 11.90</b>      |
| <b>Basic</b>  |                    |                    |                      |
| Continuing operations   | \$ 12.44           | \$ 13.66           | \$ 15.68             |
| Discontinued operations   | (0.01)             | (0.18)             | (3.71)               |
| <b>Total</b>  | <b>\$ 12.43</b>    | <b>\$ 13.48</b>    | <b>\$ 11.97</b>      |

Weighted-average stock options to purchase 405,552 common shares in 2016, 41,380 common shares in 2015 and 17,420 common shares in 2014 were outstanding, but were not included in the computation of diluted earnings per share because the exercise price of the options was greater than the average market price of the common shares for the full year, and therefore, the effect would have been antidilutive.

#### NOTE Q. RENTAL EXPENSE AND LEASE COMMITMENTS

Rental expense, including amounts charged to inventories and fixed assets, and excluding amounts previously reserved, was \$1,508 million in 2016, \$1,474 million in 2015 and \$1,592 million in 2014. Within these amounts, rental expense reflected in discontinued operations was \$29 million and \$95 million, in 2015 and 2014, respectively. Rental expense in

agreements with rent holidays and scheduled rent increases is recorded on a straight-line basis over the lease term. Contingent rentals are included in the determination of rental expense as accrueable. The table below depicts gross minimum rental commitments under noncancelable leases, amounts related to vacant space associated with workforce transformation, sublease income commitments and capital lease commitments. These amounts reflect activities primarily related to office space, as well as data centers.

(\$ in millions)

|  | 2017        | 2018        | 2019        | 2020        | 2021        | Beyond 2021 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Operating lease commitments</b>                                 |             |             |             |             |             |             |
| Gross minimum rental commitments<br>(including vacant space below) | \$ 1,414    | \$ 1,328    | \$ 1,218    | \$ 1,016    | \$ 796      | \$ 1,111    |
| Vacant space   | \$ 42       | \$ 29       | \$ 20       | \$ 15       | \$ 11       | \$ 9        |
| Sublease income commitments  | \$ 12       | \$ 8        | \$ 6        | \$ 3        | \$ —        | \$ —        |
| <b>Capital lease commitments</b>                                   | <b>\$ 1</b> | <b>\$ 2</b> | <b>\$ 2</b> | <b>\$ 2</b> | <b>\$ —</b> | <b>\$ —</b> |

#### NOTE R. STOCK-BASED COMPENSATION

The following table presents total stock-based compensation cost included in income from continuing operations.

(\$ in millions)

| For the year ended<br>December 31:           | 2016          | 2015          | 2014          |
|--|---------------|---------------|---------------|
| Cost   | \$ 88         | \$ 100        | \$ 121        |
| Selling, general and<br>administrative       | 401           | 322           | 350           |
| Research, development<br>and engineering     | 55            | 51            | 54            |
| Other (income) and<br>expense*               | —             | (6)           | (13)          |
| Pre-tax stock-based<br>compensation cost     | 544           | 468           | 512           |
| Income tax benefits                          | (179)         | (156)         | (174)         |
| <b>Net stock-based<br/>compensation cost</b> | <b>\$ 364</b> | <b>\$ 312</b> | <b>\$ 338</b> |

\* Reflects the one-time effects related to divestitures

The amount of stock-based compensation cost included in discontinued operations, net of tax, was immaterial in all periods.

Total unrecognized compensation cost related to non-vested awards at December 31, 2016 and 2015 was \$934 million and \$871 million, respectively. The amount at December 31, 2016 is expected to be recognized over a weighted-average period of approximately 2.6 years.

There was no significant capitalized stock-based compensation cost at December 31, 2016, 2015, and 2014.

#### Incentive Awards

Stock-based incentive awards are provided to employees under the terms of the company's long-term performance plans (the "Plans"). The Plans are administered by the Executive Compensation and Management Resources Committee of the Board of Directors (the "Committee"). Awards available under the Plans principally include restricted stock units, performance share units, stock options or any combination thereof.

The amount of shares originally authorized to be issued under the company's existing Plans was 273 million at December 31, 2016. In addition, certain incentive awards granted under previous plans, if and when those awards were canceled, could be reissued under the company's existing Plans. As such, 66.2 million additional shares were considered authorized to be issued under the company's existing Plans as of December 31, 2016. There were 106.7 million unused shares available to be granted under the Plans as of December 31, 2016.

Under the company's long-standing practices and policies, all awards are approved prior to or on the date of grant. The awards approval process specifies the individual receiving the grant, the number of options or the value of the award, the exercise price or formula for determining the exercise price and the date of grant. All awards for senior management are approved by the Committee. All awards for employees other than senior management are approved by senior management pursuant to a series of delegations that were approved by the Committee, and the grants made pursuant to these delegations are reviewed periodically with the Committee. Awards that are given as part of annual total compensation for senior management and other employees are made on specific cycle dates scheduled in advance. With respect to awards given in connection with promotions or new hires, the company's policy requires approval of such awards prior to the grant date, which is typically the date of the promotion or the date of hire.

#### Stock Awards

Stock awards are made in the form of Restricted Stock Units (RSUs), including Retention Restricted Stock Units (RRSUS), or Performance Share Units (PSUs).

The tables below summarize RSU and PSU activity under the Plans during the years ended December 31, 2016, 2015 and 2014.

**RSUs**

|                               | 2016                         |                  | 2015                         |                  | 2014                         |                  |
|-------------------------------|------------------------------|------------------|------------------------------|------------------|------------------------------|------------------|
|                               | Weighted-Average Grant Price | Number of Units  | Weighted-Average Grant Price | Number of Units  | Weighted-Average Grant Price | Number of Units  |
| Balance at January 1          | \$159                        | 7,527,341        | \$171                        | 7,734,277        | \$166                        | 8,635,317        |
| RSUs granted                  | 140                          | 3,985,870        | 143                          | 4,230,186        | 172                          | 2,525,947        |
| RSUs released                 | 174                          | (1,860,660)      | 164                          | (3,567,495)      | 157                          | (2,401,761)      |
| RSUs canceled/forfeited       | 158                          | (753,459)        | 167                          | (869,627)        | 167                          | (1,025,226)      |
| <b>Balance at December 31</b> | <b>\$147</b>                 | <b>8,899,092</b> | <b>\$159</b>                 | <b>7,527,341</b> | <b>\$171</b>                 | <b>7,734,277</b> |

**PSUs**

|                                 | 2016                         |                  | 2015                         |                  | 2014                         |                  |
|---------------------------------|------------------------------|------------------|------------------------------|------------------|------------------------------|------------------|
|                                 | Weighted-Average Grant Price | Number of Units  | Weighted-Average Grant Price | Number of Units  | Weighted-Average Grant Price | Number of Units  |
| Balance at January 1            | \$173                        | 2,928,932        | \$185                        | 3,140,707        | \$178                        | 2,824,294        |
| PSUs granted at target          | 140                          | 990,336          | 153                          | 1,137,242        | 180                          | 1,430,098        |
| Performance adjustments*        | 194                          | (387,457)        | 185                          | (168,055)        | 157                          | 29,960           |
| PSUs released                   | 194                          | (419,759)        | 185                          | (840,552)        | 157                          | (1,027,181)      |
| PSUs canceled/forfeited         | 174                          | (237,294)        | 184                          | (340,410)        | 187                          | (116,464)        |
| <b>Balance at December 31**</b> | <b>\$155</b>                 | <b>2,874,758</b> | <b>\$173</b>                 | <b>2,928,932</b> | <b>\$185</b>                 | <b>3,140,707</b> |

\* Represents the change in shares issued to employees after vesting of PSUs because final performance metrics were above or below specified targets

\*\*Represents the number of shares expected to be issued based on achievement of grant date performance targets. The actual number of shares issued will depend on final performance against specified targets over the vesting period.

RSUs are stock awards granted to employees that entitle the holder to shares of common stock as the award vests, typically over a one- to five-year period. For RSUs, dividend equivalents are not paid. The fair value of such RSUs is determined and fixed on the grant date based on the company's stock price adjusted for the exclusion of dividend equivalents.

The remaining weighted-average contractual term of RSUs at December 31, 2016, 2015 and 2014 is the same as the period over which the remaining cost of the awards will be recognized, which is approximately three years. The fair value of RSUs granted during the years ended December 31, 2016, 2015 and 2014 was \$557 million, \$606 million and \$434 million, respectively. The total fair value of RSUs vested and released during the years ended December 31, 2016, 2015 and 2014 was \$323 million, \$583 million and \$378 million, respectively. As of December 31, 2016, 2015 and 2014, there was \$814 million, \$800 million and \$754 million, respectively, of unrecognized compensation cost related to non-vested RSUs. The company received no cash from employees as a result of employee vesting and release of RSUs for the years ended December 31, 2016, 2015 and 2014.

PSUs are stock awards where the number of shares ultimately received by the employee depends on the company's performance against specified targets and typically vest over a three-year period. For PSUs, dividend equivalents are not paid. The fair value of each PSU is determined on the grant date, based on the company's stock price, adjusted for the exclusion of dividend equivalents, and assumes that performance targets will be achieved. Over the performance period, the number of shares of stock that will be issued is adjusted upward or downward based upon the probability of achievement of performance targets. The ultimate number of shares issued and the related compensation cost recognized as expense will be based on a comparison of the final performance metrics to the specified targets. The fair value of PSUs granted at target during the years ended December 31, 2016, 2015 and 2014 was \$138 million, \$174 million and \$257 million, respectively. Total fair value of PSUs vested and released during the years ended December 31, 2016, 2015 and 2014 was \$81 million, \$156 million and \$161 million, respectively.

In connection with vesting and release of RSUs and PSUs, the tax benefits realized by the company for the years ended December 31, 2016, 2015 and 2014 were \$118 million, \$228 million and \$222 million, respectively.

### Stock Options

During the years ended December 31, 2015 and 2014, the company did not grant stock options. During the year ended December 31, 2016, the company made one grant of 1.5 million premium-priced stock options. The option award cliff vests in three years and has a contractual term of 10 years. The total compensation cost to be recognized over the three-year vesting period is expected to be \$12 million.

The company estimates the fair value of stock options at the date of grant using the Black-Scholes valuation model. Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility of the company's stock, the risk-free rate and the company's dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the company.

The following table summarizes option activity under the Plans during the years ended December 31, 2016, 2015 and 2014.

|                                   | 2016                            |                               | 2015                            |                               | 2014                            |                               |
|-----------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|
|                                   | Weighted-Average Exercise Price | Number of Shares Under Option | Weighted-Average Exercise Price | Number of Shares Under Option | Weighted-Average Exercise Price | Number of Shares Under Option |
| Balance at January 1              | \$ 94                           | 479,774                       | \$ 97                           | 1,750,949                     | \$97                            | 5,622,951                     |
| Options granted                   | 140                             | 1,500,000                     | —                               | —                             | —                               | —                             |
| Options exercised                 | 91                              | (361,088)                     | 98                              | (1,214,109)                   | 97                              | (3,740,252)                   |
| Options canceled/expired          | 86                              | (4,763)                       | 100                             | (57,066)                      | 95                              | (131,750)                     |
| <b>Balance at December 31</b>     | <b>\$137</b>                    | <b>1,613,923</b>              | <b>\$ 94</b>                    | <b>479,774</b>                | <b>\$97</b>                     | <b>1,750,949</b>              |
| <b>Exercisable at December 31</b> | <b>\$103</b>                    | <b>113,923</b>                | <b>\$ 94</b>                    | <b>479,774</b>                | <b>\$97</b>                     | <b>1,750,949</b>              |

The shares under option at December 31, 2016 were in the following exercise price ranges:

|                             | Options Outstanding             |                               |                           |  |
|-----------------------------|---------------------------------|-------------------------------|---------------------------|--|
|                             | Weighted-Average Exercise Price | Number of Shares Under Option | Aggregate Intrinsic Value | Weighted-Average Remaining Contractual Life (in Years) |
| <b>Exercise Price Range</b> |                                 |                               |                           |  |
| \$128 and under             | \$103                           | 113,923                       | \$ 7,198,794              | 0.3  |
| \$129 – \$154               | 140                             | 1,500,000                     | 39,236,250                | 9.1  |
|                             | \$137                           | 1,613,923                     | \$46,435,044              | 8.5  |

|                             | Options Exercisable             |                               |                           |  |
|-----------------------------|---------------------------------|-------------------------------|---------------------------|--|
|                             | Weighted-Average Exercise Price | Number of Shares Under Option | Aggregate Intrinsic Value | Weighted-Average Remaining Contractual Life (in Years) |
| <b>Exercise Price Range</b> |                                 |                               |                           |  |
| \$128 and under             | \$103                           | 113,923                       | \$ 7,198,794              | 0.3  |

### Exercises of Employee Stock Options

The total intrinsic value of options exercised during the years ended December 31, 2016, 2015 and 2014 was \$20 million, \$74 million and \$323 million, respectively. The total cash received from employees as a result of employee stock option exercises for the years ended December 31, 2016, 2015 and 2014 was approximately \$33 million, \$119 million and \$364 million, respectively. In connection with these exercises, the tax benefits realized by the company for the years ended December 31, 2016, 2015 and 2014 were \$7 million, \$26 million and \$107 million, respectively.

The company settles employee stock option exercises primarily with newly issued common shares and, occasionally, with treasury shares. Total treasury shares held at December 31, 2016 and 2015 were approximately 1,279 million and 1,255 million shares, respectively.

**Acquisitions**

In connection with various acquisition transactions, there was an additional 0.6 million options outstanding at December 31, 2016, as a result of the company's conversion of stock-based awards previously granted by the acquired entities. The weighted-average exercise price of these awards was \$33 per share.

**IBM Employees Stock Purchase Plan**

The company maintains a non-compensatory Employees Stock Purchase Plan (ESPP). The ESPP enables eligible participants to purchase full or fractional shares of IBM common stock at a 5 percent discount off the average market price on the day of purchase through payroll deductions of up to 10 percent of eligible compensation. Eligible compensation includes any compensation received by the employee during the year. The ESPP provides for offering periods during which shares may be purchased and continues as long as shares remain available under the ESPP, unless terminated earlier at the discretion of the Board of Directors. Individual ESPP participants are restricted from purchasing more than \$25,000 of common stock in one calendar year or 1,000 shares in an offering period.

Employees purchased 1.2 million, 1.3 million and 1.3 million shares under the ESPP during the years ended December 31, 2016, 2015 and 2014, respectively. Cash dividends declared and paid by the company on its common stock also include cash dividends on the company stock purchased through the ESPP. Dividends are paid on full and fractional shares and can be reinvested. The company stock purchased through the ESPP is considered outstanding and is included in the weighted-average outstanding shares for purposes of computing basic and diluted earnings per share.

In July 2014, the "2014 ESPP Reserve" became effective and 25 million additional shares of authorized common stock were reserved and approved for issuance. The 2014 ESPP provides for semi-annual offerings commencing July 1, 2014, and continuing as long as shares remain available under the ESPP, unless terminated earlier at the discretion of the Board of Directors.

Approximately 21.8 million, 23.1 million and 24.4 million shares were available for purchase under the ESPP at December 31, 2016, 2015 and 2014, respectively.

**NOTE S. RETIREMENT-RELATED BENEFITS****Description of Plans**

IBM sponsors defined benefit pension plans and defined contribution plans that cover eligible regular employees, a supplemental retention plan that covers certain U.S. executives and nonpension postretirement benefit plans primarily consisting of retiree medical and dental benefits for eligible retirees and dependents.

**U.S. Plans****Defined Benefit Pension Plans****IBM Personal Pension Plan**

IBM provides U.S. regular, full-time and part-time employees hired prior to January 1, 2005 with noncontributory defined benefit pension benefits via the IBM Personal Pension Plan. Prior to 2008, the IBM Personal Pension Plan consisted of a tax qualified (qualified) plan and a non-tax qualified (nonqualified) plan. Effective January 1, 2008, the nonqualified plan was renamed the Excess Personal Pension Plan (Excess PPP) and the qualified plan is now referred to as the Qualified PPP. The combined plan is now referred to as the PPP. The Qualified PPP is funded by company contributions to an irrevocable trust fund, which is held for the sole benefit of participants and beneficiaries. The Excess PPP, which is unfunded, provides benefits in excess of IRS limitations for qualified plans.

Benefits provided to the PPP participants are calculated using benefit formulas that vary based on the participant. The first method uses a five-year, final pay formula that determines benefits based on salary, years of service, mortality and other participant-specific factors. The second method is a cash balance formula that calculates benefits using a percentage of employees' annual salary, as well as an interest crediting rate.

Benefit accruals under the IBM Personal Pension Plan ceased December 31, 2007 for all participants.

**U.S. Supplemental Executive Retention Plan**

The company also sponsors a nonqualified U.S. Supplemental Executive Retention Plan (Retention Plan). The Retention Plan, which is unfunded, provides benefits to eligible U.S. executives based on average earnings, years of service and age at termination of employment.

Benefit accruals under the Retention Plan ceased December 31, 2007 for all participants.

**Defined Contribution Plans****IBM 401(k) Plus Plan**

U.S. regular, full-time and part-time employees are eligible to participate in the IBM 401(k) Plus Plan, which is a qualified defined contribution plan under section 401(k) of the Internal Revenue Code. Under the IBM 401(k) Plus Plan, eligible employees receive a dollar-for-dollar match of their contributions generally up to 6 percent of eligible compensation for those hired prior to January 1, 2005, and, generally up to 5 percent of eligible compensation for those hired on or after January 1, 2005. In addition, eligible employees generally receive automatic contributions from the company equal to 1, 2 or 4 percent of eligible compensation based on their eligibility to participate in the PPP as of December 31, 2007. Employees generally receive automatic contributions and matching contributions after the completion of one year of service.

All contributions, including the company match, are made in cash and invested in accordance with participants' investment elections. There are no minimum amounts that must be invested in company stock, and there are no restrictions on transferring amounts out of company stock to another investment choice, other than excessive trading rules applicable to such investments. Matching and automatic contributions are made once annually at the end of the year. In order to receive such contributions each year, a participant must be employed on December 15 of the plan year. However, matching and automatic contributions can be made for certain types of separations that occur prior to December 15, including, for example, if the participant has completed certain service and/or age requirements at separation. The company's matching contributions vest immediately and participants are always fully vested in their own contributions.

#### IBM Excess 401(k) Plus Plan

The IBM Excess 401(k) Plus Plan (Excess 401(k)) is an unfunded, nonqualified defined contribution plan. Employees whose eligible compensation is expected to exceed the IRS compensation limit for qualified plans are eligible to participate in the Excess 401(k). The purpose of the Excess 401(k) is to provide benefits that would be provided under the qualified IBM 401(k) Plus Plan if the compensation limits did not apply.

Amounts deferred into the Excess 401(k) are record-keeping (notional) accounts and are not held in trust for the participants. Participants in the Excess 401(k) may invest their notional accounts in investments which mirror the primary investment options available under the 401(k) Plus Plan. Participants in the Excess 401(k) are also eligible to receive company match and automatic contributions (at the same rate as under the 401(k) Plus Plan) on eligible compensation deferred into the Excess 401(k) and on compensation earned in excess of the Internal Revenue Code pay limit once they have completed one year of service. Amounts deferred into the Excess 401(k), including company contributions are recorded as liabilities in the Consolidated Statement of Financial Position. Matching and automatic contributions are made once annually at the end of the year. In order to receive such contributions each year, a participant must be employed on December 15 of the plan year. However, matching and automatic contributions can be made for certain types of separations that occur prior to December 15, including, for example, if the participant has completed certain service and/or age requirements at separation.

#### Nonpension Postretirement Benefit Plan

##### U.S. Nonpension Postretirement Plan

The company sponsors a defined benefit nonpension postretirement benefit plan that provides medical and dental benefits to eligible U.S. retirees and eligible dependents, as well as life insurance for eligible U.S. retirees. Effective July 1, 1999, the company established a Future Health Account (FHA) for employees who were more than five years from retirement eligibility. Employees who were within five years of retirement eligibility are covered under the company's prior retiree health benefits arrangements. Under either the FHA or the prior retiree health benefit arrangements, there is a maximum cost to the company for retiree health benefits. Effective January 1, 2014, the company amended the plan to establish a Health Reimbursement Arrangement (HRA) for each Medicare-eligible plan retiree, surviving spouse and long-term disability plan participant who is eligible for company-subsidized coverage and who enrolls in an individual plan under the Medicare Exchange. The company also amended its life insurance plan. Employees retiring on or after January 1, 2015 are not eligible for life insurance.

Since January 1, 2004, new hires, as of that date or later, are not eligible for company-subsidized nonpension postretirement benefits.

#### Non-U.S. Plans

Certain subsidiaries and branches outside the United States sponsor defined benefit and/or defined contribution plans that cover eligible regular employees. The company deposits funds under various fiduciary-type arrangements, purchases annuities under group contracts or provides reserves for these plans. Benefits under the defined benefit plans are typically based either on years of service and the employee's compensation (generally during a fixed number of years immediately before retirement) or on annual credits. The range of assumptions that are used for the non-U.S. defined benefit plans reflect the different economic environments within the various countries.

In addition, certain of the company's non-U.S. subsidiaries sponsor nonpension postretirement benefit plans that provide medical and dental benefits to eligible non-U.S. retirees and eligible dependents, as well as life insurance for certain eligible non-U.S. retirees. However, most non-U.S. retirees are covered by local government sponsored and administered programs.

**Plan Financial Information****Summary of Financial Information**

The following table presents a summary of the total retirement-related benefits net periodic (income)/cost recorded in the Consolidated Statement of Earnings.

(\$ in millions)

| For the year ended December 31:                            | U.S. Plans      |                 |                 | Non-U.S. Plans  |                 |                 | Total           |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|  | 2016            | 2015            | 2014            | 2016            | 2015            | 2014            | 2016            | 2015            | 2014            |
| Defined benefit pension plans                              | <b>\$ (334)</b> | <b>\$ (284)</b> | <b>\$ (833)</b> | <b>\$ 1,039</b> | <b>\$ 1,421</b> | <b>\$ 1,267</b> | <b>\$ 705</b>   | <b>\$ 1,137</b> | <b>\$ 434</b>   |
| Retention Plan   | <b>17</b>       | <b>23</b>       | <b>15</b>       | <b>—</b>        | <b>—</b>        | <b>—</b>        | <b>17</b>       | <b>23</b>       | <b>15</b>       |
| Total defined benefit pension plans (income)/cost          | <b>\$ (317)</b> | <b>\$ (261)</b> | <b>\$ (818)</b> | <b>\$ 1,039</b> | <b>\$ 1,421</b> | <b>\$ 1,267</b> | <b>\$ 722</b>   | <b>\$ 1,160</b> | <b>\$ 449</b>   |
| IBM 401(k) Plus Plan and non-U.S. plans                    | <b>\$ 626</b>   | <b>\$ 676</b>   | <b>\$ 713</b>   | <b>\$ 420</b>   | <b>\$ 442</b>   | <b>\$ 526</b>   | <b>\$ 1,046</b> | <b>\$ 1,117</b> | <b>\$ 1,239</b> |
| Excess 401(k)  | <b>24</b>       | <b>21</b>       | <b>14</b>       | <b>—</b>        | <b>—</b>        | <b>—</b>        | <b>24</b>       | <b>21</b>       | <b>14</b>       |
| Total defined contribution plans cost                      | <b>\$ 650</b>   | <b>\$ 697</b>   | <b>\$ 727</b>   | <b>\$ 420</b>   | <b>\$ 442</b>   | <b>\$ 526</b>   | <b>\$ 1,070</b> | <b>\$ 1,138</b> | <b>\$ 1,253</b> |
| Nonpension postretirement benefit plans cost               | <b>\$ 195</b>   | <b>\$ 218</b>   | <b>\$ 206</b>   | <b>\$ 16</b>    | <b>\$ 55</b>    | <b>\$ 66</b>    | <b>\$ 211</b>   | <b>\$ 273</b>   | <b>\$ 272</b>   |
| <b>Total retirement-related benefits net periodic cost</b> | <b>\$ 527</b>   | <b>\$ 654</b>   | <b>\$ 115</b>   | <b>\$ 1,475</b> | <b>\$ 1,918</b> | <b>\$ 1,859</b> | <b>\$ 2,003</b> | <b>\$ 2,572</b> | <b>\$ 1,974</b> |

The following table presents a summary of the total PBO for defined benefit pension plans, APBO for nonpension postretirement benefit plans, fair value of plan assets and the associated funded status recorded in the Consolidated Statement of Financial Position.

(\$ in millions)

| At December 31:                            | Benefit Obligations |                  | Fair Value of Plan Assets |                  | Funded Status*     |                    |
|--|---------------------|------------------|---------------------------|------------------|--------------------|--------------------|
|  | 2016                | 2015             | 2016                      | 2015             | 2016               | 2015               |
| <b>U.S. Plans</b>                          |                     |                  |                           |                  |                    |                    |
| Overfunded plans                           |                     |                  |                           |                  |                    |                    |
| Qualified PPP                              | <b>\$ 50,403</b>    | <b>\$ 51,287</b> | <b>\$ 51,405</b>          | <b>\$ 51,716</b> | <b>\$ 1,002</b>    | <b>\$ 429</b>      |
| Underfunded plans                          |                     |                  |                           |                  |                    |                    |
| Excess PPP                                 | <b>\$ 1,509</b>     | <b>\$ 1,522</b>  | <b>\$ —</b>               | <b>\$ —</b>      | <b>\$ (1,509)</b>  | <b>\$ (1,522)</b>  |
| Retention Plan                             | <b>307</b>          | <b>312</b>       | <b>—</b>                  | <b>—</b>         | <b>(307)</b>       | <b>(312)</b>       |
| Nonpension postretirement benefit plan     | <b>4,470</b>        | <b>4,652</b>     | <b>26</b>                 | <b>71</b>        | <b>(4,444)</b>     | <b>(4,582)</b>     |
| Total underfunded U.S. plans               | <b>\$ 6,286</b>     | <b>\$ 6,486</b>  | <b>\$ 26</b>              | <b>\$ 71</b>     | <b>\$ (6,260)</b>  | <b>\$ (6,415)</b>  |
| <b>Non-U.S. Plans</b>                      |                     |                  |                           |                  |                    |                    |
| Overfunded plans                           |                     |                  |                           |                  |                    |                    |
| Qualified defined benefit pension plans    | <b>\$ 17,614</b>    | <b>\$ 16,766</b> | <b>\$ 19,647</b>          | <b>\$ 18,070</b> | <b>\$ 2,032</b>    | <b>\$ 1,304</b>    |
| Nonpension postretirement benefit plans    | <b>0</b>            | <b>0</b>         | <b>0</b>                  | <b>0</b>         | <b>0</b>           | <b>0</b>           |
| Total overfunded non-U.S. plans            | <b>\$ 17,614</b>    | <b>\$ 16,766</b> | <b>\$ 19,647</b>          | <b>\$ 18,070</b> | <b>\$ 2,032</b>    | <b>\$ 1,304</b>    |
| Underfunded plans                          |                     |                  |                           |                  |                    |                    |
| Qualified defined benefit pension plans    | <b>\$ 21,447</b>    | <b>\$ 22,039</b> | <b>\$ 16,374</b>          | <b>\$ 17,677</b> | <b>\$ (5,074)</b>  | <b>\$ (4,362)</b>  |
| Nonqualified defined benefit pension plans | <b>5,919</b>        | <b>5,911</b>     | <b>—</b>                  | <b>—</b>         | <b>(5,919)</b>     | <b>(5,911)</b>     |
| Nonpension postretirement benefit plans    | <b>692</b>          | <b>618</b>       | <b>71</b>                 | <b>59</b>        | <b>(622)</b>       | <b>(558)</b>       |
| Total underfunded non-U.S. plans           | <b>\$ 28,059</b>    | <b>\$ 28,568</b> | <b>\$ 16,445</b>          | <b>\$ 17,737</b> | <b>\$ (11,614)</b> | <b>\$ (10,832)</b> |
| <b>Total overfunded plans</b>              | <b>\$ 68,017</b>    | <b>\$ 68,053</b> | <b>\$ 71,051</b>          | <b>\$ 69,786</b> | <b>\$ 3,034</b>    | <b>\$ 1,734</b>    |
| <b>Total underfunded plans</b>             | <b>\$ 34,344</b>    | <b>\$ 35,054</b> | <b>\$ 16,470</b>          | <b>\$ 17,807</b> | <b>\$ (17,874)</b> | <b>\$ (17,247)</b> |

\* Funded status is recognized in the Consolidated Statement of Financial Position as follows: Asset amounts as prepaid pension assets; (Liability) amounts as compensation and benefits (current liability) and retirement and nonpension postretirement benefit obligations (noncurrent liability).

At December 31, 2016, the company's qualified defined benefit pension plans worldwide were 98 percent funded compared to the benefit obligations, with the U.S. Qualified PPP 102 percent funded. Overall, including nonqualified plans, the company's defined benefit pension plans worldwide were 90 percent funded.

**Defined Benefit Pension and Nonpension Postretirement Benefit Plan Financial Information**

The following tables to page 142 represent financial information for the company's retirement-related benefit plans, excluding

defined contribution plans. The defined benefit pension plans under U.S. Plans consists of the Qualified PPP, the Excess PPP and the Retention Plan. The defined benefit pension plans and the nonpension postretirement benefit plans under non-U.S. Plans consists of all plans sponsored by the company's subsidiaries. The nonpension postretirement benefit plan under U.S. Plan consists of only the U.S. Nonpension Postretirement Benefit Plan.

The tables below present the components of net periodic (income)/cost of the retirement-related benefit plans recognized in the Consolidated Statement of Earnings, excluding defined contribution plans.

(\$ in millions)

| For the year ended December 31:               | Defined Benefit Pension Plans |                 |                 |                 |                 |                 |
|---|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|   | U.S. Plans                    |                 |                 | Non-U.S. Plans  |                 |                 |
|   | 2016                          | 2015            | 2014            | 2016            | 2015            | 2014            |
| Service cost                                  | \$ —                          | \$ —            | \$ —            | \$ 420          | \$ 454          | \$ 449          |
| Interest cost                                 | 2,048                         | 2,028           | 2,211           | 1,035           | 1,075           | 1,533           |
| Expected return on plan assets                | (3,689)                       | (3,953)         | (4,096)         | (1,867)         | (1,919)         | (2,247)         |
| Amortization of transition assets             | —                             | —               | —               | 0               | 0               | 0               |
| Amortization of prior service costs/(credits) | 10                            | 10              | 10              | (106)           | (98)            | (111)           |
| Recognized actuarial losses                   | 1,314                         | 1,654           | 1,056           | 1,408           | 1,581           | 1,400           |
| Curtailments and settlements                  | —                             | —               | —               | 22              | 35              | 26              |
| Multi-employer plans/other costs*             | —                             | —               | —               | 126             | 293             | 217             |
| <b>Total net periodic (income)/cost</b>       | <b>\$ (317)</b>               | <b>\$ (261)</b> | <b>\$ (818)</b> | <b>\$ 1,039</b> | <b>\$ 1,421</b> | <b>\$ 1,267</b> |

(\$ in millions)

| For the year ended December 31:               | Nonpension Postretirement Benefit Plans |              |              |                |             |             |
|---|---|--------------|--------------|----------------|-------------|-------------|
|   | U.S. Plan                               |              |              | Non-U.S. Plans |             |             |
|   | 2016                                    | 2015         | 2014         | 2016           | 2015        | 2014        |
| Service cost                                  | \$ 17                                   | \$ 24        | \$ 26        | \$ 5           | \$ 7        | \$ 7        |
| Interest cost                                 | 165                                     | 163          | 187          | 51             | 50          | 63          |
| Expected return on plan assets                | 0                                       | 0            | 0            | (6)            | (7)         | (9)         |
| Amortization of transition assets             | —                                       | —            | —            | 0              | 0           | 0           |
| Amortization of prior service costs/(credits) | (7)                                     | (7)          | (7)          | (5)            | (5)         | (5)         |
| Recognized actuarial losses                   | 20                                      | 39           | 0            | 9              | 10          | 11          |
| Curtailments and settlements                  | —                                       | —            | —            | (38)           | 0           | 0           |
| <b>Total net periodic cost</b>                | <b>\$195</b>                            | <b>\$218</b> | <b>\$206</b> | <b>\$ 16</b>   | <b>\$55</b> | <b>\$66</b> |

\* The non-U.S. plans amount includes \$56 million, \$233 million and \$148 million related to the IBM Spain pension litigation for 2016, 2015 and 2014, respectively. See page 142 for additional information.

The following table presents the changes in benefit obligations and plan assets of the company's retirement-related benefit plans, excluding defined contribution plans.

(\$ in millions)

|   | Defined Benefit Pension Plans |                   |                   |                   | Nonpension Postretirement Benefit Plans |                  |                |                |
|---|-------------------------------|-------------------|-------------------|-------------------|---|------------------|----------------|----------------|
|   | U.S. Plans                    |                   | Non-U.S. Plans    |                   | U.S. Plan                               |                  | Non-U.S. Plans |                |
|   | 2016                          | 2015              | 2016              | 2015              | 2016                                    | 2015             | 2016           | 2015           |
| <b>Change in benefit obligation</b>             |                               |                   |                   |                   |   |                  |                |                |
| Benefit obligation at                           |                               |                   |                   |                   |   |                  |                |                |
| January 1                                       | \$53,120                      | \$56,643          | \$44,717          | \$49,834          | \$ 4,652                                | \$ 5,053         | \$ 618         | \$ 817         |
| Service cost                                    | —                             | —                 | 420               | 454               | 17                                      | 24               | 5              | 7              |
| Interest cost                                   | 2,048                         | 2,028             | 1,035             | 1,075             | 165                                     | 163              | 51             | 50             |
| Plan participants' contributions                | —                             | —                 | 30                | 34                | 50                                      | 52               | —              | —              |
| Acquisitions/divestitures, net                  | —                             | —                 | (63)              | 39                | 0                                       | (8)              | 0              | 0              |
| Actuarial losses/(gains)                        | 602                           | (1,920)           | 3,217             | (861)             | 16                                      | (204)            | 16             | (52)           |
| Benefits paid from trust                        | (3,430)                       | (3,514)           | (1,792)           | (1,784)           | (400)                                   | (406)            | (5)            | (5)            |
| Direct benefit payments                         | (123)                         | (117)             | (381)             | (402)             | (30)                                    | (23)             | (27)           | (26)           |
| Foreign exchange impact                         | —                             | —                 | (2,222)           | (3,907)           | —                                       | —                | 35             | (174)          |
| Medicare/Government subsidies                   | —                             | —                 | —                 | —                 | —                                       | 1                | —              | —              |
| Amendments/curtailments/ settlements/other      | —                             | —                 | 20                | 235               | —                                       | 0                | 0              | 0              |
| <b>Benefit obligation at December 31</b>        | <b>\$52,218</b>               | <b>\$53,120</b>   | <b>\$44,981</b>   | <b>\$44,717</b>   | <b>\$ 4,470</b>                         | <b>\$ 4,652</b>  | <b>\$ 692</b>  | <b>\$ 618</b>  |
| <b>Change in plan assets</b>                    |                               |                   |                   |                   |   |                  |                |                |
| Fair value of plan assets at                    |                               |                   |                   |                   |   |                  |                |                |
| January 1                                       | \$51,716                      | \$55,772          | \$35,748          | \$39,543          | \$ 71                                   | \$ 16            | \$ 59          | \$ 84          |
| Actual return on plan assets                    | 3,118                         | (542)             | 3,828             | 417               | 0                                       | 0                | 8              | 7              |
| Employer contributions                          | —                             | —                 | 464               | 474               | 305                                     | 409              | 0              | 0              |
| Acquisitions/divestitures, net                  | —                             | —                 | (73)              | 53                | 0                                       | 0                | 0              | 0              |
| Plan participants' contributions                | —                             | —                 | 30                | 34                | 50                                      | 52               | —              | —              |
| Benefits paid from trust                        | (3,430)                       | (3,514)           | (1,792)           | (1,784)           | (400)                                   | (406)            | (5)            | (5)            |
| Foreign exchange impact                         | —                             | —                 | (2,175)           | (3,004)           | —                                       | —                | 9              | (26)           |
| Amendments/curtailments/ settlements/other      | —                             | —                 | (10)*             | 14*               | —                                       | —                | 0              | (1)            |
| <b>Fair value of plan assets at December 31</b> | <b>\$51,405</b>               | <b>\$51,716</b>   | <b>\$36,020</b>   | <b>\$35,748</b>   | <b>\$ 26</b>                            | <b>\$ 71</b>     | <b>\$ 71</b>   | <b>\$ 59</b>   |
| <b>Funded status at December 31</b>             | <b>\$ (814)</b>               | <b>\$ (1,405)</b> | <b>\$ (8,960)</b> | <b>\$ (8,969)</b> | <b>\$(4,444)</b>                        | <b>\$(4,582)</b> | <b>\$(622)</b> | <b>\$(558)</b> |
| Accumulated benefit obligation**                | \$52,218                      | \$53,120          | \$44,514          | \$44,071          | N/A                                     | N/A              | N/A            | N/A            |

\* Includes the reinstatement of certain plan assets in Brazil due to government rulings in 2011 and 2013 allowing certain previously restricted plan assets to be returned to IBM. Return of assets to IBM over a three-year period began June 2011 and September 2013 respectively, with approximately \$23 million returned in 2016 and \$33 million returned during 2015. The remaining surplus in Brazil at December 31, 2016 is excluded from total plan assets due to continued restrictions imposed by the government on the use of those plan assets.

\*\*Represents the benefit obligation assuming no future participant compensation increases

N/A—Not applicable

The following table presents the net funded status recognized in the Consolidated Statement of Financial Position.

(\$ in millions)

| At December 31:   | Defined Benefit Pension Plans |                  |                   |                  | Nonpension Postretirement Benefit Plans |                  |                |                |
|---|-------------------------------|------------------|-------------------|------------------|---|------------------|----------------|----------------|
|   | U.S. Plans                    |                  | Non-U.S. Plans    |                  | U.S. Plan                               |                  | Non-U.S. Plans |                |
|   | 2016                          | 2015             | 2016              | 2015             | 2016                                    | 2015             | 2016           | 2015           |
| Prepaid pension assets  | \$ 1,002                      | \$ 429           | \$ 2,032          | \$ 1,304         | \$ 0                                    | \$ 0             | \$ 0           | \$ 0           |
| Current liabilities—compensation and benefits                                       | (118)                         | (116)            | (303)             | (297)            | (368)                                   | (320)            | (15)           | (11)           |
| Noncurrent liabilities—retirement and nonpension postretirement benefit obligations | (1,698)                       | (1,718)          | (10,689)          | (9,976)          | (4,076)                                 | (4,262)          | (607)          | (547)          |
| <b>Funded status—net</b>  | <b>\$ (814)</b>               | <b>\$(1,405)</b> | <b>\$ (8,960)</b> | <b>\$(8,969)</b> | <b>\$(4,444)</b>                        | <b>\$(4,582)</b> | <b>\$(622)</b> | <b>\$(558)</b> |

The following table presents the pre-tax net loss and prior service costs/(credits) and transition (assets)/liabilities recognized in OCI and the changes in the pre-tax net loss, prior service costs/(credits) and transition (assets)/liabilities recognized in AOCI for the retirement-related benefit plans.

(\$ in millions)

|  | Defined Benefit Pension Plans |                  |                  |                  | Nonpension Postretirement Benefit Plans |               |                |                |
|--|-------------------------------|------------------|------------------|------------------|---|---------------|----------------|----------------|
|  | U.S. Plans                    |                  | Non-U.S. Plans   |                  | U.S. Plan                               |               | Non-U.S. Plans |                |
|  | 2016                          | 2015             | 2016             | 2015             | 2016                                    | 2015          | 2016           | 2015           |
| Net loss at January 1  | \$ 19,363                     | \$ 18,442        | \$ 20,724        | \$ 21,676        | \$ 609                                  | \$ 852        | \$ 128         | \$ 189         |
| Current period loss/(gain)   | 1,173                         | 2,576            | 1,251            | 661              | 16                                      | (204)         | 14             | (51)           |
| Curtailments and settlements   | —                             | —                | (22)             | (33)             | —                                       | —             | 20             | 0              |
| Amortization of net loss included in net periodic (income)/cost                        | (1,314)                       | (1,654)          | (1,408)          | (1,581)          | (20)                                    | (39)          | (9)            | (10)           |
| <b>Net loss at December 31</b>   | <b>\$ 19,222</b>              | <b>\$ 19,363</b> | <b>\$ 20,544</b> | <b>\$ 20,724</b> | <b>\$ 605</b>                           | <b>\$ 609</b> | <b>\$ 154</b>  | <b>\$ 128</b>  |
| Prior service costs/(credits) at January 1   | \$ 101                        | \$ 110           | \$ (294)         | \$ (386)         | \$ 30                                   | \$ 23         | \$ (21)        | \$ (26)        |
| Current period prior service costs/(credits)   | —                             | —                | —                | (6)              | —                                       | —             | —              | 0              |
| Curtailments and Settlements   | —                             | —                | 0                | —                | —                                       | —             | 18             | —              |
| Amortization of prior service (costs)/credits included in net periodic (income)/cost   | (10)                          | (10)             | 106              | 98               | 7                                       | 7             | 5              | 5              |
| <b>Prior service costs/(credits) at December 31</b>                                    | <b>\$ 90</b>                  | <b>\$ 101</b>    | <b>\$ (188)</b>  | <b>\$ (294)</b>  | <b>\$ 37</b>                            | <b>\$ 30</b>  | <b>\$ 1</b>    | <b>\$ (21)</b> |
| Transition (assets)/liabilities at January 1   | \$ —                          | \$ —             | \$ 0             | \$ 0             | \$ —                                    | \$ —          | \$ 0           | \$ 0           |
| Amortization of transition assets/(liabilities) included in net periodic (income)/cost | —                             | —                | 0                | 0                | —                                       | —             | 0              | 0              |
| <b>Transition (assets)/liabilities at December 31</b>                                  | <b>\$ —</b>                   | <b>\$ —</b>      | <b>\$ 0</b>      | <b>\$ 0</b>      | <b>\$ —</b>                             | <b>\$ —</b>   | <b>\$ 0</b>    | <b>\$ 0</b>    |
| <b>Total loss recognized in accumulated other comprehensive income/(loss)*</b>         | <b>\$ 19,313</b>              | <b>\$ 19,464</b> | <b>\$ 20,356</b> | <b>\$ 20,429</b> | <b>\$ 642</b>                           | <b>\$ 639</b> | <b>\$ 154</b>  | <b>\$ 106</b>  |

\* See note L, "Equity Activity," for the total change in AOCI, and the Consolidated Statement of Comprehensive Income for the components of net periodic (income)/cost, including the related tax effects, recognized in OCI for the retirement-related benefit plans.

The following table presents the pre-tax estimated net loss, estimated prior service costs/(credits) and estimated transition (assets)/liabilities of the retirement-related benefit plans that will be amortized from AOCI into net periodic (income)/cost in 2017.

(\$ in millions)

|                                 | Defined Benefit Pension Plans |                | Nonpension Postretirement Benefit Plans |                |
|---------------------------------|-------------------------------|----------------|---|----------------|
|                                 | U.S. Plans                    | Non-U.S. Plans | U.S. Plan                               | Non-U.S. Plans |
| Net loss                        | \$1,348                       | \$1,434        | \$21                                    | \$6            |
| Prior service costs/(credits)   | 16                            | (93)           | (7)                                     | 0              |
| Transition (assets)/liabilities | —                             | 0              | —                                       | 0              |

On March 24, 2014, the Supreme Court of Spain issued a ruling against IBM Spain in litigation involving its defined benefit and defined contribution plans. During the fourth quarter of 2016, an arbitration ruling related to the defined contribution plan resulted in an additional charge of \$56 million. For the years ended December 31, 2016, 2015 and 2014, the company recorded pre-tax retirement-related obligations of \$56 million, \$233 million and \$148 million, respectively, in selling, general and administrative expense in the Consolidated Statement of Earnings. These obligations are reflected in “Non-U.S. Plans—Multi-employer plans/other costs” in the table on page 139.

**Assumptions Used to Determine Plan Financial Information**  
Underlying both the measurement of benefit obligations and net periodic (income)/cost are actuarial valuations. These valuations use participant-specific information such as salary, age and years of service, as well as certain assumptions, the most significant of which include estimates of discount rates, expected return on plan assets, rate of compensation increases, interest crediting rates and mortality rates. The company evaluates these assumptions, at a minimum, annually, and makes changes as necessary.

The table below presents the assumptions used to measure the net periodic (income)/cost and the year-end benefit obligations for retirement-related benefit plans.

|   | Defined Benefit Pension Plans |       |       |                |       |       |
|---|-------------------------------|-------|-------|----------------|-------|-------|
|   | U.S. Plans                    |       |       | Non-U.S. Plans |       |       |
|   | 2016                          | 2015  | 2014  | 2016           | 2015  | 2014  |
| <b>Weighted-average assumptions used to measure net periodic (income)/cost for the year ended December 31</b> |                               |       |       |                |       |       |
| Discount rate   | 4.00%                         | 3.70% | 4.50% | 2.40%          | 2.34% | 3.32% |
| Expected long-term returns on plan assets   | 7.00%                         | 7.50% | 8.00% | 5.53%          | 5.67% | 6.08% |
| Rate of compensation increase   | N/A                           | N/A   | N/A   | 2.40%          | 2.49% | 2.52% |
| <b>Weighted-average assumptions used to measure benefit obligations at December 31</b>                        |                               |       |       |                |       |       |
| Discount rate   | 3.80%                         | 4.00% | 3.70% | 1.80%          | 2.40% | 2.34% |
| Rate of compensation increase   | N/A                           | N/A   | N/A   | 2.45%          | 2.40% | 2.49% |

N/A—Not applicable

|  | Nonpension Postretirement Benefit Plans |       |       |                |        |        |
|--|---|-------|-------|----------------|--------|--------|
|  | U.S. Plan                               |       |       | Non-U.S. Plans |        |        |
|  | 2016                                    | 2015  | 2014  | 2016           | 2015   | 2014   |
| <b>Weighted-average assumptions used to measure net periodic cost for the year ended December 31</b> |   |       |       |                |        |        |
| Discount rate  | 3.70%                                   | 3.40% | 4.10% | 7.06%          | 7.51%  | 7.78%  |
| Expected long-term returns on plan assets  | N/A                                     | N/A   | N/A   | 9.95%          | 10.17% | 10.22% |
| <b>Weighted-average assumptions used to measure benefit obligations at December 31</b>               |   |       |       |                |        |        |
| Discount rate  | 3.60%                                   | 3.70% | 3.40% | 8.26%          | 7.06%  | 7.51%  |

N/A—Not applicable

#### **Discount Rate**

The discount rate assumptions used for retirement-related benefit plans accounting reflect the yields available on high-quality, fixed-income debt instruments at the measurement date. For the U.S. and certain non-U.S. countries, a portfolio of high-quality corporate bonds is used to construct a yield curve. The cash flows from the company's expected benefit obligation payments are then matched to the yield curve to derive the discount rates. In other non-U.S. countries, where the markets for high-quality long-term bonds are not generally as well developed, a portfolio of long-term government bonds is used as a base, to which a credit spread is added to simulate corporate bond yields at these maturities in the jurisdiction of each plan, as the benchmark for developing the respective discount rates.

For the U.S. defined benefit pension plans, the changes in the discount rate assumptions impacted the net periodic (income)/cost and the PBO. The changes in the discount rate assumptions resulted in an increase in 2016 net periodic income of \$103 million, a decrease in 2015 net periodic income of \$286 million and an increase in 2014 net periodic income of \$275 million. The changes in the discount rate assumptions resulted in an increase in the PBO of \$998 million and a decrease of \$1,621 million at December 31, 2016 and 2015, respectively.

For the U.S. nonpension postretirement benefit plans, the changes in the discount rate assumptions had no material impact on net periodic cost for the years ended December 31, 2016, 2015 and 2014, and resulted in an increase in the APBO of \$33 million and a decrease of \$109 million at December 31, 2016 and 2015, respectively.

For all of the company's retirement-related benefit plans, the change in the discount rate assumptions resulted in an increase in the benefit obligation of approximately \$4.8 billion at December 31, 2016 and a decrease of approximately \$2.4 billion at December 31, 2015.

#### **Expected Long-Term Returns on Plan Assets**

Expected returns on plan assets, a component of net periodic (income)/cost, represent the expected long-term returns on plan assets based on the calculated market-related value of plan assets. Expected long-term returns on plan assets take into account long-term expectations for future returns and the investment policies and strategies as described on page 144. These rates of return are developed by the company and are tested for reasonableness against historical returns. The use of expected long-term returns on plan assets may result in recognized pension income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns, and therefore result in a pattern of income and cost recognition that more closely matches the pattern of the services provided by the employees. Differences between actual and expected returns are recognized as a component of net loss or gain in AOCI, which is amortized as a component of net periodic (income)/cost over the service lives or life expectancy of the plan participants, depending on the plan, provided such amounts exceed certain thresholds provided by accounting standards. The market-related value of plan assets recognizes changes in the fair value of plan assets systematically over a five-year period in the expected return on plan assets line in net periodic (income)/cost.

For the U.S. defined benefit pension plan, the expected long-term rate of return on plan assets for the years ended December 31, 2016, 2015 and 2014 was 7.0 percent, 7.5 percent and 8 percent, respectively. The change in the rate in 2016 resulted in a decrease in 2016 net periodic income of \$268 million. For the year ended December 31, 2015, the change in the rate resulted in a decrease in net periodic income of \$264 million. There was no impact on net periodic income for the year ended December 31, 2014 as the rate was flat at 8 percent compared to the prior year. For 2017, the projected long-term rate of return on plan assets is 5.75 percent. The 125 basis point year-to-year decline is primarily driven by a change in investment strategy.

For the U.S. nonpension postretirement benefit plans, the company maintains a highly liquid trust fund balance to ensure timely payments are made. As a result, for the years ended December 31, 2016, 2015 and 2014, the expected long-term return on plan assets and the actual return on those assets were not material.

#### **Rate of Compensation Increases and Mortality Rate**

The rate of compensation increases is determined by the company, based upon its long-term plans for such increases. The rate of compensation increase is not applicable to the U.S. defined benefit pension plans as benefit accruals ceased December 31, 2007 for all participants. Mortality rate assumptions are based on life expectancy and death rates for different types of participants. Mortality rates are periodically updated based on actual experience. In the U.S., the Society of Actuaries released new mortality tables in 2014 and updated them in 2015 and 2016. The company utilized these tables in its plan remeasurements at December 31, 2016 and 2015. For the U.S. retirement-related plans, the change in mortality assumptions resulted in a decrease to the plan benefit obligations of \$0.6 billion and a decrease of \$0.7 billion at December 31, 2016 and 2015, respectively.

#### **Interest Crediting Rate**

Benefits for certain participants in the PPP are calculated using a cash balance formula. An assumption underlying this formula is an interest crediting rate, which impacts both net periodic (income)/cost and the PBO. This assumption provides a basis for projecting the expected interest rate that participants will earn on the benefits that they are expected to receive in the following year and is based on the average from August to October of the one-year U.S. Treasury Constant Maturity yield plus one percent.

For the PPP, the change in the interest crediting rate to 1.3 percent for the year ended December 31, 2016 from 1.1 percent for the year ended December 31, 2015 resulted in a decrease in 2016 net periodic income of \$7 million. The interest crediting rate of 1.1 percent for the year ended December 31, 2015, was unchanged from December 31, 2014 and therefore, had no impact on the decrease in 2015 net periodic income. The change in the interest crediting rate to 1.1 percent for the year ended December 31, 2014, from 1.2 percent for the year ended December 31, 2013, resulted in an increase in 2014 net periodic income of \$8 million.

**Healthcare Cost Trend Rate**

For nonpension postretirement benefit plan accounting, the company reviews external data and its own historical trends for healthcare costs to determine the healthcare cost trend rates. However, the healthcare cost trend rate has an insignificant effect on plan costs and obligations as a result of the terms of the plan which limit the company's obligation to the participants. The company assumes that the healthcare cost trend rate for 2017 will be 6.75 percent. In addition, the company assumes that the same trend rate will decrease to 5 percent over the next seven years. A one percentage point increase or decrease in the assumed healthcare cost trend rate would not have had a material effect on 2016, 2015 and 2014 net periodic cost or the benefit obligations as of December 31, 2016 and 2015.

**Plan Assets**

Retirement-related benefit plan assets are recognized and measured at fair value. Because of the inherent uncertainty of valuations, these fair value measurements may not necessarily reflect the amounts the company could realize in current market transactions.

**Investment Policies and Strategies**

The investment objectives of the Qualified PPP portfolio are designed to generate returns that will enable the plan to meet its future obligations. The precise amount for which these obligations will be settled depends on future events, including the retirement dates and life expectancy of the plans' participants. The obligations are estimated using actuarial assumptions, based on the current economic environment and other pertinent factors described on pages 142 through 143. The Qualified PPP portfolio's investment strategy balances the requirement to generate returns, using potentially higher yielding assets such as equity securities, with the need to control risk in the portfolio with less volatile assets, such as fixed-income securities. Risks include, among others, inflation, volatility in equity values and changes in interest rates that could cause the plan to become underfunded, thereby increasing its dependence on contributions from the company. To mitigate any potential concentration risk, careful consideration is given to balancing the portfolio among industry sectors, companies and geographies, taking into account interest rate sensitivity, dependence on economic growth, currency and other factors that affect investment returns. In 2016, the company changed its investment strategy, modifying the target asset allocation, primarily by reducing equity securities and increasing debt securities. This change was designed to reduce the potential negative impact that equity markets might have on the funded status of the plan. The Qualified PPP portfolio's target allocation is 70 percent fixed-income securities, 20 percent equity securities, 5 percent real estate and 5 percent other investments.

The assets are managed by professional investment firms and investment professionals who are employees of the company. They are bound by investment mandates determined by the company's management and are measured against specific benchmarks. Among these managers, consideration is given, but not limited to, balancing security concentration, issuer concentration, investment style and reliance on particular active and passive investment strategies.

Market liquidity risks are tightly controlled, with \$5,010 million of the Qualified PPP portfolio as of December 31, 2016 invested in private market assets consisting of private equities and private real estate investments, which are less liquid than publicly traded securities. In addition, the Qualified PPP portfolio had \$2,142 million in commitments for future investments in private markets to be made over a number of years. These commitments are expected to be funded from plan assets.

Derivatives are used as an effective means to achieve investment objectives and/or as a component of the plan's risk management strategy. The primary reasons for the use of derivatives are fixed income management, including duration, interest rate management and credit exposure, cash equitization and to manage currency and commodity strategies.

Outside the U.S., the investment objectives are similar to those described above, subject to local regulations. The weighted-average target allocation for the non-U.S. plans is 25 percent equity securities, 60 percent fixed-income securities, 3 percent real estate and 12 percent other investments, which is consistent with the allocation decisions made by the company's management. In some countries, a higher percentage allocation to fixed income is required to manage solvency and funding risks. In others, the responsibility for managing the investments typically lies with a board that may include up to 50 percent of members elected by employees and retirees. This can result in slight differences compared with the strategies previously described. Generally, these non-U.S. plans do not invest in illiquid assets and their use of derivatives is consistent with the U.S. plan and mainly for currency hedging, interest rate risk management, credit exposure and alternative investment strategies.

The company's nonpension postretirement benefit plans are underfunded or unfunded. For some plans, the company maintains a nominal, highly liquid trust fund balance to ensure timely benefit payments.

**Defined Benefit Pension Plan Assets**

The following table presents the company's defined benefit pension plans' asset classes and their associated fair value at December 31, 2016. The U.S. Plan consists of the Qualified PPP and the non-U.S. Plans consist of all plans sponsored by the company's subsidiaries.

(\$ in millions)

|  | U.S. Plan      |                 |              |                 | Non-U.S. Plans |                 |              |                 |
|--|----------------|-----------------|--------------|-----------------|----------------|-----------------|--------------|-----------------|
|  | Level 1        | Level 2         | Level 3      | Total           | Level 1        | Level 2         | Level 3      | Total           |
| <b>Equity</b>  |                |                 |              |                 |                |                 |              |                 |
| Equity securities <sup>(1)</sup>   | \$5,778        | \$ 1            | \$ —         | \$ 5,779        | \$4,080        | \$ 0            | \$ —         | \$ 4,080        |
| Equity mutual funds <sup>(2)</sup>   | 93             | —               | —            | 93              | 35             | —               | —            | 35              |
| <b>Fixed income</b>  |                |                 |              |                 |                |                 |              |                 |
| Government and related <sup>(3)</sup>  | —              | 14,897          | —            | 14,897          | —              | 7,577           | 16           | 7,593           |
| Corporate bonds <sup>(4)</sup>   | —              | 18,063          | 101          | 18,164          | —              | 2,045           | 1            | 2,045           |
| Mortgage and asset-backed securities   | —              | 652             | 5            | 656             | —              | 4               | —            | 4               |
| Fixed-income mutual funds <sup>(5)</sup>   | 359            | —               | —            | 359             | 22             | —               | —            | 22              |
| Insurance contracts  | —              | —               | —            | —               | —              | 1,137           | —            | 1,137           |
| Cash and short-term investments <sup>(6)</sup>   | 55             | 1,927           | —            | 1,982           | 294            | 707             | —            | 1,001           |
| Real estate  | —              | —               | —            | —               | —              | —               | 294          | 294             |
| Derivatives <sup>(7)</sup>   | 18             | 20              | —            | 38              | 43             | 752             | —            | 796             |
| Other mutual funds <sup>(8)</sup>  | —              | —               | —            | —               | 114            | —               | —            | 114             |
| <b>Subtotal</b>  | <b>6,303</b>   | <b>35,560</b>   | <b>106</b>   | <b>41,969</b>   | <b>4,589</b>   | <b>12,223</b>   | <b>310</b>   | <b>17,122</b>   |
| Investments measured at net asset value using the NAV practical expedient <sup>(9)</sup> |                |                 |              |                 |                |                 |              |                 |
| —  | —              | —               | —            | 9,641           | —              | —               | —            | 18,946          |
| Other <sup>(10)</sup>  | —              | —               | —            | (205)           | —              | —               | —            | (48)            |
| <b>Fair value of plan assets</b>   | <b>\$6,303</b> | <b>\$35,560</b> | <b>\$106</b> | <b>\$51,405</b> | <b>\$4,589</b> | <b>\$12,223</b> | <b>\$310</b> | <b>\$36,020</b> |

<sup>(1)</sup> Represents U.S. and international securities. The U.S. Plan includes IBM common stock of \$28 million, representing 0.1 percent of the U.S. Plan assets. Non-U.S. Plans include IBM common stock of \$15 million, representing 0.04 percent of the non-U.S. Plans assets.

<sup>(2)</sup> Invests in predominantly equity securities

<sup>(3)</sup> Includes debt issued by national, state and local governments and agencies

<sup>(4)</sup> The U.S. Plan includes IBM corporate bonds of \$4 million, representing 0.01 percent of the U.S. Plan assets. Non-U.S. plans include IBM corporate bonds of \$1 million representing 0.003 percent of the non-U.S. Plan assets.

<sup>(5)</sup> Invests predominantly in fixed-income securities

<sup>(6)</sup> Includes cash, cash equivalents and short-term marketable securities

<sup>(7)</sup> Includes interest rate derivatives, forwards, exchange traded and other over-the-counter derivatives

<sup>(8)</sup> Invests in both equity and fixed-income securities

<sup>(9)</sup> Investments measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient, including commingled funds, hedge funds, private equity and real estate partnerships

<sup>(10)</sup> Represents net unsettled transactions, relating primarily to purchases and sales of plan assets

The U.S. nonpension postretirement benefit plan assets of \$26 million were invested in cash, categorized as Level 1 in the fair value hierarchy. The non-U.S. nonpension postretirement benefit plan assets of \$71 million, primarily in Brazil, and, to a lesser extent, in Mexico and South Africa, were invested primarily in government and related fixed-income securities and corporate bonds, categorized as Level 2 in the fair value hierarchy.

The following table presents the company's defined benefit pension plans' asset classes and their associated fair value at December 31, 2015. The U.S. Plan consists of the Qualified PPP and the non-U.S. Plans consist of all plans sponsored by the company's subsidiaries. In the following table, some Level 2 and Level 3 assets have been reclassified to reflect the FASB guidance removing investments using NAV as a practical expedient from the fair value hierarchy. The December 31, 2015 Level 3 reconciliation tables have also been reclassified to reflect this change. Refer to note B, "Accounting Changes," for additional information.

(\$ in millions)

|  | U.S. Plan       |                 |             |                 | Non-U.S. Plans |                 |              |                 | Total |
|--|-----------------|-----------------|-------------|-----------------|----------------|-----------------|--------------|-----------------|-------|
|  | Level 1         | Level 2         | Level 3     | Total           | Level 1        | Level 2         | Level 3      | Total           |       |
| <b>Equity</b>  |                 |                 |             |                 |                |                 |              |                 |       |
| Equity securities <sup>(1)</sup>   | \$11,210        | \$ 1            | \$ —        | \$11,211        | \$4,631        | \$ 0            | \$ —         | \$ 4,631        |       |
| Equity mutual funds <sup>(2)</sup>   | 99              | —               | —           | 99              | 90             | —               | —            | 90              |       |
| <b>Fixed income</b>  |                 |                 |             |                 |                |                 |              |                 |       |
| Government and related <sup>(3)</sup>  | —               | 9,854           | —           | 9,854           | —              | 7,482           | 16           | 7,499           |       |
| Corporate bonds <sup>(4)</sup>   | —               | 17,088          | 2           | 17,090          | —              | 1,896           | 4            | 1,899           |       |
| Mortgage and asset-backed securities   | —               | 633             | 10          | 643             | —              | 6               | —            | 6               |       |
| Fixed-income mutual funds <sup>(5)</sup>   | 313             | —               | —           | 313             | 38             | —               | —            | 38              |       |
| Insurance contracts  | —               | —               | —           | —               | —              | 1,079           | —            | 1,079           |       |
| Cash and short-term investments <sup>(6)</sup>   | 244             | 2,305           | —           | 2,549           | 142            | 422             | —            | 564             |       |
| Real estate  | —               | —               | —           | —               | —              | —               | —            | 411             | 411   |
| Derivatives <sup>(7)</sup>   | (82)            | 2               | —           | (80)            | (1)            | 481             | —            | 480             |       |
| Other mutual funds <sup>(8)</sup>  | —               | —               | —           | —               | 115            | —               | —            | 115             |       |
| <b>Subtotal</b>  | <b>11,784</b>   | <b>29,884</b>   | <b>12</b>   | <b>41,680</b>   | <b>5,016</b>   | <b>11,366</b>   | <b>431</b>   | <b>16,812</b>   |       |
| Investments measured at net asset value using the NAV practical expedient <sup>(9)</sup> |                 |                 |             |                 |                |                 |              |                 |       |
| —  | —               | —               | —           | 10,179          | —              | —               | —            | 18,986          |       |
| Other <sup>(10)</sup>  | —               | —               | —           | (143)           | —              | —               | —            | (50)            |       |
| <b>Fair value of plan assets</b>   | <b>\$11,784</b> | <b>\$29,884</b> | <b>\$12</b> | <b>\$51,716</b> | <b>\$5,016</b> | <b>\$11,366</b> | <b>\$431</b> | <b>\$35,748</b> |       |

<sup>(1)</sup> Represents U.S. and international securities. The U.S. Plan includes IBM common stock of \$34 million, representing 0.1 percent of the U.S. Plan assets. Non-U.S. Plans include IBM common stock of \$14 million, representing 0.04 percent of the non-U.S. Plans assets.

<sup>(2)</sup> Invests in predominantly equity securities

<sup>(3)</sup> Includes debt issued by national, state and local governments and agencies

<sup>(4)</sup> The U.S. Plan includes IBM corporate bonds of \$23 million, representing 0.04 percent of the U.S. Plan assets. Non-U.S. plans include IBM corporate bonds of \$1 million representing 0.004 percent of the non-U.S. Plan assets.

<sup>(5)</sup> Invests in predominantly fixed-income securities

<sup>(6)</sup> Includes cash and cash equivalents and short-term marketable securities

<sup>(7)</sup> Includes interest rate derivatives, forwards, exchange traded and other over-the-counter derivatives

<sup>(8)</sup> Invests in both equity and fixed-income securities

<sup>(9)</sup> Investments measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient, including commingled funds, hedge funds, private equity and real estate partnerships

<sup>(10)</sup>Represents net unsettled transactions, relating primarily to purchases and sales of plan assets

The U.S. nonpension postretirement benefit plan assets of \$71 million were invested in cash, categorized as Level 1 in the fair value hierarchy. The non-U.S. nonpension postretirement benefit plan assets of \$59 million, primarily in Brazil, and, to a

lesser extent, in Mexico and South Africa, were invested primarily in government and related fixed-income securities and corporate bonds, categorized as Level 2 in the fair value hierarchy.

The following tables present the reconciliation of the beginning and ending balances of Level 3 assets for the years ended December 31, 2016 and 2015 for the U.S. Plan.

(\$ in millions)

|                                       | Corporate Bonds | Mortgage and Asset-Backed Securities | Total        |
|---------------------------------------|-----------------|--------------------------------------|--------------|
| Balance at January 1, 2016            | \$ 2            | \$10                                 | \$ 12        |
| Return on assets held at end of year  | (3)             | 0                                    | (2)          |
| Return on assets sold during the year | 0               | 1                                    | 1            |
| Purchases, sales and settlements, net | 103             | (5)                                  | 99           |
| Transfers, net                        | (2)             | (2)                                  | (3)          |
| <b>Balance at December 31, 2016</b>   | <b>\$101</b>    | <b>\$ 5</b>                          | <b>\$106</b> |

(\$ in millions)

|                                       | Corporate Bonds | Mortgage and Asset-Backed Securities | Total       |
|---------------------------------------|-----------------|--------------------------------------|-------------|
| Balance at January 1, 2015            | \$ 4            | \$20                                 | \$24        |
| Return on assets held at end of year  | 0               | 0                                    | 0           |
| Return on assets sold during the year | 1               | 0                                    | 1           |
| Purchases, sales and settlements, net | (5)             | (2)                                  | (7)         |
| Transfers, net                        | 2               | (8)                                  | (6)         |
| <b>Balance at December 31, 2015</b>   | <b>\$ 2</b>     | <b>\$10</b>                          | <b>\$12</b> |

The following tables present the reconciliation of the beginning and ending balances of Level 3 assets for the years ended December 31, 2016 and 2015 for the non-U.S. Plans.

(\$ in millions)

|                                       | Government and Related | Corporate Bonds | Real Estate  | Total        |
|---------------------------------------|------------------------|-----------------|--------------|--------------|
| Balance at January 1, 2016            | \$16                   | \$ 4            | \$411        | \$431        |
| Return on assets held at end of year  | 1                      | 0               | (22)         | (21)         |
| Return on assets sold during the year | 0                      | 0               | 35           | 35           |
| Purchases, sales and settlements, net | 0                      | (3)             | (68)         | (72)         |
| Transfers, net                        | 0                      | —               | —            | 0            |
| Foreign exchange impact               | 0                      | 0               | (62)         | (63)         |
| <b>Balance at December 31, 2016</b>   | <b>\$16</b>            | <b>\$ 1</b>     | <b>\$294</b> | <b>\$310</b> |

(\$ in millions)

|                                       | <b>Government<br/>and Related</b> | <b>Corporate<br/>Bonds</b> | <b>Real Estate</b> | <b>Total</b> |
|---------------------------------------|-----------------------------------|----------------------------|--------------------|--------------|
| <b>Balance at January 1, 2015</b>     | \$ 32                             | \$1                        | \$411              | \$444        |
| Return on assets held at end of year  | (2)                               | 0                          | 28                 | 26           |
| Return on assets sold during the year | 0                                 | 0                          | 42                 | 42           |
| Purchases, sales and settlements, net | (10)                              | 3                          | (51)               | (58)         |
| Transfers, net                        | —                                 | —                          | —                  | —            |
| Foreign exchange impact               | (3)                               | 0                          | (20)               | (23)         |
| <b>Balance at December 31, 2015</b>   | <b>\$ 16</b>                      | <b>\$4</b>                 | <b>\$411</b>       | <b>\$431</b> |

**Valuation Techniques**

The following is a description of the valuation techniques used to measure plan assets at fair value. There were no changes in valuation techniques during 2016 and 2015.

Equity securities are valued at the closing price reported on the stock exchange on which the individual securities are traded. IBM common stock is valued at the closing price reported on the New York Stock Exchange. Mutual funds are typically valued based on quoted market prices. These assets are generally classified as Level 1.

The fair value of fixed-income securities is typically estimated using pricing models, quoted prices of securities with similar characteristics or discounted cash flows and are generally classified as Level 2. If available, they are valued using the closing price reported on the major market on which the individual securities are traded.

Cash includes money market accounts that are valued at their cost plus interest on a daily basis, which approximates fair value. Short-term investments represent securities with original maturities of one year or less. These assets are classified as Level 1 or Level 2.

Real estate valuations require significant judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. These assets are initially valued at cost and are reviewed periodically utilizing available and relevant market data, including appraisals, to determine if the carrying value of these assets should be adjusted. These assets are classified as Level 3.

Exchange traded derivatives are valued at the closing price reported on the exchange on which the individual securities are traded, while forward contracts are valued using a mid-close price. Over-the-counter derivatives are typically valued using pricing models. The models require a variety of inputs, including, for example, yield curves, credit curves, measures of volatility and foreign exchange rates. These assets are classified as Level 1 or Level 2 depending on availability of quoted market prices.

Certain investments are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient. These investments, which include commingled funds, hedge funds, private equity and real estate partnerships, are typically valued using the net asset value (NAV) provided by the administrator of the fund and reviewed by the company. The NAV is based on the value of the underlying assets owned by the fund, minus liabilities and divided by the number of shares or units outstanding. In accordance with FASB guidance, these investments have not been classified in the fair value hierarchy. Refer to note B, "Accounting Changes."

**Contributions****Defined Benefit Pension Plans**

It is the company's general practice to fund amounts for pensions sufficient to meet the minimum requirements set forth in applicable employee benefits laws and local tax laws. From time to time, the company contributes additional amounts as it deems appropriate.

The company contributed \$169 million in cash and \$295 million in U.S. Treasury Securities to non-U.S. defined benefit pension plans as well as \$43 million in cash to multi-employer plans for the year ended December 31, 2016. The contribution of U.S. Treasury securities is considered a non-cash transaction in the Consolidated Statement of Cash Flows. For the year ended December 31, 2015, the company contributed \$474 million in cash to non-U.S. defined benefit pension plans and \$40 million in cash to multi-employer plans. The cash contributions to multi-employer plans represent the annual cost included in net periodic (income)/cost recognized in the Consolidated Statement of Earnings. The company's participation in multi-employer plans has no material impact on the company's financial statements.

In 2017, the company is not legally required to make any contributions to the U.S. defined benefit pension plans. However, depending on market conditions, or other factors, the company may elect to make discretionary contributions to the Qualified PPP during the year.

The Pension Protection Act of 2006 (the Act), enacted into law in 2006, is a comprehensive reform package that, among other provisions, increases pension funding requirements for certain U.S. defined benefit plans, provides guidelines for measuring pension plan assets and pension obligations for funding purposes and raises tax deduction limits for contributions to retirement-related benefit plans. The additional funding requirements by the Act apply to plan years beginning after December 31, 2007. The Act was updated by the Worker, Retiree and Employer Recovery Act of 2008, which revised the funding requirements in the Act by clarifying that pension plans may smooth the value of pension plans over 24 months. At December 31, 2016, no mandatory contribution was required for 2017.

In 2017, the company estimates contributions to its non-U.S. defined benefit and multi-employer plans to be approximately \$500 million, the largest of which will be contributed to defined benefit pension plans in the UK, Japan and Spain. This amount represents the legally mandated minimum contributions.

Financial market performance in 2017 could increase the legally mandated minimum contribution in certain countries which require monthly or daily remeasurement of the funded status. The company could also elect to contribute more than the legally mandated amount based on market conditions or other factors.

#### Defined Contribution Plans

The company contributed \$1,046 million and \$1,117 million in cash to the defined contribution plans during the years ended December 31, 2016 and 2015, respectively. In 2017, the company estimates cash contributions to the defined contribution plans to be approximately \$1.0 billion.

#### Nonpension Postretirement Benefit Plans

The company contributed \$305 million and \$408 million to the nonpension postretirement benefit plans during the years ended

December 31, 2016 and 2015, respectively. The \$305 million contribution in 2016 consisted of \$80 million in cash and \$225 million in U.S. Treasury securities. The \$408 million contribution in 2015 consisted of \$328 million in cash and \$80 million in U.S. Treasury securities. The contribution of U.S. Treasury securities is considered a non-cash transaction in the Consolidated Statement of Cash Flows.

#### Expected Benefit Payments

##### Defined Benefit Pension Plan Expected Payments

The following table presents the total expected benefit payments to defined benefit pension plan participants. These payments have been estimated based on the same assumptions used to measure the plans' PBO at December 31, 2016 and include benefits attributable to estimated future compensation increases, where applicable.

(\$ in millions)

|           | Qualified<br>U.S. Plan<br>Payments | Nonqualified<br>U.S. Plans<br>Payments | Qualified<br>Non-U.S. Plans<br>Payments | Nonqualified<br>Non-U.S. Plans<br>Payments | Total<br>Expected<br>Benefit<br>Payments |
|-----------|------------------------------------|--|---|--|--|
| 2017      | \$ 3,519                           | \$120                                  | \$1,689                                 | \$ 306                                     | \$ 5,634                                 |
| 2018      | 3,519                              | 121                                    | 1,705                                   | 301  | 5,646                                    |
| 2019      | 3,504                              | 121                                    | 1,730                                   | 312  | 5,668                                    |
| 2020      | 3,589                              | 122                                    | 1,741                                   | 358  | 5,809                                    |
| 2021      | 3,525                              | 123                                    | 1,783                                   | 376  | 5,806                                    |
| 2022–2026 | 16,970                             | 594                                    | 9,077                                   | 2,121                                      | 28,762                                   |

The 2017 expected benefit payments to defined benefit pension plan participants not covered by the respective plan assets (underfunded plans) represent a component of compensation and benefits, within current liabilities, in the Consolidated Statement of Financial Position.

##### Nonpension Postretirement Benefit Plan Expected Payments

The following table reflects the total expected benefit payments to nonpension postretirement benefit plan participants. These payments have been estimated based on the same assumptions used to measure the plans' APBO at December 31, 2016.

(\$ in millions)

|           | U.S. Plan<br>Payments | Qualified<br>Non-U.S. Plans<br>Payments | Nonqualified<br>Non-U.S. Plans<br>Payments | Total<br>Expected<br>Benefit<br>Payments |
|-----------|-----------------------|---|--|--|
| 2017      | \$ 396                | \$ 6                                    | \$ 30                                      | \$ 432                                   |
| 2018      | 397                   | 6                                       | 32   | 435                                      |
| 2019      | 403                   | 6                                       | 34   | 443                                      |
| 2020      | 405                   | 6                                       | 37   | 448                                      |
| 2021      | 395                   | 7                                       | 39   | 441                                      |
| 2022–2026 | 1,743                 | 36                                      | 219  | 1,998                                    |

The 2017 expected benefit payments to nonpension postretirement benefit plan participants not covered by the respective plan assets represent a component of compensation and benefits, within current liabilities, in the Consolidated Statement of Financial Position.

#### Other Plan Information

The following table presents information for defined benefit pension plans with accumulated benefit obligations (ABO) in excess of plan assets. For a more detailed presentation of the funded status of the company's defined benefit pension plans, see the table on page 140.

(\$ in millions)

|   | 2016               |             | 2015               |             |
|---|--------------------|-------------|--------------------|-------------|
|   | Benefit Obligation | Plan Assets | Benefit Obligation | Plan Assets |
| <b>At December 31:</b>                  |                    |             |                    |             |
| Plans with PBO in excess of plan assets | \$29,182           | \$16,374    | \$29,784           | \$17,677    |
| Plans with ABO in excess of plan assets | 28,770             | 16,272      | 29,135             | 17,492      |
| Plans with assets in excess of PBO      | 68,017             | 71,051      | 68,053             | 69,786      |

**NOTE T. SEGMENT INFORMATION**

In January 2016, the company made a number of changes to its organizational structure and management system consistent with its ongoing transformation to a cognitive solutions and cloud platform business. With these changes, the company updated its reportable segments. The company filed a recast 2015 Annual Report in a Form 8-K on June 13, 2016 to recast its historical segment information to reflect these changes. The company's five reportable segments are as follows:

The Cognitive Solutions segment includes solutions units that address many of the company's strategic areas, including analytics, commerce and security, several of the new initiatives around Watson Platform, Watson Health, Watson Internet of Things and Transaction Processing Software. The Technology Services & Cloud Platforms segment includes the company's cloud infrastructure and platform capabilities, the previously reported Global Technology Services business and Integration Software. Operating Systems Software has been aligned with the underlying hardware platforms in the Systems segment. The Global Business Services and Global Financing segments remain unchanged.

The company also realigned a portion of its software support revenue, which was previously managed and reported in Integrated Technology Services within Global Technology Services, to the underlying software product areas.

The segments represent components of the company for which separate financial information is available that is utilized on a regular basis by the chief operating decision maker (the chief executive officer) in determining how to allocate resources and evaluate performance. The segments are determined based on several factors, including client base, homogeneity of products, technology, delivery channels and similar economic characteristics.

Information about each segment's business and the products and services that generate each segment's revenue is located in the "Description of Business" section on pages 32 to 34, and in the "Segment Details," on pages 36 to 41 in the Management Discussion.

Segment revenue and pre-tax income include transactions between the segments that are intended to reflect an arm's-length, market-based transfer price. Systems that are used by Technology Services & Cloud Platforms in outsourcing engagements are primarily sourced internally from the Systems segment and software is sourced from various segments. Software used by Technology Services & Cloud Platforms on external engagements is sourced internally through Cognitive Solutions and the Systems segments. For providing IT services that are used internally, Technology Services & Cloud Platforms and Global Business Services recover cost, as well as a reasonable fee, that is intended to reflect the arm's-length value of providing the services. They enter into arm's-length loans at prices equivalent to market rates with Global Financing to facilitate the acquisition of equipment and software used in services engagements. All internal transaction prices are reviewed annually, and reset if appropriate.

The company utilizes globally integrated support organizations to realize economies of scale and efficient use of resources. As a result, a considerable amount of expense is shared by all of the segments. This shared expense includes sales coverage, certain marketing functions and support functions such as Accounting, Treasury, Procurement, Legal, Human Resources and Billing and Collections. Where practical, shared expenses are allocated based on measurable drivers of expense, e.g., headcount. When a clear and measurable driver cannot be identified, shared expenses are allocated on a financial basis that is consistent with the company's management system, e.g., advertising expense is allocated based on the gross profits of the segments. A portion of the shared expenses, which are recorded in net income, are not allocated to the segments. These expenses are associated with the elimination of internal transactions and other miscellaneous items.

The following tables reflect the results of continuing operations of the company's segments consistent with the management and measurement system utilized within the company. Performance measurement is based on pre-tax income from continuing operations. These results are used, in part, by the chief operating decision maker, both in evaluating the performance of, and in allocating resources to, each of the segments.

**Management System Segment View**

(\$ in millions)

| For the year ended December 31:                  | Cognitive Solutions & Industry Services |                          |   | Technology Services & Cloud Platforms Systems | Global Financing | Total Segments  |
|--|---|--------------------------|---|---|------------------|-----------------|
|  | Cognitive Solutions                     | Global Business Services | Technology Services & Cloud Platforms Systems |   |                  |                 |
| <b>2016</b>                                      |   |                          |   |   |                  |                 |
| External revenue                                 | \$18,187                                | \$16,700                 | \$35,337                                      | \$ 7,714                                      | \$1,692          | \$79,630        |
| Internal revenue                                 | 2,630                                   | 409                      | 715   | 750   | 1,802            | 6,307           |
| <b>Total revenue</b>                             | <b>\$20,817</b>                         | <b>\$17,109</b>          | <b>\$36,052</b>                               | <b>\$ 8,464</b>                               | <b>\$3,494</b>   | <b>\$85,936</b> |
| <b>Pre-tax income from continuing operations</b> | <b>\$ 6,352</b>                         | <b>\$ 1,732</b>          | <b>\$ 4,707</b>                               | <b>\$ 933</b>                                 | <b>\$1,656</b>   | <b>\$15,380</b> |
| Revenue year-to-year change                      | 3.8%                                    | (3.1)%                   | 0.6%  | (18.0)%                                       | (22.0)%          | (2.7)%          |
| Pre-tax income year-to-year change               | (12.3)%                                 | (33.4)%                  | (17.0)%                                       | (45.8)%                                       | (29.9)%          | (21.5)%         |
| Pre-tax income margin                            | 30.5%                                   | 10.1%                    | 13.1%   | 11.0%   | 47.4%            | 17.9%           |
| <b>2015</b>                                      |   |                          |   |   |                  |                 |
| External revenue                                 | \$17,841                                | \$17,166                 | \$35,142                                      | \$ 9,547                                      | \$1,840          | \$81,535        |
| Internal revenue                                 | 2,215                                   | 499                      | 698   | 778   | 2,637            | 6,826           |
| <b>Total revenue</b>                             | <b>\$20,055</b>                         | <b>\$17,664</b>          | <b>\$35,840</b>                               | <b>\$10,325</b>                               | <b>\$4,477</b>   | <b>\$88,361</b> |
| <b>Pre-tax income from continuing operations</b> | <b>\$ 7,245</b>                         | <b>\$ 2,602</b>          | <b>\$ 5,669</b>                               | <b>\$ 1,722</b>                               | <b>\$2,364</b>   | <b>\$19,602</b> |
| Revenue year-to-year change                      | (8.4)%                                  | (11.9)%                  | (9.8)%  | (22.4)%                                       | (1.0)%           | (11.2)%         |
| Pre-tax income year-to-year change               | (11.8)%                                 | (22.3)%                  | (20.0)%                                       | 24.4%   | 8.0%             | (11.8)%         |
| Pre-tax income margin                            | 36.1%                                   | 14.7%                    | 15.8%   | 16.7%   | 52.8%            | 22.2%           |
| <b>2014</b>                                      |   |                          |   |   |                  |                 |
| External revenue                                 | \$19,689                                | \$19,512                 | \$38,889                                      | \$12,294                                      | \$2,034          | \$92,418        |
| Internal revenue                                 | 2,216                                   | 543                      | 840   | 1,006   | 2,488            | 7,093           |
| <b>Total revenue</b>                             | <b>\$21,906</b>                         | <b>\$20,055</b>          | <b>\$39,729</b>                               | <b>\$13,300</b>                               | <b>\$4,522</b>   | <b>\$99,512</b> |
| <b>Pre-tax income from continuing operations</b> | <b>\$ 8,215</b>                         | <b>\$ 3,347</b>          | <b>\$ 7,084</b>                               | <b>\$ 1,384</b>                               | <b>\$2,189</b>   | <b>\$22,219</b> |
| Revenue year-to-year change                      | (0.1)%                                  | (8.5)%                   | (0.9)%  | (19.8)%                                       | 5.1%             | (5.1)%          |
| Pre-tax income year-to-year change               | (5.2)%                                  | (2.9)%                   | (7.3)%  | (21.5)%                                       | 0.8%             | (6.2)%          |
| Pre-tax income margin                            | 37.5%                                   | 16.7%                    | 17.8%   | 10.4%   | 48.4%            | 22.3%           |

**Reconciliations of IBM as Reported**

(\$ in millions)

| <b>For the year ended<br/>December 31:</b> | <b>2016</b>     | <b>2015</b>     | <b>2014</b>     |
|--|-----------------|-----------------|-----------------|
| <b>Revenue</b>                             |                 |                 |                 |
| Total reportable segments                  | \$85,936        | \$88,361        | \$99,512        |
| Other revenue                              | 289             | 206             | 374             |
| Elimination of internal transactions       | (6,307)         | (6,826)         | (7,093)         |
| <b>Total IBM consolidated revenue</b>      | <b>\$79,919</b> | <b>\$81,741</b> | <b>\$92,793</b> |

(\$ in millions)

| <b>For the year ended<br/>December 31:</b>             | <b>2016</b>     | <b>2015**</b>   | <b>2014**</b>   |
|--|-----------------|-----------------|-----------------|
| <b>Pre-tax income from continuing operations</b>       |                 |                 |                 |
| Total reportable segments                              | \$15,380        | \$19,602        | \$22,219        |
| Amortization of acquired intangible assets             | (998)           | (677)           | (791)           |
| Acquisition-related charges                            | (5)             | (26)            | (12)            |
| Non-operating retirement-related (costs)/income        | (598)           | (1,050)         | (353)           |
| Elimination of internal transactions                   | (1,160)         | (1,675)         | (1,746)         |
| Unallocated corporate amounts*                         | (290)           | (230)           | 668             |
| <b>Total pre-tax income from continuing operations</b> | <b>\$12,330</b> | <b>\$15,945</b> | <b>\$19,986</b> |

\* The 2014 amount includes the gain related to the Retail Store Solutions divestiture and the net gain related to the System x business divestiture.

\*\*Reclassified to conform to 2016 presentation

**Immaterial Items****Investment in Equity Alliances and Equity Alliances Gains/(Losses)**

The investments in equity alliances and the resulting gains and (losses) from these investments that are attributable to the segments did not have a material effect on the financial position or the financial results of the segments.

**Segment Assets and Other Items**

Cognitive Solutions assets are mainly goodwill, acquired intangible assets and accounts receivable. Global Business Services assets are primarily goodwill and accounts receivable. Technology Services & Cloud Platforms assets are primarily goodwill, plant, property and equipment including the assets associated with the outsourcing business, deferred services arrangement transition costs, accounts receivable and acquired intangible assets. Systems assets are primarily goodwill, plant, property and equipment, and manufacturing inventory. Global Financing assets are primarily financing receivables, cash and marketable securities, and fixed assets under operating leases.

To ensure the efficient use of the company's space and equipment, several segments may share plant, property and equipment assets. Where assets are shared, landlord ownership of the assets is assigned to one segment and is not allocated to each user segment. This is consistent with the company's management system and is reflected accordingly in the table on page 153. In those cases, there will not be a precise correlation between segment pre-tax income and segment assets.

Similarly, the depreciation amounts reported by each segment are based on the assigned landlord ownership and may not be consistent with the amounts that are included in the segments' pre-tax income. The amounts that are included in pre-tax income reflect occupancy charges from the landlord segment and are not specifically identified by the management reporting system. Capital expenditures that are reported by each segment also are consistent with the landlord ownership basis of asset assignment.

Global Financing amounts for interest income and interest expense reflect the interest income and interest expense associated with the Global Financing business, including the intercompany financing activities discussed on page 34, as well as the income from investment in cash and marketable securities. The explanation of the difference between cost of financing and interest expense for segment presentation versus presentation in the Consolidated Statement of Earnings is included on page 80 of the Management Discussion.

**Management System Segment View**

(\$ in millions)

| For the year ended December 31:                 | Cognitive Solutions & Industry Services |                          |                 | Technology Services & Cloud Platforms | Systems  | Global Financing | Total Segments |
|---|---|--------------------------|-----------------|---------------------------------------|----------|------------------|----------------|
|   | Cognitive Solutions                     | Global Business Services | Cloud Platforms |                                       |          |                  |                |
| <b>2016</b>                                     |   |                          |                 |                                       |          |                  |                |
| Assets  | \$25,517                                | \$8,628                  | \$24,085        | \$3,812                               | \$36,492 | \$98,534         |                |
| Depreciation/amortization of intangibles*       | 1,228                                   | 104                      | 2,224           | 375                                   | 317      | 4,248            |                |
| Capital expenditures/investments in intangibles | 495                                     | 55                       | 2,382           | 453                                   | 380      | 3,764            |                |
| Interest income                                 | —                                       | —                        | —               | —                                     | 1,547    | 1,547            |                |
| Interest expense                                | —                                       | —                        | —               | —                                     | 371      | 371              |                |
| <b>2015</b>                                     |   |                          |                 |                                       |          |                  |                |
| Assets  | \$20,017                                | \$8,327                  | \$23,530        | \$3,967                               | \$36,157 | \$91,999         |                |
| Depreciation/amortization of intangibles*       | 921                                     | 81                       | 1,944           | 321                                   | 343      | 3,610            |                |
| Capital expenditures/investments in intangibles | 448                                     | 86                       | 2,619           | 321                                   | 356      | 3,830            |                |
| Interest income                                 | —                                       | —                        | —               | —                                     | 1,720    | 1,720            |                |
| Interest expense                                | —                                       | —                        | —               | —                                     | 469      | 469              |                |
| <b>2014</b>                                     |   |                          |                 |                                       |          |                  |                |
| Assets  | \$19,525                                | \$8,831                  | \$22,512        | \$4,219                               | \$38,845 | \$93,933         |                |
| Depreciation/amortization of intangibles*       | 1,040                                   | 98                       | 1,982           | 734                                   | 455      | 4,308            |                |
| Capital expenditures/investments in intangibles | 413                                     | 79                       | 2,321           | 627                                   | 482      | 3,921            |                |
| Interest income                                 | —                                       | —                        | —               | —                                     | 1,951    | 1,951            |                |
| Interest expense                                | —                                       | —                        | —               | —                                     | 518      | 518              |                |

\* Segment pre-tax income from continuing operations does not include the amortization of intangible assets.

**Notes to Consolidated Financial Statements**

International Business Machines Corporation and Subsidiary Companies

**Reconciliations of IBM as Reported**

(\$ in millions)

| <b>At December 31:</b>               | <b>2016</b>      | <b>2015</b>      | <b>2014</b>      |
|--------------------------------------|------------------|------------------|------------------|
| <b>Assets</b>                        |                  |                  |                  |
| Total reportable segments            | \$ 98,534        | \$ 91,999        | \$ 93,933        |
| Elimination of internal transactions | (5,670)          | (4,709)          | (5,193)          |
| Unallocated amounts                  |                  |                  |                  |
| Cash and marketable securities       | 6,752            | 6,634            | 7,182            |
| Notes and accounts receivable        | 2,660            | 2,333            | 4,253            |
| Deferred tax assets                  | 5,078            | 4,693            | 6,465            |
| Plant, other property and equipment  | 2,656            | 2,650            | 2,169            |
| Pension assets                       | 3,034            | 1,734            | 2,160            |
| Other                                | 4,425            | 5,161            | 6,303            |
| <b>Total IBM consolidated assets</b> | <b>\$117,470</b> | <b>\$110,495</b> | <b>\$117,271</b> |

**Major Clients**

No single client represented 10 percent or more of the company's total revenue in 2016, 2015 or 2014.

**Geographic Information**

The following provides information for those countries that are 10 percent or more of the specific category.

**Revenue\***

(\$ in millions)

| <b>For the year ended December 31:</b> | <b>2016</b>     | <b>2015</b>     | <b>2014</b>     |
|--|-----------------|-----------------|-----------------|
| United States                          | \$30,194        | \$30,514        | \$32,021        |
| Japan                                  | 8,339           | 7,544           | 8,382           |
| Other countries                        | 41,386          | 43,683          | 52,390          |
| <b>Total IBM consolidated revenue</b>  | <b>\$79,919</b> | <b>\$81,741</b> | <b>\$92,793</b> |

\* Revenues are attributed to countries based on the location of the client.

**Plant and Other Property—Net**

(\$ in millions)

| <b>At December 31:</b> | <b>2016</b>     | <b>2015</b>     | <b>2014</b>     |
|------------------------|-----------------|-----------------|-----------------|
| United States          | \$ 4,701        | \$ 4,644        | \$ 4,388        |
| Other countries        | 5,607           | 5,532           | 5,690           |
| <b>Total</b>           | <b>\$10,308</b> | <b>\$10,176</b> | <b>\$10,078</b> |

**Revenue by Classes of Similar Products or Services**

The following table presents external revenue for similar classes of products or services within the company's reportable segments. Client solutions often include IBM software and systems and other suppliers' products if the client solution requires it. For each of the segments that include services; Software-as-a-Service, consulting, education, training and other product-related services are included as services. For each of these segments, software includes product license charges and ongoing subscriptions.

(\$ in millions)

| <b>For the year ended December 31:</b>           | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| <b>Cognitive Solutions</b>                       |             |             |             |
| Software   | \$13,969    | \$14,557    | \$16,502    |
| Services   | 4,111       | 3,175       | 3,143       |
| Systems  | 107         | 108         | 44          |
| <b>Global Business Services</b>                  |             |             |             |
| Services   | \$16,399    | \$16,851    | \$19,202    |
| Software   | 179         | 164         | 186         |
| Systems  | 121         | 151         | 124         |
| <b>Technology Services &amp; Cloud Platforms</b> |             |             |             |
| Services   | \$24,311    | \$23,947    | \$26,462    |
| Maintenance                                      | 5,862       | 6,085       | 6,790       |
| Software   | 3,818       | 3,907       | 4,332       |
| Systems  | 1,346       | 1,203       | 1,304       |
| <b>Systems</b>                                   |             |             |             |
| Servers  | \$ 3,567    | \$ 5,032    | \$ 7,177    |
| Storage  | 2,083       | 2,325       | 2,641       |
| Software   | 1,586       | 1,749       | 2,053       |
| Services   | 478         | 442         | 423         |
| <b>Global Financing</b>                          |             |             |             |
| Financing  | \$ 1,231    | \$ 1,386    | \$ 1,543    |
| Used equipment sales                             | 461         | 454         | 491         |

**NOTE U. SUBSEQUENT EVENTS**

On January 31, 2017, the company announced that the Board of Directors approved a quarterly dividend of \$1.40 per common share. The dividend is payable March 10, 2017 to shareholders of record on February 10, 2017.

On January 24, 2017, the company issued \$2.75 billion in bonds as follows: \$500 million of 3-year floating-rate bonds priced at LIBOR plus 23 basis points, \$750 million of 3-year fixed-rate bonds with a 1.9 percent coupon, \$1.0 billion of 5-year fixed-rate bonds with a 2.5 percent coupon and \$500 million of 10-year fixed-rate bonds with a 3.3 percent coupon.

(\$ in millions except per share amounts)

| For the year ended December 31:                 | 2016      | 2015      | 2014       | 2013      | 2012      |
|---|-----------|-----------|------------|-----------|-----------|
| Revenue   | \$ 79,919 | \$ 81,741 | \$ 92,793  | \$ 98,367 | \$102,874 |
| Income from continuing operations               | \$ 11,881 | \$ 13,364 | \$ 15,751  | \$ 16,881 | \$ 16,999 |
| Loss from discontinued operations, net of tax   | \$ (9)    | \$ (174)  | \$ (3,729) | \$ (398)  | \$ (395)  |
| Net income                                      | \$ 11,872 | \$ 13,190 | \$ 12,022  | \$ 16,483 | \$ 16,604 |
| Operating (non-GAAP) earnings*                  | \$ 13,031 | \$ 14,659 | \$ 16,702  | \$ 18,356 | \$ 18,022 |
| Earnings/(loss) per share of common stock:      |           |           |            |           |           |
| Assuming dilution:                              |           |           |            |           |           |
| Continuing operations                           | \$ 12.39  | \$ 13.60  | \$ 15.59   | \$ 15.30  | \$ 14.71  |
| Discontinued operations                         | \$ (0.01) | \$ (0.18) | \$ (3.69)  | \$ (0.36) | \$ (0.34) |
| Total   | \$ 12.38  | \$ 13.42  | \$ 11.90   | \$ 14.94  | \$ 14.37  |
| Basic:  |           |           |            |           |           |
| Continuing operations                           | \$ 12.44  | \$ 13.66  | \$ 15.68   | \$ 15.42  | \$ 14.88  |
| Discontinued operations                         | \$ (0.01) | \$ (0.18) | \$ (3.71)  | \$ (0.36) | \$ (0.35) |
| Total   | \$ 12.43  | \$ 13.48  | \$ 11.97   | \$ 15.06  | \$ 14.53  |
| Diluted operating (non-GAAP)*                   | \$ 13.59  | \$ 14.92  | \$ 16.53   | \$ 16.64  | \$ 15.60  |
| Cash dividends paid on common stock             | \$ 5,256  | \$ 4,897  | \$ 4,265   | \$ 4,058  | \$ 3,773  |
| Per share of common stock                       | \$ 5.50   | \$ 5.00   | \$ 4.25    | \$ 3.70   | \$ 3.30   |
| Investment in property, plant and equipment     | \$ 3,567  | \$ 3,579  | \$ 3,740   | \$ 3,623  | \$ 4,082  |
| Return on IBM stockholders' equity              | 74.0%     | 101.1%    | 72.5%      | 83.8%     | 81.6%     |
| At December 31:                                 | 2016      | 2015      | 2014       | 2013      | 2012      |
| Total assets                                    | \$117,470 | \$110,495 | \$117,271  | \$125,641 | \$118,965 |
| Net investment in property, plant and equipment | \$ 10,830 | \$ 10,727 | \$ 10,771  | \$ 13,821 | \$ 13,996 |
| Working capital                                 | \$ 7,613  | \$ 8,235  | \$ 7,797   | \$ 9,610  | \$ 4,413  |
| Total debt                                      | \$ 42,169 | \$ 39,890 | \$ 40,722  | \$ 39,637 | \$ 33,209 |
| Total equity                                    | \$ 18,392 | \$ 14,424 | \$ 12,014  | \$ 22,929 | \$ 18,984 |

\* Refer to the "GAAP Reconciliation," on page 63 of the company's 2014 Annual Report for the reconciliation of non-GAAP financial information for 2013 and 2012. Also see "GAAP Reconciliation," on pages 48, 49 and 66 for the reconciliation of non-GAAP financial information for 2016, 2015 and 2014.

**Selected Quarterly Data**

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts and stock prices)

| <b>2016</b>  | <b>First Quarter</b> | <b>Second Quarter</b> | <b>Third Quarter</b> | <b>Fourth Quarter</b> | <b>Full Year</b> |
|--|----------------------|-----------------------|----------------------|-----------------------|------------------|
| Revenue  | \$18,684             | \$20,238              | \$19,226             | \$21,770              | \$79,919         |
| Gross profit   | \$ 8,686             | \$ 9,702              | \$ 9,013             | \$10,893              | \$38,294         |
| Income from continuing operations                      | \$ 2,016             | \$ 2,505              | \$ 2,854             | \$ 4,505              | \$11,881         |
| Income/(loss) from discontinued operations, net of tax | \$ (3)               | \$ 0                  | \$ (1)               | \$ (4)                | \$ (9)           |
| Net income   | \$ 2,014             | \$ 2,504              | \$ 2,853             | \$ 4,501              | \$11,872         |
| Operating (non-GAAP) earnings*                         | \$ 2,270             | \$ 2,835              | \$ 3,149             | \$ 4,776              | \$13,031         |
| Earnings per share of common stock**                   |                      |                       |                      |                       |                  |
| Assuming dilution:                                     |                      |                       |                      |                       |                  |
| Continuing operations                                  | \$ 2.09              | \$ 2.61               | \$ 2.98              | \$ 4.73               | \$ 12.39         |
| Discontinued operations                                | \$ 0.00              | \$ 0.00               | \$ 0.00              | \$ (0.01)             | \$ (0.01)        |
| Total  | \$ 2.09              | \$ 2.61               | \$ 2.98              | \$ 4.72               | \$ 12.38         |
| Basic:   |                      |                       |                      |                       |                  |
| Continuing operations                                  | \$ 2.09              | \$ 2.62               | \$ 2.99              | \$ 4.75               | \$ 12.44         |
| Discontinued operations                                | \$ 0.00              | \$ 0.00               | \$ 0.00              | \$ (0.01)             | \$ (0.01)        |
| Total  | \$ 2.09              | \$ 2.62               | \$ 2.99              | \$ 4.74               | \$ 12.43         |
| Diluted operating (non-GAAP)*                          | \$ 2.35              | \$ 2.95               | \$ 3.29              | \$ 5.01               | \$ 13.59         |
| Dividends per share of common stock                    | \$ 1.30              | \$ 1.40               | \$ 1.40              | \$ 1.40               | \$ 5.50          |
| Stock prices**   |                      |                       |                      |                       |                  |
| High   | \$151.45             | \$155.35              | \$163.53             | \$168.51              |                  |
| Low  | \$117.85             | \$143.50              | \$151.68             | \$149.63              |                  |

(\$ in millions except per share amounts and stock prices)

| <b>2015</b>  | <b>First Quarter</b> | <b>Second Quarter</b> | <b>Third Quarter</b> | <b>Fourth Quarter</b> | <b>Full Year</b> |
|--|----------------------|-----------------------|----------------------|-----------------------|------------------|
| Revenue  | \$19,590             | \$20,813              | \$19,280             | \$22,059              | \$81,741         |
| Gross profit   | \$ 9,452             | \$10,390              | \$ 9,436             | \$11,407              | \$40,684         |
| Income from continuing operations                      | \$ 2,415             | \$ 3,526              | \$ 2,962             | \$ 4,460              | \$13,364         |
| Income/(loss) from discontinued operations, net of tax | \$ (88)              | \$ (77)               | \$ (12)              | \$ 3                  | \$ (174)         |
| Net income   | \$ 2,328             | \$ 3,449              | \$ 2,950             | \$ 4,463              | \$13,190         |
| Operating (non-GAAP) earnings*                         | \$ 2,890             | \$ 3,790              | \$ 3,272             | \$ 4,707              | \$14,659         |
| Earnings per share of common stock**                   |                      |                       |                      |                       |                  |
| Assuming dilution:                                     |                      |                       |                      |                       |                  |
| Continuing operations                                  | \$ 2.44              | \$ 3.58               | \$ 3.02              | \$ 4.59               | \$ 13.60         |
| Discontinued operations                                | \$ (0.09)            | \$ (0.08)             | \$ (0.01)            | \$ 0.00               | \$ (0.18)        |
| Total  | \$ 2.35              | \$ 3.50               | \$ 3.01              | \$ 4.59               | \$ 13.42         |
| Basic:   |                      |                       |                      |                       |                  |
| Continuing operations                                  | \$ 2.45              | \$ 3.59               | \$ 3.04              | \$ 4.60               | \$ 13.66         |
| Discontinued operations                                | \$ (0.09)            | \$ (0.08)             | \$ (0.01)            | \$ 0.00               | \$ (0.18)        |
| Total  | \$ 2.36              | \$ 3.51               | \$ 3.03              | \$ 4.60               | \$ 13.48         |
| Diluted operating (non-GAAP)*                          | \$ 2.91              | \$ 3.84               | \$ 3.34              | \$ 4.84               | \$ 14.92         |
| Dividends per share of common stock                    | \$ 1.10              | \$ 1.30               | \$ 1.30              | \$ 1.30               | \$ 5.00          |
| Stock prices**   |                      |                       |                      |                       |                  |
| High   | \$164.83             | \$174.40              | \$173.22             | \$152.39              |                  |
| Low  | \$151.55             | \$159.18              | \$140.96             | \$131.75              |                  |

\* Refer to page 71 of the company's first-quarter 2016 Form 10-Q filed on April 26, 2016, page 87 of the company's second-quarter 2016 Form 10-Q filed on July 26, 2016, page 87 of the company's third-quarter 2016 Form 10-Q filed on October 25, 2016, and page 55 under the heading "GAAP Reconciliation" for the reconciliation of non-GAAP financial information for the quarterly periods of 2016 and 2015. Also see "GAAP Reconciliation," on pages 48 and 49 for the reconciliation of non-GAAP financial information for full-year 2016 and 2015.

\*\*Earnings Per Share (EPS) in each quarter is computed using the weighted-average number of shares outstanding during that quarter while EPS for the full year is computed using the weighted-average number of shares outstanding during the year. Thus, the sum of the four quarters' EPS does not equal the full-year EPS.

++The stock prices reflect the high and low prices for IBM's common stock on the New York Stock Exchange composite tape for the periods presented.

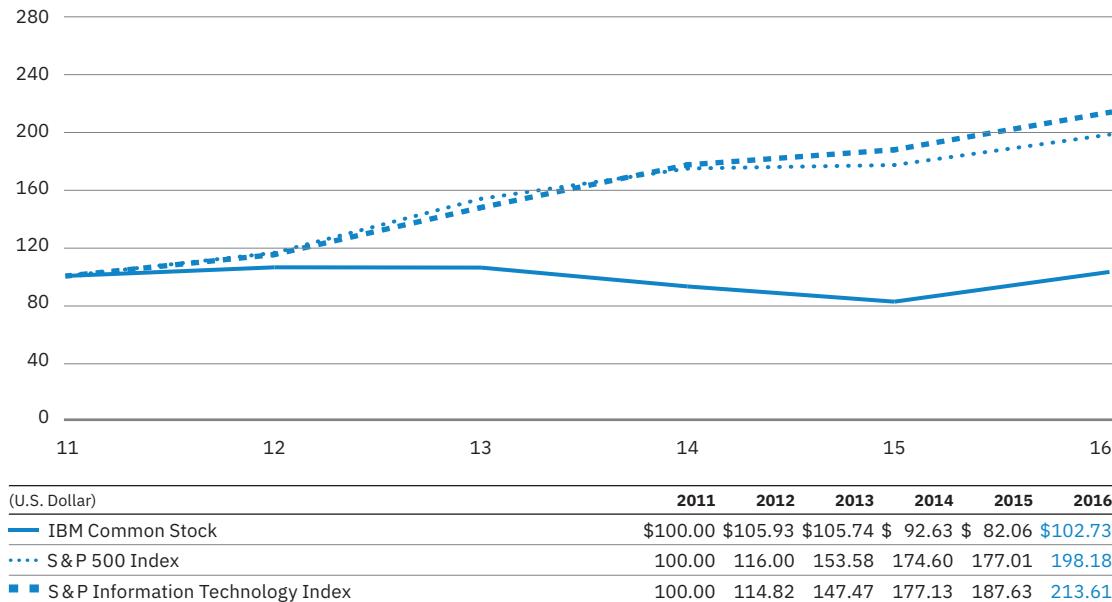
**Comparison of Five- and Ten-Year Cumulative Total Return for IBM, S&P 500 Stock Index and S&P Information Technology Index**

The following graphs compare the five- and ten-year cumulative total returns for IBM common stock with the comparable cumulative return of certain Standard & Poor's (S&P) indices. Due to the fact that IBM is a company included in the S&P 500 Stock Index, the SEC's rules require the use of that index for the

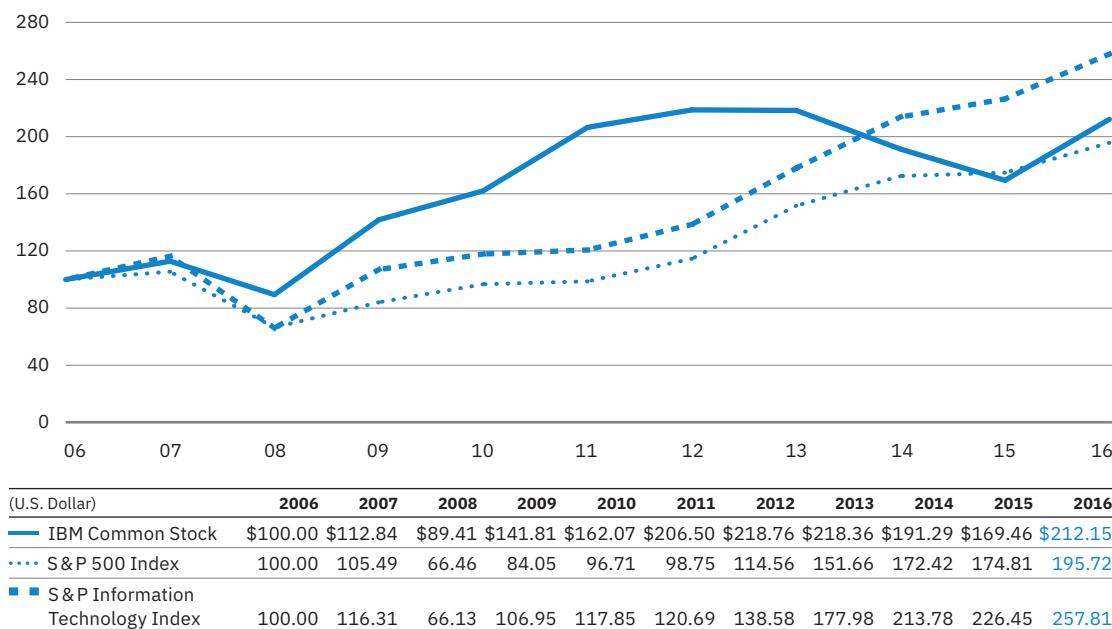
required five-year graph. Under those rules, the second index used for comparison may be a published industry or line-of-business index. The S&P Information Technology Index is such an index. IBM is also included in this index.

Each graph assumes \$100 invested on December 31 (of the initial year shown in the graph) in IBM common stock and \$100 invested on the same date in each of the S&P indices. The comparisons assume that all dividends are reinvested.

**Five-Year**



**Ten-Year**



**BOARD OF DIRECTORS****Kenneth I. Chenault**

Chairman and Chief Executive Officer  
*American Express Company*

**Michael L. Eskew**

Retired Chairman and  
Chief Executive Officer  
*United Parcel Service, Inc.*

**David N. Farr**

Chairman and Chief Executive Officer  
*Emerson Electric Co.*

**Mark Fields**

President and Chief Executive Officer  
*Ford Motor Company*

**Alex Gorsky**

Chairman and Chief Executive Officer  
*Johnson & Johnson*

**Shirley Ann Jackson**

President  
*Rensselaer Polytechnic Institute*

**Andrew N. Liveris**

Chairman and Chief Executive Officer  
*The Dow Chemical Company*

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\* Term on the Board ends on April 25, 2017.

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Stockholders with questions about their accounts should contact:

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Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

Stockholders can also reach Computershare Trust Company, N.A. via e-mail at: [ibm@computershare.com](mailto:ibm@computershare.com)

Hearing-impaired stockholders with access to a telecommunications device (TDD) can communicate directly with Computershare Trust Company, N.A., by calling (800) 490-1493. Stockholders residing outside the United States, Canada and Puerto Rico should call (781) 575-2694.

**IBM on the Internet**

Topics featured in this Annual Report can be found online at [www.ibm.com](http://www.ibm.com). Financial results, news on IBM products, services and other activities can also be found at that website.

IBM files reports with the Securities and Exchange Commission (SEC), including the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any other filings required by the SEC.

IBM's website ([www.ibm.com/investor](http://www.ibm.com/investor)) contains a significant amount of information about IBM, including the company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. These materials are available free of charge on or through our website.

The public may read and copy any materials the company files with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at (800) SEC-0330. The SEC maintains a website ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

**Computershare Investment Plan  
(formerly IBM Investor Services Program)**

The Computershare Investment Plan brochure outlines a number of services provided for IBM stockholders and potential IBM investors, including the reinvestment of dividends, direct purchase and the deposit of IBM stock certificates for safekeeping. Call (888) IBM-6700 for a copy of the brochure. Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

Investors with other requests may write to: IBM Stockholder Relations, New Orchard Road, M/D 325, Armonk, New York 10504.

**IBM Stock**

IBM common stock is listed on the New York Stock Exchange, the Chicago Stock Exchange, and outside the United States.

**Stockholder Communications**

Stockholders can get quarterly financial results, a summary of the Annual Meeting remarks, and voting results from the meeting by calling (914) 499-7777, by sending an e-mail to [infoibm@us.ibm.com](mailto:infoibm@us.ibm.com), or by writing to IBM Stockholder Relations, New Orchard Road, M/D 325, Armonk, New York 10504.

**Annual Meeting**

The IBM Annual Meeting of Stockholders will be held on Tuesday, April 25, 2017, at 10 a.m. at the Tampa Marriott Waterside Hotel & Marina, Tampa, Florida.

**Literature for IBM Stockholders**

The literature mentioned below on IBM is available without charge from:

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The company's annual report on Form 10-K and the quarterly reports on Form 10-Q provide additional information on IBM's business. The 10-K report is released by the end of February; 10-Q reports are released by early May, August and November.

An audio recording of the 2016 Annual Report will be available for sight-impaired stockholders in June 2017.

The IBM Corporate Responsibility Report highlights IBM's values and its integrated approach to corporate responsibility, including its innovative strategies to transform communities through global citizenship. The full Corporate Responsibility Report is available online at [www.ibm.com/responsibility](http://www.ibm.com/responsibility). It is also available in printed form by downloading the report at [www.ibm.com/responsibility](http://www.ibm.com/responsibility).

**General Information**

Stockholders of record can receive account information and answers to frequently asked questions regarding stockholder accounts online at [www.ibm.com/investor](http://www.ibm.com/investor). Stockholders of record can also consent to receive future IBM Annual Reports and Proxy Statements online through this site.

For answers to general questions about IBM from within the continental United States, call (800) IBM-4YOU. From outside the United States, Canada and Puerto Rico, call (914) 499-1900.



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