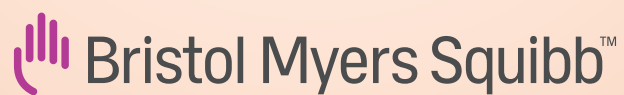




We're inspired by a single vision:

Transforming patients' lives through science™



2019 ANNUAL REPORT



Our Mission

To discover, develop and deliver innovative medicines
that help patients prevail over serious diseases

Our Vision

To be the world's leading biopharma company
that transforms patients' lives through science

The patient stories shared in this Annual Report depict individual patient responses to our medicines or investigational compounds and are not representative of all patient responses. In addition, there is no guarantee that potential drugs or indications still in development will receive regulatory approval.





Letter from the Chairman and CEO

At Bristol Myers Squibb, we are inspired by our mission – to discover, develop and deliver innovative medicines that help patients prevail over serious diseases. Every day, we focus on innovations that drive meaningful breakthroughs so we can bring life-saving medicines to people around the world.

2019 was a transformative year for us.

A BIOPHARMA LEADER

The acquisition of Celgene Corporation significantly advanced our strategy to create a leading biopharma company by bringing together the speed and agility of a biotech with the global scale and resources of an established pharmaceutical company. Our new company has strong commercial franchises in oncology, hematology, immunology and cardiovascular disease, one of the most diverse and promising pipelines in the industry, and highly talented people.

Together, we are advancing our mission and our vision to transform patients' lives through science, and you will see that reflected in our new brand.

THE POWER OF FOLLOWING THE SCIENCE

We start this next chapter at a time when unprecedented scientific breakthroughs are advancing the treatment of disease as never before. Bristol Myers Squibb is well positioned in scientific hubs of innovation in the U.S. and globally, and we collaborate with a broad network of global partners across our disease areas of focus to sustain our leadership and continue to transform patient outcomes. We are moving to the next generation of treatment options, such as CAR T therapy, and continue to pursue innovative treatments through new scientific platforms such as biologics, cell therapy and protein homeostasis. We are leveraging technology, data and analytics to accelerate our pipeline, enhance the speed, accuracy, and efficiency of clinical trials, and better demonstrate the value of our medicines.

2019 Full Year Revenues

\$26.1_B

GAAP Full Year*

16%

GAAP Full Year Change*

\$39.8_B

Pro Forma Full Year**

10%

Pro Forma Full Year Change**

* Full Year GAAP: *Includes Celgene product revenues from November 20, 2019, which was the date of the closing of the acquisition, through December 31, 2019.

See "Quarterly Package of Financial Information," available on bms.com/investors.

** Pro Forma Full Year: Reflects product revenues for the period prior to November 20, 2019, which was the date of the Celgene acquisition.

All product revenues prior to November 20, 2019 have been recast to exclude foreign currency hedge gains and losses.

See "Quarterly Package of Financial Information" available on bms.com/investors.

DELIVERING EXCEPTIONAL RESULTS

We are focused on driving enterprise performance while keeping ethics, integrity and quality at the core of everything we do. We operate with discipline and seize opportunities to increase productivity.

In 2019, we delivered strong performance across our portfolio of marketed medicines, advanced our pipeline, and positioned our new company for a successful integration. At every level of the company our people played an important role. I am proud of our teams for their strong focus and execution during a period of significant change.

We leveraged digital innovation to accelerate drug discovery and development, improve manufacturing, enhance our business capabilities, and ultimately advance patient care. For example, we partnered with Fitbit through our BMS-Pfizer Alliance to help bring arrhythmia detection to Fitbit's fitness trackers, potentially helping to drive earlier diagnosis of atrial fibrillation in individuals at increased risk of stroke.

Our manufacturing network is growing to meet the needs of our evolving pipeline and portfolio. We have expanded our network to include CAR T manufacturing centers in the U.S. as well as a newly constructed biologics plant in Cruiserath, Ireland. I am excited to share that this site is our first zero-waste-to-landfill and 100% green energy manufacturing facility.

We achieved several important milestones in 2019 as we prepared to integrate Celgene. We established a clear integration roadmap, designed our new operating model and named several layers of senior leaders. As we begin to implement our plans, we are on track to deliver \$2.5 billion of synergies, approximately one-third of which will be achieved in 2020. To measure our success, we have added a key integration metric to our executive compensation plans.

RESPONSIBILITY AT OUR CORE

How we carry out our work is as important as the medicines we deliver. We take a holistic approach to building sustainability across our product portfolio – from developing and manufacturing our life-saving medicines to transporting them to patients around the world.

We support initiatives and organizations that help improve health, expand research opportunities, promote STEM education, and deliver basic human services to our communities. We also promote health equity globally and strive to increase access to life-saving medicines for populations disproportionately affected by serious diseases and conditions, giving new hope to some of the world's most vulnerable people. We achieve this in part through the Bristol Myers Squibb Foundation, an independent 501(c)(3) charitable organization, which supports community-based programs to address cancer disparities in sub-Saharan Africa, China and Brazil, and in cancer, cardiovascular disease and immunology in the U.S.

We are focused on developing transformational medicines that improve upon the current standard of care, and benefit patients, society and payers. We are actively engaged in the global dialogue to address the affordability of life-saving medicines and the increased burden that healthcare costs may place on patients, families and caregivers. We are playing an active role in identifying changes in healthcare systems required to enable payment models that closely match value, improve patient access and help reduce the overall cost of care to society. We are also working to advance policies that support and reward investments in the discovery and development of life-saving medicines. Every day, we are providing greater access to our medicines in global markets through tiered pricing, voluntary licensing, reimbursement support, patient assistance programs and our Bristol Myers Squibb Foundation partnerships.

KEY ACHIEVEMENTS IN 2019 INCLUDE:

Completed acquisition of Celgene

Strong business performance across our portfolio

Implementation of a 10% dividend increase and \$7 billion accelerated share repurchase

Rapid and successful divestiture of Otezla® (apremilast)

Progress on the Revlimid® (lenalidomide) intellectual property estate

The launch of Inrebic® (fedratinib) and Reblozyl® (luspatercept-aamt) in the U.S.

Two positive studies in first-line lung cancer for the Opdivo® (nivolumab) + Yervoy® (ipilimumab) combination

Continued strengthening of the profile of Eliquis® (apixaban) through multiple, robust real-world studies

Regulatory filings for Reblozyl® and ozanimod in the U.S. and Europe, and liso-cel in the U.S.

Registrational data for the launch indication for ide-cel

Strong external recognition of the excellence of our environmental, social and governance programs

*Figures include, among others, recent indications approved for Opdivo in the U.S. for adjuvant melanoma, metastatic colorectal cancer, and second-line liver and bladder cancers; in Japan for second-line head & neck cancer and gastric cancer; and in Europe for second-line bladder and head & neck cancer.

A PATIENT-FOCUSED CULTURE

Our culture is the foundation of our success and competitive advantage and is supported by three key areas of focus.

Patients are at the center of everything we do. We are inspired by the knowledge that our efforts can make the difference for a patient who needs new options.

We embed innovation throughout our organization. Our integrated operating model helps us efficiently advance our pipeline, successfully manufacture new medicines, and seamlessly execute launches, delivering medicines to patients with urgency, agility and the utmost integrity and care.

We recognize that people are our greatest asset. We have created an industry-leading workforce. We embrace passion, innovation, urgency, accountability, inclusion and integrity to bring out the highest potential of each of our colleagues. We believe that the diverse experiences and perspectives of our colleagues help generate our best ideas, drive innovation and achieve transformative business results. In order to attract and retain the best people, we offer exciting work opportunities, ongoing education and training, and competitive compensation and benefit programs.

A COMPANY FOR THE FUTURE

Today, we are well positioned as a company because of the strength of our current business. We have an unprecedented opportunity with eight potential commercial launches and significant lifecycle management opportunities for each of those medicines.

In the medium and long term, we have a deep and diverse pipeline that will drive future innovative medicines.

In oncology, our scientists are targeting different immune system pathways to address interactions between tumors, the microenvironment and the immune system to help more patients respond to treatment. Combining these approaches is key to delivering new options for cancer treatment and addressing the growing issue of resistance to immunotherapy.

At the 2019 American Society of Hematology (ASH) Annual Meeting, our first medical congress as a new company, we demonstrated the strength of our hematology pipeline with data across 85 abstracts, including 26 oral presentations and one of only six late-breaking presentations. This shows how much we can accomplish for blood cancer patients.

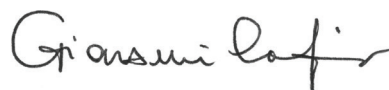
We continue to make significant progress in advancing our pipeline, which also includes clinical programs in immunology, fibrosis and cardiovascular disease. Registrational trials for our selective TYK2 inhibitor for the treatment of moderate to severe plaque psoriasis are well underway. Our Phase 2b trial for our lead fibrosis compound, FGF21, for the treatment of nonalcoholic steatohepatitis

(NASH), is also progressing. We are enrolling patients in Phase 2 trials of our Factor XIa inhibitor for secondary stroke prevention and VTE prevention, in collaboration with Janssen Pharmaceuticals, and our research in heart failure is progressing. With the acquisition of Celgene we have added early discovery capabilities in neuroscience to our research teams and look forward to advancing this science.

Tomorrow's medicines will come from our internal innovations as well as the rich ecosystem of scientific innovation that exists outside our company. We have the financial flexibility to continue to invest in our internal capabilities as well as to support investment in external innovation.

These are exciting times for us, and our achievements in 2019 have set the stage for sustained success. I am honored to lead such a great company and work with brilliant, passionate and dedicated colleagues. Our patients remind us every day of the urgency of our mission.

Thank you.



Giovanni Caforio, M.D.
Chairman of the Board and Chief Executive Officer

March 10, 2020



Evolving our Brand

To reflect the transformation of our company, we have evolved our company brand. We drew inspiration for our brand identity from our patients and our people. Our symbol, the hand, is a simple, universal expression of healing, of giving and receiving care. It is a representation of humanity, of the personal touch we bring to our work and to every treatment we pioneer. Our brand fully embodies our vision, and embraces our commitment of compassionate science and putting patients and people first.

Environmental Stewardship: A Key Ingredient of Our Medicines

We have set—and exceeded—ambitious targets for environmental performance, and we will build on these achievements to challenge ourselves and our vendors to continue reducing environmental impact and incorporating sustainability across our global enterprise. We incorporate the principles of green chemistry and green engineering to reduce our environmental impact across the supply chain: from product design, through manufacture, packaging and transport. And we are working to reduce the environmental impact of packaging of our products by using more recycled materials in our primary and secondary packaging, reducing the amount of secondary packaging and optimizing the design of packaging inserts.

GREENHOUSE GAS (GHG) REDUCTION



18% reduction in absolute GHG emissions (against 5% goal)



50% decrease in transportation-related GHG emissions for Orencia® and Opdivo®



20% of BMS energy is cogenerated

WATER MANAGEMENT



100% of our manufacturing sites evaluated for waste-water practices (3-year study completed across 13 sites in 6 countries)



6% reduction in water usage from 2015 baseline (against 5% goal)

PRODUCT DEVELOPMENT, PACKAGING, LABELLING, AND TRANSPORT



100% of new products in our R&D portfolio are assessed for improved environmental impact

100% of prioritized product packaging is assessed for improved environmental impact

Implemented e-labeling of *Opdivo*® to provide a single, digital source of information for product details and updates and to save package-insert materials

Shifting to cleaner liquid natural gas as fuel in our distribution networks

PRACTICES & INNOVATIONS



12 LEED certifications received since 2009 (2 additional pending)



Awarded Energy Star Partner of the Year for 5 consecutive years and Sustained Excellence for 2 consecutive years

Launched our first zero-waste-to-landfill and 100% green energy manufacturing facility in Cruiserath, Ireland

Permission to Pause

Latarsha Jones had a persistent headache for weeks; she also had bouts of dizziness and sometimes found herself struggling for words. As the assistant principal at a busy elementary school in Atlanta, Ga., she didn't want those things to slow her down, so she ignored them.



"Then, when I was at school preparing paperwork for a standardized test, the room began to spin. I thought I was speaking, but nothing was coming out of my mouth," she said.

Latarsha was taken to the emergency room and diagnosed with a left mid-brain ischemic stroke caused by a blockage in a blood vessel that supplies the brain.

"I was shocked. To me, a stroke happened to older Caucasian men, not to a 41-year-old African-American woman," she explained.

Fortunately, Latarsha fully recovered, but she did not make the recommended lifestyle changes or take the medication her doctor prescribed. Two years later, she had another stroke.

"Looking back on it, it all makes sense – it was clear that my weight, stress, grief at two deaths in my family and other unhealthy lifestyle choices were contributing to my poor health," she said. "I had so many warning signs but I ignored them and just kept going."

Latarsha then took charge of her life. Today, seven years after her first stroke, she maintains a healthy and active lifestyle, walking at least five times a week and eating

more colorful foods. She relocated to Florida, where she lives with the youngest of her three children, 17-year-old Kara, and teaches reading at an elementary school.



Latarsha with daughter Kara, preparing home-cooked meals as part of the new lifestyle that she has adopted after her stroke.

She was selected by the American Heart Association to be a Class of 2019 Ambassador based on her simple message – "Give yourself permission to pause" – which she shares at events across the country as she, along with countless other patients, wait for a breakthrough treatment.

"I tell people to listen to their body, not to put off seeing a doctor if something doesn't feel right and to give themselves permission to pause."

Treatment options for patients who have experienced a stroke are limited and the need for something to help reduce the risk is needed. Although she has taken control of her health, Latarsha said she lives with the fear of having another stroke. "I try not to think about it and just try to just live my life, but the reality is it could happen. It's a scary thought for sure."

Bristol Myers Squibb collaborates with Janssen Pharmaceuticals on the development and commercialization of FXIa, an anticoagulant discovered by Bristol Myers Squibb and in Phase 2 clinical trials for prevention of secondary stroke. ■



People and Business Resource Groups (PBRGs):

Inspired by Patients. Focused on Business. Powered by Our People.

Global Diversity & Inclusion (GD&I) is essential to our values and strategy. We strive to create a Company culture that brings out the best in everyone and advances our mission to discover, develop and deliver innovative medicines that help patients prevail over serious diseases.

The People and Business Resource Groups (PBRGs) are a transformative business model within GD&I that gives us a competitive advantage in a complex biopharmaceutical industry – one that has seen many mergers and acquisitions, shifts in global policy and changing patient and talent demographics. PBRGs are the voices of our workforce and the trusted line-of-sight into the patient experience. The PBRGs help drive business performance, innovation and leadership development with more than 11,000 global members while strategically engaging with business, governmental and community partners to build BMS's reputation and trust with external stakeholders.

Each of the eight PBRGs is managed by an experienced, high potential full-time leader. PBRG Leads have significant industry experience and in-depth business, medical and scientific research backgrounds. They report to a member of the BMS Executive Leadership Team and act as senior advisors to the businesses, with significant responsibilities including development of three-year business plans.

Following are some of the dynamic ways our PBRGs are making a substantive business difference for our patients, our communities and our workforce.

SELECT PBRG HIGHLIGHTS & 2019 ACHIEVEMENTS

Black Organization for Leadership and Development (BOLD)

- Engaged middle school, high school and university students in STEM career mentoring and sponsored the United Negro College Fund (UNCF) Post Doctorate Fellowship
- Helped foster an understanding between the African-American community and the medical community by promoting the story of Henrietta Lacks, an African-American woman whose cells were taken without her knowledge and developed into the HeLa cell, the first immortal line of human cells that were commercialized and distributed to researchers worldwide
- BOLD & OLA Edge Research Concept partnership with Howard University Hospital targeted African-American RA patients



Bristol Myers Squibb Network of Women (B-NOW)

- Partnered with/sponsored professional development activities for BMS women in the U.S. and E.U. to help prepare them for leadership roles now and in the future
- Established and representing BMS as a founding member of the HBA Gender Parity Collaborative
- Partnering with BOLD to help educate more than 250 students in STEM awareness activities

Cultivating Leadership and Innovation for Millennials and Beyond (CLIMB)

- Produced a customized information card with targeted resources to help young cancer patients navigate their cancer journeys and answer questions specific to their unique needs
- Hosted STEM-focused initiatives including innovation tournaments, STEM speed networking, and shadowing programs
- Partnered with Oncology Academic Research (OAR) team to host the first ever Emerging Leaders Forums at ASCO and ASH industry conferences. We gathered and engaged with next-gen healthcare providers to facilitate the inclusion of diverse perspectives to better inform the BMS medical strategy. Additionally, building partnerships with the next-gen investigators will help diversify our thought and our clinical trials

Photo: Rita Fawcett (center), of the cardiovascular field team, talks with PAN members, including Manisha Mahimkar (left) and Shalabh Singhal (right), who helped create training materials that shed light on important cultural insights.

Differently-Abled Workplace Network (DAWN)

- Worked with leaders to increase awareness of benefits of hiring neurodiverse talent and as a result had an increase of direct and contract hiring of individuals on the autism spectrum
- Worked with Supplier Diversity to increase the number of preferred disability-owned business enterprises (DOBE) vendors as a result was recognized in 2019 as Top Corporation for DOBE
- Local DAWN chapters worked with local vocational schools and high schools to support mentoring programs for students with disabilities in efforts to cultivate future talent

Pan Asian Network (PAN)

- Developed a cultural agility development program for sales team members to improve intercultural skills that build trust, gain credibility and better serve Asian-American healthcare professionals
- Established a global buddy program to expedite effective onboarding of our R&D colleagues in China contributing to the development and launch of *Opdivo*® in China
- Collaborated to offer the ASPIRE leadership development program which provides unique opportunities for aspiring Asian leaders to develop competencies required to reach the executive level



In 2019, a PBRG partnership with the Oncology Academic Research group for the Health Equities Forum brought together 23 external leaders in the field of Health Equities from major cancer centers across the U.S. with 15 BMS leaders to discuss barriers to diversity in clinical trials and identify potential solutions.

Veterans Community Network (VCN)

- Effective January 1, 2020, a new Military Leave Policy began offering full BMS pay for 24 months, rather than an offset, for full- and part-time U.S. and Puerto Rico employees engaged in uniformed services. Enhanced Employee Assistance Program (EAP) services and a 2-week paid leave for readjustment period between return from deployment and reporting back to work are also available. VCN co-lead the enhanced policy development with BMS Total Rewards colleagues in Human Resources
- Helped expand outreach opportunities in partnership with our Commercial Federal Accounts teams to strengthen their network of VA and DoD stakeholders

Organization for Latino Achievement (OLA)

- Hosted annual innovation challenge, OLATHon, which calls on employees to propose solutions for diseases that are highly prevalent within the Latino / Latinx community. The winning team from this innovative crowdsourcing event worked with R&D leadership on the implementation
- Signed the Hispanic Promise at the United Nations' second National Hispanic Leadership Summit
- Collaborated with Hispanics Inspiring Students' Performance and Achievement (HISPA) and the Center for Hispanic Policy, Research and Development in support of the New Jersey Governor's Hispanic Fellows Program. After four years, more than 100 fellows who are pursuing various college degrees have been positively impacted by OLA's work

Lesbian, Gay, Bisexual, Transgender and Allies (LGBT+)

- Introduced a set of transgender guidelines in the U.S. and Canada to ensure a respectful and inclusive workplace environment for employees in the process of gender transition
- Supported national and international efforts to expand LGBTQ+ rights such as joining the Business Coalition for the Equality Act and the UN LGBTI Standards of Conduct
- Worked with Supplier Diversity to enhance relationships among LGBTQ+ suppliers





Living Life Again

On December 1, 2016, Stan Stanek of Chanhassen, Minnesota, was diagnosed with acute myeloid leukemia (AML) and told that his best chance of survival was a bone marrow transplant.

But first, the active, otherwise healthy 60-year-old had to undergo several months of intense chemotherapy to stop the cancer from spreading and to put him into remission.

The treatments didn't work. In fact, the man who was in a hospital only once before found himself spending weeks there.

Stan went through several more months of treatment, numerous bone marrow biopsies and blood infusions. Eventually, he says, "We came to the realization that chemo was just not working. I was hitting a brick wall and I didn't really know what to do. I needed the transplant, but doctors at the Mayo Clinic [in Rochester] wouldn't even consider it until I was in remission."

Stan and Sue approached his battle as a couple. Without denying his prognosis, they stayed positive and hopeful and relied on their family, friends and faith to keep them focused on their blessings. "Our mantra was, 'Make it a day well lived,'" he says.

Several months later, as Stan's health continued to decline, he learned about a clinical trial for IDHIFA (enasidenib) being conducted at a treatment center in Houston.

Stan had a specific type of AML caused by a gene mutation called IDH2, found in less than 15% of patients with the disease, and IDHIFA was being studied in patients like him. He met all the qualifying criteria for the trial and began treatment – one IDHIFA pill daily – in July 2017.

It was not long before he noticed a change. "I seemed to be getting better. I started to feel stronger and I was having fewer blood infusions," he says.

Six months later, after 18 trips from his Minnesota home to Houston, Stan achieved complete remission. He was cleared for a bone marrow transplant, with his brother as the donor, in February 2018.

Since it was performed, he has had several biopsies and remains in complete remission.



Stan and his wife, Sue, approached his AML treatment as a team, relying on friends, family and faith.

"I do not believe I would be here today if it weren't for this pill," Stan adds. "IDHIFA was the key that opened the door to my bone marrow transplant."

Stan and Sue are celebrating their 40th wedding anniversary this year and enjoying moments they thought might be lost because of AML. "I'm doing all the things I was before," Stan says. "For me IDHIFA wasn't only hope, it was an answer. I'm living life again." ■

At Bristol Myers Squibb, employees like associate researcher Mahwish Khalid are passionate about the work they do to help transform patients' lives through science.

Listed below are our investigational compounds that we have in clinical studies as well as the approved and potential indications for our marketed products in the related therapeutic area as of January 1, 2020. Whether any of the listed compounds ultimately becomes a marketed product depends on the results of clinical studies, the competitive landscape of the potential product's market, reimbursement decisions by payers and the manufacturing processes necessary to produce the potential product on a commercial scale, among other factors. There can be no assurance that we will seek regulatory approval of any of these compounds or that, if such approval is sought, it will be obtained. There is also no assurance that a compound which gets approved will be commercially successful. At this stage of development, we cannot determine all intellectual property issues or all the patent protection that may, or may not, be available for these investigational compounds.

Oncology

Phase I

OPDIVO*
– Solid Tumors
OPDIVO* + YERVOY*
– Solid Tumors
OPDIVO* + Motolimod
– SCCHN
Relatlimab**
– Solid Tumors
NLRP3 Agonist*
– Solid Tumors
Anti-TIM-3*
– Solid Tumors
STING Agonist
– Solid Tumors
EP4* Antagonist*
– Solid Tumors
AHR*
– Solid Tumors
Anti-CTLA-4 NF-Probody
– Solid Tumors
Anti-ICOS*
– Solid Tumors
Anti-TIGIT*
– Solid Tumors
Anti-CD73*
– Solid Tumors
BET Inhibitor*
– Solid Tumors
Anti-SIRP*
– Solid Tumors
GEMOAB CD3xPSCA*
– Solid Tumors
Anti-IL8*
– Solid Tumors
LSD1 Inhibitor
– Extensive Stage SCLC
MAT2A*
– Solid Tumors

Phase II

OPDIVO*
– 1L CRC
– Ovarian
– Pan Tumor TMB High
– Pediatric
OPDIVO**
– Solid Tumors
OPDIVO* + YERVOY*
– Metastatic Castration-Resistant Prostate
OPDIVO* + YERVOY**
– Solid Tumors
OPDIVO* + CDK4/6 Inhibitor
– Neoadjuvant ER+/HER2-Breast
OPDIVO + Relatlimab***
– Solid Tumors
OPDIVO* + Linrodostat
– Solid Tumors
OPDIVO* + Bempegaldesleukin**
– 1L Bladder
OPDIVO* + Bempegaldesleukin*
– Solid Tumors
POMALYST/IMNOVID
– Pediatric Glioblastoma
Anti-CTLA-4 NF*
– Solid Tumors
Anti-CTLA-4 Probody*
– Solid Tumors
CCR2/5 Dual Antagonist*
– Solid Tumors
Cabiralizumab**
– Solid Tumors

Phase III

OPDIVO*
– 1L Glioblastoma
– 1L HCC
– 1L Head & Neck
– 1L Head & Neck Locally Advanced
– 2L Esophageal
– Adjuvant Bladder
– Adjuvant Esophageal/Gastroesophageal
– Adjuvant Gastric
– Adjuvant HCC
– Adjuvant Melanoma
– Adjuvant RCC
– Metastatic Castration-Resistant Prostate
– Neoadjuvant ER+/HER2-Breast
– Neoadjuvant NSCLC
– Peri-adjuvant NSCLC
– Unresectable NSCLC
OPDIVO* + YERVOY*
– 1L Bladder
– 1L Esophageal
– 1L Gastric
– 1L HCC
– 1L Head & Neck
– 1L Mesothelioma
– 1L NSCLC
– Adjuvant Melanoma
– Adjuvant RCC
– NSCLC EGFR Mutant
– Unresectable NSCLC
OPDIVO + Relatlimab***
– 1L Melanoma
OPDIVO* + Linrodostat
– 1L Metastatic Melanoma
– Neoadjuvant Muscle Invasive Bladder Cancer
OPDIVO* + Bacillus Calmette-Guerin
– High-Risk Non-Muscle Invasive Bladder Cancer
OPDIVO* + Bempegaldesleukin*
– 1L Melanoma
OPDIVO* + Bempegaldesleukin**
– 1L RCC
OPDIVO* + YERVOY* + Cabozantinib*
– Metastatic RCC
Marizomib
– Newly Diagnosed Glioblastoma

Approved Indications

OPDIVO*
– 1L BRAF wild-type Metastatic Melanoma
– Adjuvant Melanoma
– Melanoma across BRAF status
– Mesothelioma
– Previously treated advanced RCC
– Previously treated Gastric cancer (Japan)
– Previously treated HCC
– Previously treated Metastatic Head & Neck
– Previously treated Metastatic Melanoma
– Previously treated Metastatic MSI-High CRC
– Previously treated Metastatic Non-squamous NSCLC
– Previously treated Metastatic SCLC
– Previously treated Metastatic Squamous NSCLC
– Previously treated Metastatic Urothelial
OPDIVO* + YERVOY*
– 1L Metastatic Melanoma
– 1L RCC
– BRAF wild-type Metastatic Melanoma
– Melanoma across BRAF status
– Previously treated Metastatic MSI-High CRC
YERVOY*
– Adjuvant Melanoma
– Adolescent Metastatic Melanoma
– Metastatic Melanoma
ABRAXANE
– Breast
– Gastric
– Locally Advanced or Metastatic NSCLC
– Metastatic Breast Cancer
– NSCLC
– Pancreatic
– Unresectable Pancreatic

**Bristol Myers Squibb
Development Portfolio
by Therapeutic Area**

Bristol Myers Squibb Development Portfolio by Therapeutic Area

Hematology

Phase I

OPDIVO*

- Hematologic Malignancies

liso-cel (CD-19 CAR T)

- 3L+ Mantle Cell Lymphoma

orva-cel[®] (BCMA CAR T)

- Relapsed/Refractory Multiple Myeloma

bb21217 (BCMA CAR T)*

- Relapsed/Refractory Multiple Myeloma

Relatlimab**

- Hematologic Malignancies

BET Inhibitor (1)

- Non-Hodgkin Lymphoma

BET Inhibitor (2)

- Non-Hodgkin Lymphoma
- Relapsed/Refractory Acute Myeloid Leukemia

BCMA ADC

- Relapsed/Refractory Multiple Myeloma

BCMA TCE

- Relapsed/Refractory Multiple Myeloma

CD3XCD33 Bispecific Antibody*

- Relapsed/Refractory Acute Myeloid Leukemia

CELMoD

- Relapsed/Refractory Acute Myeloid Leukemia
- Relapsed/Refractory Multiple Myeloma
- Relapsed/Refractory Non-Hodgkin Lymphoma

Anti-SIRPα

- Non-Hodgkin Lymphoma

LSD1 Inhibitor

- Relapsed/Refractory Non-Hodgkin Lymphoma

MAT2A*

- Lymphoma

Phase II

OPDIVO*

- Non-Hodgkin Lymphoma (Diffuse Large B-cell Lymphoma)
- Non-Hodgkin Lymphoma (Follicular Lymphoma)
- Pediatric Hodgkin Lymphoma
- Primary Testicular Lymphoma

OPDIVO* + EMLICITI*

- Relapsed/Refractory Multiple Myeloma

IDHIFA*

- 1L Acute Myeloid Leukemia
- Newly Diagnosed Acute Myeloid Leukemia with IDH2 Mutation

REBLOZYL*

- MF Anemia
- Non-Transfusion-Dependent Beta-Thalassemia

liso-cel (CD-19 CAR T)

- 2L Diffuse Large B-cell Lymphoma
- 3L Diffuse Large B-cell Lymphoma
- Chronic Lymphocytic Leukemia

ide-cel (BCMA CAR T)*

- 2L Relapsed/Refractory Multiple Myeloma
- 4L+ Relapsed/Refractory Multiple Myeloma

Iberdomide (CELMoD)

- Multiple Myeloma

DNMT Inhibitor (CC-486)

- Post HMA Failure MDS

Phase III

OPDIVO*

- Refractory Hodgkin Lymphoma

EMLICITI* + REVLIMID

- 1L Multiple Myeloma

POMALYST/IMNOVID

- Relapsed/Refractory Multiple Myeloma

REBLOZYL*

- ESA Naïve MDS
- MDS Previously treated with ESA

INREBIC

- MF Previously treated with Ruxolitinib

IDHIFA*

- Relapsed/Refractory Acute Myeloid Leukemia with IDH2 Mutation

ISTODAX

- 1L Peripheral T-cell Lymphoma

liso-cel (CD-19 CAR T)

- Relapsed/Refractory Aggressive Large B-cell Lymphoma

ide-cel (BCMA CAR T)*

- 3L Relapsed/Refractory Multiple Myeloma

DNMT Inhibitor (CC-486)

- Angioimmunoblastic T-cell Lymphoma
- Lower Risk MDS
- Post-Induction Acute Myeloid Leukemia Maintenance

Approved Indications

REVLIMID

- 1L Multiple Myeloma
- Mantle Cell Lymphoma
- MDS
- Multiple Myeloma
- Previously treated Follicular Lymphoma
- Relapsed/Refractory Adult T-cell Leukemia/Lymphoma

OPDIVO*

- Advanced Hodgkin Lymphoma

POMALYST/IMNOVID

- Multiple Myeloma
- Relapsed/Refractory Multiple Myeloma

EMLICITI* + POMALYST/IMNOVID

- Relapsed/Refractory Multiple Myeloma

EMLICITI* + REVLIMID

- Relapsed/Refractory Multiple Myeloma

SPRYCEL

- 1L CML
- Pediatric ALL
- Refractory CML

VIDAZA

- Acute Myeloid Leukemia
- Chronic Myelomonocytic Leukemia
- MDS

REBLOZYL

- Transfusion-Dependent Beta-Thalassemia

INREBIC

- MF

IDHIFA*

- Relapsed/Refractory AML

ISTODAX

- Cutaneous T-cell Lymphoma
- Peripheral T-cell Lymphoma

Immunology

Phase I

TYK2 Inhibitor (2)

– Autoimmune Disease

TLR 7/8 Antagonist

– Autoimmune Disease

S1P1 Agonist

– Autoimmune Disease

IL-2 Agonist

– Autoimmune Disease

MK2

– Autoimmune Disease

Phase II

Branebrutinib

– Rheumatoid Arthritis

– Sjögren's Disease

– Systemic Lupus

Erythematosus

TYK2 Inhibitor

– Crohn's Disease

– Lupus Nephritis

– Psoriatic Arthritis

– Systemic Lupus

Erythematosus

– Ulcerative Colitis

Iberdomide (CELMoD)

– Systemic Lupus

Erythematosus

Anti-IL-13

– Eosinophilic Esophagitis

Phase III

ORENCIA

– Idiopathic Inflammatory
Myopathy

NULOJIX

– Switch from Calcineurin
Inhibitor Renal Transplant

TYK2 Inhibitor

– Psoriasis

Ozanimod

– Crohn's Disease

– Relapsing Multiple
Sclerosis

– Ulcerative Colitis

Approved Indications

ORENCIA

– Active Polyarticular JIA

– Early Rheumatoid Arthritis

– JIA Intravenous

– JIA Subcutaneous

– Psoriatic Arthritis

– RA Auto injector

– RA Intravenous

– RA Subcutaneous

NULOJIX

– De Novo Renal Transplant

Cardiovascular

Phase I

Factor XIa Inhibitor[†] (2)

– Thrombotic Disorders

FPR-2 Agonist

– Heart Failure

Relaxin

– Heart Failure

Phase II

ELIQUIS[†]

– Pediatric Heart Disease

Nitroxyl Donor

– Heart Failure

Factor XIa Inhibitor[†]

– Thrombotic Disorders

Phase III

Approved Indications

ELIQUIS[†]

– Stroke Prevention in Atrial
Fibrillation

– Venous Thromboembolism
Prevention Orthopedic
Surgery

– Venous Thromboembolism
Treatment

Fibrotic Diseases

Phase I

LPA₁ Antagonist

– Pulmonary Fibrosis

Phase II

HSP47[†]

– Fibrosis

Pegbelfermin

– Non-alcoholic Steatohepatitis

JNK Inhibitor

– Idiopathic Pulmonary Fibrosis

– Non-Alcoholic Steatohepatitis

Note: Above pipeline excludes clinical collaborations

† Development Partnership: **OPDIVO**, **YERVOY**, **Relatlimab**, **EP4**: Ono (our collaboration with Ono also includes other early stage compounds); **EMPLICITI**: AbbVie; **Bempegaldesleukin**: Nektar; **Cabiralizumab**: Five Prime Therapeutics, Inc.; **Cabozantinib**: Exelixis, Inc.; **ELIQUIS**: Pfizer; **Factor XIa Inhibitor**: Janssen Pharmaceuticals, Inc.; **HSP47**: Nitto Denko Corporation; **CD3XCD33**, **GEMoaB CD3xPSCA**, **GEM333**: GeMoaB Monoclonals GmbH; **bb21217**, **ide-cel**: bluebird bio, Inc.; **REBLOZYL**: Acceleron Pharma Inc.; **IDHIFA**, **MAT2A**: Agios Pharmaceuticals, Inc.; **AHR**: Ikena Oncology

^ Trial(s) exploring various combinations

Partner-run study



Transforming patients' lives
through science™





Like the Sun Had Come Up

“Everyone has a plan until they get punched in the mouth.”

Chris Dougherty, 56, often uses that quote from a famous boxer to describe his experience with melanoma.

“When I learned about my diagnosis seven years ago, I was numb,” he says. “I thought it was just a birthmark. It felt like I had been hit with a fatal blow and that my plans for my life were in disarray. My family and I were very concerned, but we were determined to be optimistic after I had the surgery to remove the birthmark.”

One year later, Chris found two lumps on his neck. The melanoma had spread.

Doctors at a hospital where Chris worked in Lubbock, Texas recommended radiation and treatment with Interferon, which he followed for about two years. Then, further scans showed the cancer had also spread to his lung and his brain.

Chris’s status immediately ramped up: he was a stage 4 cancer patient.

“My doctor told me he was going to throw everything, including the kitchen sink, at it,” he says. Chris’s treatment got more aggressive: radiosurgery and radiation for the tumors on his brain and high doses of chemotherapy.

“I was in the 5% of people whose brain does not react well to radiation, so the hope was that the chemo would penetrate the blood brain barrier and get to work on the tumors in my brain. It was awful. The treatments made me so sick.”

Chris says it was then that he felt the disease had truly dealt him the biggest hit of all. “I couldn’t work. I couldn’t drive. It was beginning to break me down, not only physically, but emotionally and spiritually,” he explains. “No one knew what

the next step would be. Hope was running out. I needed a new plan.”

It came in the form of two Bristol Myers Squibb immuno-oncology drugs: *Yervoy* and *Opdivo*. Chris had begun *Yervoy* right after his radiosurgery and had undergone two of the four treatments he was scheduled to receive. Then his oncologist shared exciting news: a combination of *Yervoy* and *Opdivo* had shown promising results.

He started the combination almost immediately. “It was life-changing, like the sun had come up. The drugs were attacking my cancer but I wasn’t experiencing any of the side effects I had with chemo. I felt normal again,” he says.

Chris continued taking *Opdivo* for more than three years and stopped all of his treatments in August 2018. “I went from being a patient with stage 4 cancer to being cancer free,” he says.

Today, Chris lives in Pasadena, California, and works full time as the administrative CEO at a children’s hospital. He exercises with kickboxing and outdoor activities with Wendy, his wife of almost 29 years, and their two adult children.

His advice for patients fighting their own battle with cancer? “Don’t ever give up, because there are people like the researchers at Bristol Myers Squibb who will continue looking for new ways to fight this disease.” ■



Chris appreciates the ability to exercise again and to enjoy the outdoors near his California home.

I Will Win This

Seven years ago, at age 26,
Jasmin Watson-El's world
turned upside down.



She was lying in a hospital bed in her hometown of Baltimore, Maryland, unable to feel her arms or her legs, and she had just been diagnosed with multiple sclerosis (MS).

"I lost all control of my body. It felt like my brain just shut down," she says of the days and hours leading up to her hospitalization.

MS is a progressive autoimmune disease that damages the protective myelin sheath surrounding nerves in the brain and spinal cord, interrupting the signals sent from those sites to other parts of the body. It causes symptoms that can range from fatigue and numbness in the extremities, like Jasmin experienced, to tremors and breathing problems.

The disease affects about 1 million people in the U.S., and they are waiting for more breakthroughs in treatment options.

With physical therapy, medication and determination, Jasmin resumed most of her activities and returned to work as a project manager in the public sector. She has good days and bad days and an occasional relapse.

"My brain no longer works the same as it did before," she says. "It takes longer for words to come to me or to digest

information, but I am determined to get back to me and I have strategies to overcome those obstacles."

About a year after her diagnosis, Jasmin learned she was pregnant with her son, Keagan, and credits her "village" of supportive family members, friends and healthcare professionals with helping her navigate life as a new mother with MS.



"I am determined to get back to me," says Jasmin (pictured with her son, Keagan, who was born after her diagnosis).

She also joined the MS Mindshift, an educational initiative for people living with MS, sponsored by Bristol Myers Squibb (formerly Celgene). She is an MS Ambassador and speaks to groups about living with the daily uncertainties that MS brings. "I hope I'm showing people that even with MS, they can get up and live. I look at me, and I look at MS and I think, 'MS will not win. I will win this.'" More information can be found at www.MSMindShift.com.

As Jasmin and other patients continue to wait for more treatment options, she says, "It gives me hope that companies like Bristol Myers Squibb are working and getting closer to new treatments. You cannot stop because MS will not stop."

Bristol Myers Squibb's ozanimod is currently in Phase 3 clinical trials for relapsing multiple sclerosis. ■

BRISTOL MYERS SQUIBB
2019 Financial Report

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MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Management’s discussion and analysis of financial condition and results of operations is provided as a supplement to and should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this 2019 Form 10-K to enhance the understanding of our results of operations, financial condition and cash flows.

The comparison of fiscal 2018 to 2017 has been omitted from this Form 10-K, but can be referenced in our Form 10-K for the fiscal year ended December 31, 2018—“Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” filed on February 25, 2019.

EXECUTIVE SUMMARY

Bristol-Myers Squibb Company is a global biopharmaceutical company whose mission is to discover, develop and deliver innovative medicines that help patients prevail over serious diseases. Refer to the Summary of Abbreviated Terms at the end of this 2019 Form 10-K for terms used throughout the document.

We completed the Celgene transaction on November 20, 2019. We expect that the acquisition will enable us to create a leading focused biopharmaceutical company that is well positioned to address the needs of patients with cancer, inflammatory, immunologic, cardiovascular or fibrotic diseases through high-value innovative medicines and leading scientific capabilities. Commencing from the acquisition date, BMS’s financial statements include the assets, liabilities, operating results and cash flows of Celgene. Refer to “Consolidated Financial Statements—Note 4. Acquisition, Divestitures, Licensing and Other Arrangements” for further discussion on the Celgene transaction.

In 2019, we received several approvals for new medicines and additional indications and formulations of currently marketed medicines in major markets (the U.S., EU and Japan), including multiple regulatory milestone achievements for *Opdivo* and *Opdivo+Yervoy* combinations. We are investigating *Opdivo* alone and in combination with *Yervoy* and other anti-cancer agents for a wide array of tumor types, and have 24 other IO compounds in clinical development. We continue to expand in the field of hematology, where we have the leading presence, through in-line assets *Revlimid* and *Pomalyst*. In 2019, we received regulatory approvals for *Reblozyl* and *Inrebic* and submitted a regulatory application for liso-cel targeting Diffuse Large B-Cell Lymphoma. Additionally, our pipeline shows significant added promise in hematology malignancies through our *CELMoD* agents, multiple modalities targeting B-Cell Maturation Antigen (“BCMA”) and the next generation of cell therapy agents. We are expanding our portfolio in immunology with two near term launch opportunities in TYK-2 inhibitor and ozanimod. Additionally in the cardiovascular space, *Eliquis* is now the global leading oral anti-coagulant drug, and we continue to experience growth in both the *Eliquis* brand and market while also advancing our Factor XIa inhibitor program.

In 2019, our revenues increased 16% as a result of higher demand for our prioritized brands including *Eliquis* and *Opdivo* and the Celgene acquisition, which contributed \$1.9 billion of revenues, representing approximately one half of the growth. The \$1.00 decrease in GAAP EPS was primarily due to taxes resulting from the *Otezla** divestiture, amortization of acquired intangible assets, the unwinding of inventory fair value adjustments and other costs and expenses resulting from the Celgene acquisition, partially offset by higher revenues. After adjusting for specified items, non-GAAP EPS increased \$0.71, primarily as a result of higher revenues.

Highlights

The following table summarizes our financial information:

	Year Ended December 31,	
	2019	2018
Dollars in Millions, except per share data		
Total Revenues	\$ 26,145	\$ 22,561
Diluted Earnings Per Share		
GAAP	\$ 2.01	\$ 3.01
Non-GAAP	4.69	3.98

Our non-GAAP financial measures, including non-GAAP earnings and related EPS information, are adjusted to exclude specified items that represent certain costs, expenses, gains and losses and other items impacting the comparability of financial results. For a detailed listing of all specified items and further information and reconciliations of non-GAAP financial measures refer to “—Non-GAAP Financial Measures.”

Significant Product and Pipeline Approvals

The following is a summary of the significant approvals received in 2019:

Product	Date	Approval
<i>Revlimid</i>	December 2019	EC approval in combination with rituximab for the treatment of adult patients with previously treated FL (Grade 1-3a). <i>Revlimid</i> and rituximab (R ²) is the first chemotherapy-free combination regimen approved for the patients with FL by the EC.
<i>Opdivo+Yervoy</i>	March 2019	Conversion of accelerated FDA approval to full FDA approval for <i>Opdivo+Yervoy</i> for first line metastatic melanoma treatment based on longer follow-up data from CheckMate-067.
	January 2019	EC approval of <i>Opdivo</i> plus low-dose <i>Yervoy</i> for previously untreated patients with intermediate and poor-risk advanced RCC.
<i>Orencia</i>	April 2019	EC approval of two new strengths (50 mg and 87.5 mg) for subcutaneous administration, and a new indication for <i>Orencia</i> injection for the treatment of moderate to severe active polyarticular juvenile idiopathic arthritis in pediatric patients 2 years of age and older.
<i>Sprycel</i>	February 2019	EC approval in both tablet and powder for oral suspension formulations, in combination with chemotherapy for the treatment of pediatric patients with newly diagnosed Philadelphia chromosome-positive ALL.
<i>Empliciti</i>	November 2019	Approved in Japan in combination with pomalidomide and dexamethasone for multiple myeloma following at least two prior therapies, including lenalidomide and proteasome inhibitor.
	August 2019	EC approval in combination with pomalidomide and dexamethasone for adult patients with RRMM who have received at least two prior therapies, including lenalidomide and a proteasome inhibitor, and have demonstrated disease progression on the last therapy.
<i>Inrebic</i> ^(a)	August 2019	FDA approval for the treatment of adult patients with intermediate-2 or high-risk primary or secondary (post-polycythemia vera or post-essential thrombocythemia) myelofibrosis.
<i>Reblozyl</i> ^(a)	November 2019	FDA approval for the treatment of anemia in adult patients with beta thalassemia who require regular red blood cell transfusions.

(a) The regulatory approval was obtained by Celgene prior to the completion of the Celgene transaction.

Refer to “—Product and Pipeline Developments” for all of the developments in our marketed products and late-stage pipeline in 2019 and in early 2020.

Strategy

Our principal strategy is to combine the resources, scale and capability of a pharmaceutical company with the speed and focus on innovation of the biotech industry. Our focus as a biopharmaceutical company is on discovering, developing and delivering transformational medicines for patients facing serious diseases in areas where we believe that we have an opportunity to make a meaningful difference: oncology (both solid tumors and hematology), immunology, cardiovascular and fibrosis. Our four strategic priorities as a combined company are to drive enterprise performance, maximize the value of our commercial portfolio, ensure the long-term sustainability of our pipeline through combined internal and external innovation and establish our new culture and embed our people strategy.

We are developing new medicines in the following core therapeutic areas: (1) oncology with a priority in certain tumor types; (2) hematology with opportunities to broaden our franchise and potentially sustain a leadership position in multiple myeloma; (3) immunology with priorities in relapsing multiple sclerosis, psoriasis, lupus, RA and inflammatory bowel disease; (4) cardiovascular disease and; (5) fibrotic disease with priorities in lung and liver. We continue to advance the next wave of innovative medicines by investing significantly in our pipeline both internally and through business development activities. We expect that our acquisition of Celgene will further position us as a leading biopharmaceutical company, expanding our oncology, hematology and immunology portfolios with several near-term assets and additional external partnerships. We continue to invest in our oncology portfolio by pursuing both monotherapy and combination approaches and advancing our next wave of early assets and to explore new collaboration opportunities across our therapeutic areas of focus. We remain focused and well-resourced in our cancer development programs and seek to broaden the use of *Opdivo* in earlier lines of therapy, expand into new tumors, accelerate next wave oncology mechanisms and develop treatment options for refractory oncology patients. For hematology, we have opportunities to launch several new medicines in the near-term with additional pipeline opportunities in the longer term. There is a broad effort to continue to address the unmet medical need in multiple myeloma and we are working across multiple modalities and mechanisms of action such as cereblon modulator (“*CELMoD*”), T-cell Engager and CAR T-cell therapy. Beyond cancer, we continue to advance our early stage portfolio in immunology, cardiovascular and fibrotic diseases and strengthen our partnerships with a diverse group of companies and academic institutions in new and expanded research activities. We believe our differentiated internal and external focus contributes to the advancing of our pipeline of potentially transformational medicines.

Our commercial model has been successful with revenues from our prioritized brands continuing to grow, which demonstrates strong execution of our strategy. We continue to drive adoption of *Opdivo* by expanding into additional indications and tumor types both as a monotherapy and in combination with *Yervoy* and other anti-cancer agents. *Eliquis* continues to grow, leveraging its best in class clinical profile and extensive real world data and is now the number one novel oral anticoagulant in total prescriptions globally. *Revlimid* and *Pomalyst* have transformed the treatment of multiple myeloma, where we have a leading presence, and we continue to seek opportunities to leverage the significant medical and commercial expertise to address areas of high unmet medical need. We are building on the continued success of our other prioritized brands and remain strongly committed to *Orencia* and *Sprycel*. We are also optimistic on the future growth and near-term opportunities of *Reblozyl*, a first-in-class medicine, and *Inrebic*. Through our operating model transformation, our commercial infrastructure is uniquely leveraged for potential growth.

Our operating model continues to evolve and we have been successful in focusing commercial, R&D and manufacturing resources on prioritized brands and markets, strengthening our R&D capabilities in tumor biology, patient selection and new biomarkers, delivering leaner administrative functions and streamlining our manufacturing network to reflect the importance of biologics in our current and future portfolio. The evolution in our operating model, which focuses on maintaining a disciplined approach in marketing, selling and administrative expenses, will enable us to deliver the necessary strategic, financial and operational flexibility to invest in the highest priority opportunities within our portfolio. We will continue to make progress towards integrating the companies on the commercial and research and development area. We expect to realize \$2.5 billion of synergies resulting from cost savings and avoidance through 2022 and our integration efforts across general and administrative, manufacturing, R&D, procurement and streamlining the Company's pricing and information technology infrastructure.

Looking ahead, we will continue to implement our biopharma strategy by driving the growth of prioritized brands, executing product launches, investing in our diverse and innovative pipeline, aided by strategic business development, focusing on prioritized markets, increasing investments in our biologics manufacturing capabilities and maintaining a culture of continuous improvement.

Acquisitions, Divestitures, Licensing and Collaboration Arrangements

Significant acquisitions, divestitures, licensing and collaboration arrangements during 2019 are summarized below. Refer to “Consolidated Financial Statements—Note 3. Alliances” and “—Note 4. Acquisitions, Divestitures, Licensing and Other Arrangements” for further information.

Celgene: BMS acquired Celgene, an integrated global biopharmaceutical company engaged primarily in the discovery, development and commercialization of innovative therapies for the treatment of cancer and inflammatory diseases through next-generation solutions in protein homeostasis, immuno-oncology, epigenetics, immunology and neuro-inflammation. Its primary commercial stage products include *Revlimid*, *Pomalyst/Imnovid*, *Abraxane*, *Reblozyl* and *Inrebic*.

Otezla*: BMS divested *Otezla** to Amgen as part of the regulatory approval process for the Celgene transaction.

UPSA: BMS divested its UPSA consumer health business to Taisho Pharmaceutical Co., Ltd. to simplify and realign its business portfolio.

RESULTS OF OPERATIONS

Regional Revenues

The composition of the changes in revenues was as follows:

Dollars in Millions	Year Ended December 31,		2019 vs. 2018	
	2019	2018	% Change	Foreign Exchange ^(b)
United States	\$ 15,342	\$ 12,586	22 %	—
Europe	6,266	5,658	11 %	(6)%
Rest of the World	4,013	3,733	8 %	(5)%
Other ^(a)	524	584	(10)%	N/A
Total	\$ 26,145	\$ 22,561	16 %	(2)%

(a) Other revenues include royalties and alliance-related revenues for products not sold by our regional commercial organizations.

(b) Foreign exchange impacts were derived by applying the prior period average currency rates to the current period revenues.

U.S. revenues in 2019 were impacted by \$1.3 billion from *Revlimid* and other Celgene products, representing 10% of the change in revenues, and higher demand for *Eliquis*. Average net selling prices for legacy BMS products did not increase after charge-backs, rebates, and discounts in 2019.

Europe revenues in 2019 were impacted by \$397 million from Celgene products, representing 7% of the change in revenues, and higher demand for *Eliquis* and *Opdivo*, partially offset by foreign exchange and lower demand for established brands. Average net selling prices for legacy BMS products were lower after charge-backs, rebates, and discounts in 2019.

Rest of World revenues in 2019 were impacted by \$210 million from Celgene products, representing 6% of the change in revenues, and higher demand for *Opdivo* and *Eliquis*, partially offset by foreign exchange and lower demand for established brands. Average net selling prices for legacy BMS products did not increase after charge-backs, rebates, and discounts in 2019.

No single country outside the U.S. contributed more than 10% of total revenues in 2019 and 2018.

GTN Adjustments

We recognize revenue net of GTN adjustments that are further described in “—Critical Accounting Policies.”

The activities and ending reserve balances for each significant category of GTN adjustments were as follows:

Dollars in Millions	Year Ended December 31, 2019			
	Charge-Backs and Cash Discounts	Medicaid and Medicare Rebates	Other Rebates, Returns, Discounts and Adjustments	Total
Balance at January 1, 2019	\$ 245	\$ 1,061	\$ 1,356	\$ 2,662
Celgene acquisition	116	426	846	1,388
Provision related to sales made in:				
Current period	3,679	5,003	3,482	12,164
Prior period	(4)	(62)	(66)	(132)
Payments and returns	(3,643)	(4,569)	(3,196)	(11,408)
Foreign currency translation and other	(2)	—	(6)	(8)
Balance at December 31, 2019	\$ 391	\$ 1,859	\$ 2,416	\$ 4,666

The reconciliation of gross product sales to net product sales by each significant category of GTN adjustments was as follows:

Dollars in Millions	Year Ended December 31,		% Change
	2019	2018	2019 vs. 2018
Gross product sales	\$ 37,206	\$ 30,174	23%
GTN Adjustments			
Charge-backs and cash discounts	(3,675)	(2,735)	34%
Medicaid and Medicare rebates	(4,941)	(3,225)	53%
Other rebates, returns, discounts and adjustments	(3,416)	(2,633)	30%
Total GTN Adjustments	(12,032)	(8,593)	40%
Net product sales	\$ 25,174	\$ 21,581	17%
GTN adjustments percentage	32%	28%	4%
U.S.	40%	36%	4%
Non-U.S.	15%	13%	2%

GTN adjustments are primarily a function of product sales volume, regional and payer channel mix, contractual or legislative discounts and rebates. GTN adjustments are increasing at a higher rate than gross product sales due to higher U.S. *Eliquis* gross product sales, which has a relatively high GTN adjustment percentage as a result of higher Medicare Part D coverage gap cost share and competitive pressures to maintain its position on healthcare payer formularies allowing patients continued access through their medical plans.

Product Revenues

Dollars in Millions	Year Ended December 31,		% Change
	2019	2018	2019 vs. 2018
Prioritized Brands			
<i>Revlimid</i>	\$ 1,299	\$ —	N/A
U.S.	899	—	N/A
Non-U.S.	400	—	N/A
<i>Eliquis</i>	7,929	6,438	23%
U.S.	4,755	3,760	26%
Non-U.S.	3,174	2,678	19%
<i>Opdivo</i>	7,204	6,735	7%
U.S.	4,344	4,239	2%
Non-U.S.	2,860	2,496	15%
<i>Orencia</i>	2,977	2,710	10%
U.S.	2,146	1,875	14%
Non-U.S.	831	835	—
<i>Pomalyst/Imnovid</i>	322	—	N/A
U.S.	226	—	N/A
Non-U.S.	96	—	N/A
<i>Sprycel</i>	2,110	2,000	6%
U.S.	1,191	1,091	9%
Non-U.S.	919	909	1%
<i>Yervoy</i>	1,489	1,330	12%
U.S.	1,004	941	7%
Non-U.S.	485	389	25%
<i>Abraxane</i>	166	—	N/A
U.S.	122	—	N/A
Non-U.S.	44	—	N/A
<i>Empliciti</i>	357	247	45%
U.S.	246	164	50%
Non-U.S.	111	83	34%
<i>Inrebic</i>	5	—	N/A
U.S.	5	—	N/A
Non-U.S.	—	—	N/A

Dollars in Millions	Year Ended December 31,		% Change
	2019	2018	2019 vs. 2018
Established Brands			
<i>Baraclude</i>	\$ 555	\$ 744	(25)%
U.S.	20	32	(38)%
Non-U.S.	535	712	(25)%
<i>Vidaza</i>	58	—	N/A
U.S.	1	—	N/A
Non-U.S.	57	—	N/A
Other Brands ^(a)	1,674	2,357	(29)%
U.S.	383	484	(21)%
Non-U.S.	1,291	1,873	(31)%
Total Revenues	26,145	22,561	16 %
U.S.	15,342	12,586	22 %
Non-U.S.	10,803	9,975	8 %

(a) Includes BMS and Celgene products in 2019.

Revlimid (lenalidomide) — an oral immunomodulatory drug that in combination with dexamethasone is indicated for the treatment of patients with multiple myeloma. *Revlimid* as a single agent is also indicated as a maintenance therapy in patients with multiple myeloma following autologous hematopoietic stem cell transplant.

Eliquis (apixaban) — an oral Factor Xa inhibitor, targeted at stroke prevention in adult patients with NVAF and the prevention and treatment of VTE disorders.

- U.S. revenues increased due to higher demand, partially offset by higher Medicare Part D coverage gap cost share (from 50% in 2018 to 70% in 2019).
- International revenues increased due to higher demand. Excluding foreign exchange impacts, revenues increased by 24% in 2019.

Opdivo (nivolumab) — a fully human monoclonal antibody that binds to the PD-1 on T and NKT cells that has been approved for several anti-cancer indications including bladder, blood, colon, head and neck, kidney, liver, lung, melanoma and stomach and continues to be investigated across other tumor types and disease areas.

- U.S. revenues increased due to higher average net selling price. The decline in growth rate from 37% in 2018 to 2% in 2019 was primarily due to a smaller previously-treated advanced lung cancer market and increased competition for the *Opdivo*+*Yervoy* combination in kidney cancer. We expect this trend to continue until the market stabilizes or new indications are approved and launched.
- International revenues increased due to higher demand as a result of approvals for additional indications in 2018 and launches in Europe and Asia. Excluding foreign exchange impacts, revenues increased by 22% in 2019.

Orencia (abatacept) — a fusion protein indicated for adult patients with moderate to severe active RA and PsA and is also indicated for reducing signs and symptoms in certain pediatric patients with moderately to severely active polyarticular JIA.

- U.S. revenues increased due to higher demand and higher average net selling price.
- Excluding foreign exchange impacts, international revenues increased by 5% in 2019.

Pomalyst/Imnovid (pomalidomide) — a proprietary, distinct, small molecule that is administered orally and modulates the immune system and other biologically important targets. *Pomalyst/Imnovid* is indicated for patients with multiple myeloma who have received at least two prior therapies including lenalidomide and a proteasome inhibitor and have demonstrated disease progression on or within 60 days of completion of the last therapy.

Sprycel (dasatinib) — an oral inhibitor of multiple tyrosine kinase indicated for the first-line treatment of adults with Philadelphia chromosome-positive CML in chronic phase and the treatment of adults with chronic, accelerated, or myeloid or lymphoid blast phase CML with resistance or intolerance to prior therapy, including *Gleevec** (imatinib mesylate).

- U.S. revenues increased due to higher average net selling price and higher demand.
- International revenues were unchanged in 2019, but may decline due to generic European competition.

Yervoy (ipilimumab) — a monoclonal antibody for the treatment of patients with unresectable or metastatic melanoma.

- U.S. revenues increased due to higher demand and higher average net selling price.
- International revenues increased due to higher demand as a result of approvals for additional indications and launches primarily in Europe and Japan in 2018. Excluding foreign exchange impacts, revenue increased by 31% in 2019.

Abraxane (paclitaxel albumin-bound particles for injectable suspension) — a solvent-free protein-bound chemotherapy product that combines paclitaxel with albumin using our proprietary nab[®] technology platform, and is used to treat breast cancer, NSCLC and pancreatic cancer, among others.

Inrebic (fedratinib) — an oral kinase inhibitor with activity against wild type and mutationally activated JAK2 and FLT3. In August 2019, the FDA approved *Inrebic* for the treatment of adult patients with intermediate-2 or high-risk primary or secondary (post-polycythemia vera or post-essential thrombocythemia) myelofibrosis.

Reblozyl (lusparcept-aamt) — an erythroid maturation agent indicated for the treatment of anemia in adult patients with beta thalassemia who require regular red blood cell transfusions. In November 2019, the FDA approved *Reblozyl* for the treatment of anemia in adult patients with beta thalassemia who require RBC transfusions.

Baraclude (entecavir) — an oral antiviral agent for the treatment of chronic hepatitis B.

- International revenues decreased due to lower demand resulting from increased generic competition.

Vidaza (azacitidine for injection) — is a pyrimidine nucleoside analog that has been shown to reverse the effects of deoxyribonucleic acid hypermethylation and promote subsequent gene re-expression and is indicated for treatment of patients with the following myelodysplastic syndrome subtypes: refractory anemia or refractory anemia with ringed sideroblasts (if accompanied by neutropenia or thrombocytopenia or requiring transfusions), refractory anemia with excess blasts, refractory anemia with excess blasts in transformation, and CML.

Other Brands — includes all other brands, including those which have lost exclusivity in major markets, OTC brands and royalty revenue.

- International revenues decreased primarily due to divestiture of the UPSA business and certain other brands and continued generic erosion.

Estimated End-User Demand

Pursuant to the SEC Consent Order described under “—SEC Consent Order”, we monitor the level of inventory on hand in the U.S. wholesaler distribution channel and outside of the U.S. in the direct customer distribution channel. We are obligated to disclose products with levels of inventory in excess of one month on hand or expected demand, subject to a *de minimis* exception. Estimated levels of inventory in the distribution channel in excess of one month on hand for the following products were not material to our results of operations as of the dates indicated. Below are international products that had estimated levels of inventory in the distribution channel in excess of one month on hand at September 30, 2019.

Perfalgan, an analgesic product, had 2.6 months of inventory on hand internationally at direct customers compared to 2.5 months of inventory on hand at June 30, 2019. The level of inventory on hand was primarily in the Gulf Countries due to inventory build to mitigate the risk of product supply disruption in these markets as a result of the sale of the Anagni manufacturing plant to Catalent Inc. in December 2019.

In the U.S., we generally determine our months on hand estimates using inventory levels of product on hand and the amount of out-movement provided by our three largest wholesalers, which account for approximately 93% of total gross sales of U.S. products. Factors that may influence our estimates include generic competition, seasonality of products, wholesaler purchases in light of increases in wholesaler list prices, new product launches, new warehouse openings by wholesalers and new customer stockings by wholesalers. In addition, these estimates are calculated using third-party data, which may be impacted by their recordkeeping processes.

Revlimid and *Pomalyst* are distributed in the U.S. primarily through contracted pharmacies under the *Revlimid* REMS and *Pomalyst* REMS programs, respectively. These are proprietary risk-management distribution programs tailored specifically to provide for the safe and appropriate distribution and use of *Revlimid* and *Pomalyst*. Internationally, *Revlimid* and *Imnovid* are distributed under mandatory risk-management distribution programs tailored to meet local authorities' specifications to provide for the products' safe and appropriate distribution and use. These programs may vary by country and, depending upon the country and the design of the risk-management program, the product may be sold through hospitals or retail pharmacies. *Abraxane*, *Inrebic* and *Vidaza* are distributed through wholesaler channel in the U.S. and direct customer distribution channel outside of the U.S.

Our non-U.S. businesses have significantly more direct customers. Information on available direct customer product level inventory and corresponding out-movement information and the reliability of third-party demand information varies widely. We limit our direct customer sales channel inventory reporting to where we can influence demand. When this information does not exist or is otherwise not available, we have developed a variety of methodologies to estimate such data, including using historical sales made to direct customers and third-party market research data related to prescription trends and end-user demand. Given the difficulties inherent in estimating third-party demand information, we evaluate our methodologies to estimate direct customer product level inventory and to calculate months on hand on an ongoing basis and make changes as necessary. Factors that may affect our estimates include generic competition, seasonality of products, price increases, new product launches, new warehouse openings by direct customers, new customer stockings by direct customers and expected direct customer purchases for governmental bidding situations. As such, all of the information required to estimate months on hand in the direct customer distribution channel for non-U.S. business for the year ended December 31, 2019 is not available prior to the filing of this 2019 Form 10-K. We will disclose any product with levels of inventory in excess of one month on hand or expected demand, subject to a *de minimis* exception, in the next quarterly report on Form 10-Q.

Expenses

Dollar in Millions	Year Ended December 31,		% Change
	2019	2018	2019 vs 2018
Cost of products sold ^(a)	\$ 8,078	\$ 6,467	25 %
Marketing, selling and administrative	4,871	4,551	7 %
Research and development	6,148	6,332	(3)%
Amortization of acquired intangible assets	1,135	97	**
Other (income)/expense, net	938	(854)	**
Total Expenses	\$ 21,170	\$ 16,593	28 %

** In excess of +/- 100%.

(a) Excludes amortization of acquired intangible assets.

Cost of products sold

Cost of products sold include material, internal labor and overhead costs from our owned manufacturing sites, third-party product supply costs and other supply chain costs managed by our global manufacturing and supply organization. Cost of products sold also includes royalties and profit sharing, certain excise taxes and foreign currency hedge settlement gains and losses. Cost of products sold typically vary between periods as a result of product mix and volume (particularly royalties and profit sharing), and to a lesser extent changes in foreign currency, price, inflation and costs attributed to manufacturing site exits. Cost of products sold excludes amortization from acquired intangible assets.

- Cost of products sold increased by \$1.6 billion due to higher royalties and profit sharing of \$702 million primarily from higher *Eliquis* sales, unwinding of inventory fair value adjustments of \$660 million, an impairment charge of \$126 million for a manufacturing and packaging facility and higher product sales.

Marketing, selling and administrative

Marketing, selling and administrative expenses primarily include salary and benefit costs, third-party professional and marketing fees, outsourcing fees, shipping and handling costs, advertising and product promotion costs. Expenses are managed through regional commercialization organizations or global enabling functions such as finance, legal, information technology and human resources. Certain expenses are shared with alliance partners based upon contractual agreements.

- Marketing, selling and administrative expenses increased by \$320 million in 2019 primarily due to Celgene expenses of approximately \$400 million, partially offset by foreign exchange impact of 2%.

Research and development

Research and development activities include discovery research, preclinical and clinical development, drug formulation and medical support of marketed products. Expenses include salary and benefit costs, third-party grants and fees paid to clinical research organizations, supplies, upfront and contingent milestone payments for licensing and asset acquisitions of investigational compounds, IPRD impairment charges and proportionate allocations of enterprise-wide costs. The allocations include facilities, information technology, employee stock compensation costs and other appropriate costs. Certain expenses are shared with alliance partners based upon contractual agreements. Expenses typically vary between periods for a number of reasons, including the timing of license and asset acquisition charges and IPRD impairment charges.

- Research and development expense decreased by \$184 million in 2019 due to \$1.1 billion of Nektar related charges in 2018, partially offset by Celgene expenses of approximately \$500 million and higher investment in IO and other immunology development programs.

Significant charges included in R&D expense were as follows:

Dollars in Millions	Year Ended December 31,	
	2019	2018
License and asset acquisition charges	\$ 25	\$ 1,135
IPRD impairments	32	—
Employee compensation charges	33	—
Site exit and other costs	167	79
Research and development significant charges	\$ 257	\$ 1,214

- License and asset acquisition charges resulted from strategic transactions to acquire or license certain investigational compounds (or options to acquire or license) as disclosed in “—Acquisitions, Divestitures, Licensing and Collaboration Arrangements.” Significant charges include an up-front charge of \$1.1 billion related to Nektar in 2018; a \$60 million milestone for Cormorant Pharmaceuticals in 2018 and \$25 million milestones in 2019 and 2018 for IFM Therapeutics, Inc.
- IPRD impairment charges includes the discontinued development of an investigational compound previously acquired with Medarex.
- Employee compensation charges resulted from the impact of retention and sign-on arrangements in connection with the Celgene transaction.
- Site exit and other costs include \$79 million in 2019 and 2018 resulting from the expected exit of R&D sites in the U.S. and an \$85 million charge in 2019 resulting from the purchase of priority review voucher expected to be used with an on-going development program.

Amortization of Acquired Intangible Assets

Amortization of intangible assets acquired as a result of business combinations.

- Amortization of acquired intangible assets increased by \$1.0 billion in 2019 as a result of the marketed product rights acquired with the Celgene transaction.

Other (income)/expense, net

- Other (income)/expense, net changed by \$1.8 billion in 2019 primarily due to \$2.0 billion of costs and expenses resulting from the Celgene transaction and a \$1.6 billion pension settlement charge, partially offset by a \$1.2 billion gain on the sale of the UPSA business and equity investments fair value adjustments.

Components of Other (income)/expense, net were as follows:

Dollars in Millions	Year Ended December 31,	
	2019	2018
Interest expense	\$ 656	\$ 183
Pension and postretirement	1,599	(27)
Royalties and licensing income	(1,360)	(1,353)
Divestiture gains	(1,168)	(178)
Acquisition expenses	657	—
Contingent value rights	523	—
Investment income	(464)	(173)
Integration expenses	415	—
Provision for restructuring	301	131
Equity investment (gains)/losses	(279)	512
Litigation and other settlements	77	76
Transition and other service fees	(37)	(12)
Intangible asset impairment	15	64
Equity in net loss/(income) of affiliates	4	(93)
Other	(1)	16
Other (income)/expense, net	\$ 938	\$ (854)

- Interest expense includes interest incurred on the approximately \$19.0 billion of notes issued in May 2019 (including \$340 million incurred prior to the Celgene acquisition date) and approximately \$19.9 billion of Celgene debt acquired in the 2019 exchange offer. Interest expense was reduced by \$18 million of amortization of the purchase price adjustment attributed to Celgene's debt.
- Pension and postretirement includes pension settlement charges, including \$1.6 billion primarily relating to the termination of the Bristol-Myers Squibb Retirement Income Plan in 2019.
- Royalties and licensing income primarily includes diabetes royalties of \$650 million in 2019 and \$661 million in 2018, and *Keytruda** royalties of \$545 million in 2019 and \$343 million in 2018. In addition, *Erbix** royalties of \$145 million, a \$50 million fee for amending a royalty rate and a \$25 million sales-based milestone were included in 2018.
- Divestiture gains resulted from the divestiture of the UPSA business in 2019 and multiple mature global product lines in 2018.
- Acquisition expenses include the following items related to the Celgene transaction: (1) upfront bridge facility commitment, term loan and debt exchange fees of \$135 million, (2) acquisition financing hedge losses of \$278 million and (3) financial advisory, legal, proxy filing and other transaction costs of \$244 million.
- Contingent value rights include fair value adjustments resulting from changes in the traded price of the securities.
- Investment income includes \$197 million of interest income earned on the net proceeds of the new notes issued prior to the Celgene transaction. The net proceeds were used to fund a portion of the Celgene acquisition cash consideration and to pay related fees and expenses.
- Integration expenses include consulting fees incurred in connection with Celgene integration activities.
- Restructuring charges include exit costs primarily related to employee termination benefits and contract terminations. Restructuring charges related to the prior company transformation initiatives were \$45 million in 2019 and \$131 million in 2018. Restructuring charges related to the Celgene transaction were \$256 million in 2019, including \$145 million of accelerated vesting of Celgene equity awards. Refer to "Consolidated Financial Statements—Note 6. Restructuring" for further information.
- Equity investment (gains)/losses includes fair value adjustments related to equity investments in uniQure N.V., Nektar and other equity investments obtained in the Celgene transaction. In addition, \$80 million related to the termination of our Europe and Asia partnership with Sanofi in 2019.
- Litigation and other settlements include \$75 million related to a government pricing matter in 2019 and \$70 million related to intellectual property and product liability settlements in 2018.
- Intangible asset impairment includes \$64 million in 2018 for an out-licensed asset obtained in the acquisition of ZymoGenetics, Inc., which did not meet its primary endpoint in a Phase II clinical study.
- Equity in net loss/(income) of affiliates is primarily related to our partnership with Sanofi in Europe and Asia, which was terminated in 2019 and other investments in limited partnerships.

Income Taxes

Dollars in Millions	Year Ended December 31,	
	2019	2018
Earnings Before Income Taxes	\$ 4,975	\$ 5,968
Provision for Income Taxes	1,515	1,021
Effective Tax Rate	30.5%	17.1%
Impact of Specified Items	15.7%	—
Effective Tax Rate Excluding Specified Items	14.8%	17.1%

The tax impact attributed to specified items, including the *Otezla** divestiture, certain non-deductible expenses and purchase price adjustments, increased the effective tax rate by 15.7% in 2019. Taxes attributed to internal cash repatriations in 2018, lower state taxes in 2019, Swiss tax reform and other adjustments upon finalization of the 2018 tax returns accounted for a 2.3% reduction in the effective income tax rates compared to the prior period. Tax reserve releases due to lapse of statutes were \$81 million in 2019 and \$119 million in 2018. Refer to “Consolidated Financial Statements—Note 7. Income Taxes” for further information.

Non-GAAP Financial Measures

Our non-GAAP financial measures, including non-GAAP earnings and related EPS information, are adjusted to exclude certain costs, expenses, gains and losses and other specified items that are evaluated on an individual basis. These items are adjusted after considering their quantitative and qualitative aspects and typically have one or more of the following characteristics, such as being highly variable, difficult to project, unusual in nature, significant to the results of a particular period or not indicative of future operating results. Similar charges or gains were recognized in prior periods and will likely reoccur in future periods including (1) amortization of acquired intangible assets beginning in the fourth quarter of 2019, including product rights that generate a significant portion of our ongoing revenue and will recur until the intangible assets are fully amortized, (2) unwind of inventory fair value adjustments, (3) acquisition and integration expenses, (4) restructuring costs, (5) accelerated depreciation and impairment of property, plant and equipment and intangible assets, (6) R&D charges or other income resulting from upfront or contingent milestone payments in connection with the acquisition or licensing of third-party intellectual property rights, (7) costs of acquiring a priority review voucher, (8) divestiture gains or losses, (9) stock compensation resulting from accelerated vesting of Celgene awards and certain retention-related compensation charges related to the Celgene transaction, (10) pension, legal and other contractual settlement charges, (11) interest expense on the notes issued in May 2019 prior to our Celgene transaction and interest income earned on the net proceeds of those notes and (12) amortization of fair value adjustments of debt acquired from Celgene in our 2019 exchange offer, among other items. Deferred and current income taxes attributed to these items are also adjusted for considering their individual impact to the overall tax expense, deductibility and jurisdictional tax rates. Certain other significant tax items are also excluded such as the impact of the U.S. tax reform. We also provide international revenues for our priority products excluding the impact of foreign exchange. Reconciliations of these non-GAAP measures to the most comparable GAAP measures are included in Exhibit 99.2 to our Form 8-K filed on February 6, 2020 and are incorporated herein by reference.

Non-GAAP information is intended to portray the results of our baseline performance, supplement or enhance management, analysts and investors' overall understanding of our underlying financial performance and facilitate comparisons among current, past and future periods. For example, non-GAAP earnings and EPS information is an indication of our baseline performance before items that are considered by us to not be reflective of our ongoing results. In addition, this information is among the primary indicators that we use as a basis for evaluating performance, allocating resources, setting incentive compensation targets and planning and forecasting for future periods. This information is not intended to be considered in isolation or as a substitute for net earnings or diluted EPS prepared in accordance with GAAP and may not be the same as or comparable to similarly titled measures presented by other companies due to possible differences in method and in the items being adjusted. We encourage investors to review our financial statements and publicly-filed reports in their entirety and not to rely on any single financial measure.

Amortization of acquired intangible assets were previously included in non-GAAP earnings and EPS information. These amounts have become significant to the financial results subsequent to the Celgene acquisition and as a result, have been excluded in the non-GAAP results to better reflect our core operating performance. Comparable prior period non-GAAP results have not been revised to include this adjustment as the related amounts were insignificant (\$97 million in 2018).

Specified items were as follows:

Dollars in Millions	Year Ended December 31,	
	2019	2018
Inventory purchase price accounting adjustments	\$ 660	\$ —
Employee compensation charges	1	—
Site exit and other costs	197	58
Cost of products sold	858	58
Employee compensation charges	27	—
Site exit and other costs	9	2
Marketing, selling and administrative	36	2
License and asset acquisition charges	25	1,135
IPRD impairments	32	—
Employee compensation charges	33	—
Site exit and other costs	167	79
Research and development	257	1,214
Amortization of acquired intangible assets	1,062	—
Interest expense	322	—
Pension and postretirement	1,635	121
Royalties and licensing income	(24)	(75)
Divestiture gains	(1,168)	(177)
Acquisition expenses	657	—
Contingent value rights	523	—
Investment income	(197)	—
Integration expenses	415	—
Provision for restructuring	301	131
Equity investment (gains)/losses	(279)	512
Litigation and other settlements	75	70
Intangible asset impairment	—	64
Other	2	—
Other (income)/expense, net	2,262	646
Increase to pretax income	4,475	1,920
Income taxes on items above	(687)	(268)
Income taxes attributed to <i>Otezla</i> * divestiture	808	—
Income taxes attributed to U.S. tax reform	—	(56)
Income taxes	121	(324)
Increase to net earnings	\$ 4,596	\$ 1,596

The reconciliations from GAAP to Non-GAAP were as follows:

Dollars in Millions, except per share data	Year Ended December 31,	
	2019	2018
Net Earnings Attributable to BMS used for Diluted EPS Calculation — GAAP	\$ 3,439	\$ 4,920
Specified Items	4,596	1,596
Net Earnings Attributable to BMS used for Diluted EPS Calculation — Non-GAAP	\$ 8,035	\$ 6,516
Weighted Average Common Shares Outstanding — Diluted	1,712	1,637
Diluted EPS Attributable to BMS — GAAP	\$ 2.01	\$ 3.01
Diluted EPS Attributable to Specified Items	2.68	0.97
Diluted EPS Attributable to BMS — Non-GAAP	\$ 4.69	\$ 3.98

Financial Position, Liquidity and Capital Resources

Our net (debt)/cash position was as follows:

Dollars in Millions	December 31,	
	2019	2018
Cash and cash equivalents	\$ 12,346	\$ 6,911
Marketable debt securities — current	3,047	1,848
Marketable debt securities — non-current	767	1,775
Total cash, cash equivalents and marketable debt securities	16,160	10,534
Short-term debt obligations	(3,346)	(1,703)
Long-term debt	(43,387)	(5,646)
Net (debt)/cash position ^(a)	\$ (30,573)	\$ 3,185

(a) Prior period amounts were conformed to current period presentation.

Cash, cash equivalents and marketable securities held in the U.S. were approximately \$13.6 billion at December 31, 2019. We expect flexibility in accessing cash and future cash that may be generated in foreign subsidiaries. We believe that our existing cash, cash equivalents and marketable securities together with cash generated from operations and if required, the issuance of commercial paper supported by our credit facilities will be sufficient to satisfy our anticipated cash needs for at least the next few years, including dividends, capital expenditures, milestone payments, contingent value rights, working capital, restructuring initiations, business development, deemed repatriation transition tax and \$2.8 billion of debt maturing in 2020.

Management continuously evaluates the capital structure to ensure the Company is financed efficiently, which may result in the repurchase of common stock and debt securities, termination of interest rate swap contracts prior to maturity and issuance of debt securities. We may purchase CVRs issued in connection with the Celgene transaction. We repurchased 105 million shares of our common stock for \$5.9 billion in 2019, including 99 million shares for \$5.6 billion under our accelerated share repurchase program announced on November 20, 2019. Our Board of Directors approved an increase of \$5 billion to the share repurchase authorization for the Company's common stock in February 2020, increasing the total outstanding share repurchase authorization, after giving effect to the \$5.9 billion share repurchase in 2019, to approximately \$6.0 billion.

Dividend payments were \$2.7 billion in 2019 and \$2.6 billion in both 2018 and 2017. Dividend decisions are made on a quarterly basis by our Board of Directors. Annual capital expenditures were approximately \$800 million in 2019, \$1.0 billion in 2018 and \$1.1 billion in 2017 and are expected to be approximately \$900 million in 2020 and \$1.3 billion in 2021. We continue to expand our biologics manufacturing capabilities and other facility-related activities. For example, we constructed a new large-scale biologics manufacturing facility in Ireland that was approved by the FDA in December 2019 and by the EU in January 2020. The facility is expected to produce multiple therapies for our growing biologics portfolio.

Our investment portfolio includes non-current marketable securities, which are subject to changes in fair value as a result of interest rate fluctuations and other market factors. Our investment policy establishes limits on the amount and time to maturity of investments with any institution. The policy also requires that investments are only entered into with corporate and financial institutions that meet high credit quality standards. Refer to “Consolidated Financial Statements—Note 9. Financial Instruments and Fair Value Measurements” for further information.

Under our commercial paper program, we may issue a maximum of \$5 billion unsecured notes that have maturities of not more than 366 days from the date of issuance. There were no commercial paper borrowings outstanding as of December 31, 2019.

As of December 31, 2019, we had four revolving credit facilities totaling \$6.0 billion, which consisted of a 364-day \$2.0 billion facility expiring in January 2021, a \$1.0 billion facility expiring in January 2022 and two five-year \$1.5 billion facilities that were extended to September 2023 and July 2024, respectively. The facilities provide for customary terms and conditions with no financial covenants and may be used to provide backup liquidity for our commercial paper borrowings. Our \$1.0 billion facility and our two \$1.5 billion revolving facilities are extendable annually by one year on the anniversary date with the consent of the lenders. Our 364-day \$2.0 billion facility can be renewed for one year on each anniversary date, subject to certain terms and conditions. No borrowings were outstanding under any revolving credit facility at December 31, 2019 and 2018.

In May 2019, we issued an aggregate principal amount of approximately \$19.0 billion of floating rate and fixed rate unsecured senior notes at maturities ranging from 18 months to 30 years. In connection with the Celgene transaction, we also acquired approximately \$19.9 billion of Celgene debt in our 2019 exchange offer.

Economic and Market Factors

Additional regulations in the U.S. could be passed in the future including additional healthcare reform initiatives, further changes to tax laws, additional pricing laws and potential importation restrictions which may reduce our results of operations, operating cash flow, liquidity and financial flexibility. We continue to monitor the potential impact of the economic conditions in certain European and other countries and the related impact on prescription trends, pricing discounts and creditworthiness of our customers. We believe these economic conditions will not have a material impact on our liquidity, cash flow or financial flexibility.

The UK departed from the EU on January 31, 2020. The departure began a transition period that is set to end on December 31, 2020, during which the UK and the EU will negotiate their future relationship. Similar to other companies in our industry, certain regulatory, trade, labor and other aspects of our business will likely be affected during the transition period and over time. However, we currently do not believe that these matters and other related financial effects will have a material impact on our consolidated results of operations, financial position or liquidity. Our sales in the UK represent less than 3% of our total revenues.

The global health emergency concerning the spread of the 2019 Novel Coronavirus is currently unknown. Although we are not aware of any material impact on our operations, we continue to monitor the situation very closely including the supply of our commercial and clinical medicines in the region.

Credit Ratings

In November 2019, Moody's and S&P completed their ratings review of our acquisition of Celgene and concluded that the Company's credit rating would remain unchanged. BMS's current long-term and short-term credit ratings assigned by Moody's Investors Service were confirmed at A2 and Prime-1, respectively, with a negative long-term credit outlook. BMS's current long-term and short-term credit ratings assigned by Standard & Poor's were confirmed at A+ and A-1+, respectively. The long-term ratings reflect the agencies' opinion that we have a low default risk but are somewhat susceptible to adverse effects of changes in circumstances and economic conditions. The short-term ratings reflect the agencies' opinion that we have good to extremely strong capacity for timely repayment. Any credit rating downgrade may affect the interest rate of any debt we may incur, the fair market value of existing debt and our ability to access the capital markets generally.

Cash Flows

The following is a discussion of cash flow activities:

Dollars in Millions	Year Ended December 31,	
	2019	2018
Cash flow provided by/(used in):		
Operating activities	\$ 8,067	\$ 5,940
Investing activities	(9,770)	(874)
Financing activities	7,621	(3,535)

Operating Activities

Cash flow from operating activities represents the cash receipts and disbursements from all of our activities other than investing and financing activities. Operating cash flow is derived by adjusting net earnings for noncontrolling interest, non-cash operating items, gains and losses attributed to investing and financing activities and changes in operating assets and liabilities resulting from timing differences between the receipts and payments of cash and when the transactions are recognized in our results of operations. As a result, changes in cash from operating activities reflect the timing of cash collections from customers and alliance partners; payments to suppliers, alliance partners and employees; customer discounts and rebates; and tax payments in the ordinary course of business. For example, annual employee bonuses are typically paid in the first quarter of the subsequent year. In addition, cash collections continue to be impacted by longer payment terms for certain biologic products in the U.S., primarily our newer oncology products including *Opdivo*, *Yervoy* and *Empliciti* (90 days in 2019 and 90 to 120 days in 2018). The longer payment terms are used to more closely align with the insurance reimbursement timing for physicians and cancer centers following administration to the patients.

The \$2.1 billion change in cash flow from operating activities compared to 2018 was primarily attributable to:

- Higher cash collections and timing of payments in the ordinary course of business of approximately \$3.0 billion, including approximately \$1.0 billion relating to Celgene; and
- Lower R&D licensing and collaboration payments of approximately \$1.0 billion primarily due to the Nektar transaction in 2018. Partially offset by:
 - Higher income tax payments of approximately \$750 million; and
 - Celgene acquisition and integration related payments of approximately \$1.1 billion.

Investing Activities

Cash requirements from investing activities include cash used for acquisitions, manufacturing and facility-related capital expenditures and purchases of marketable securities with original maturities greater than 90 days at the time of purchase reduced by proceeds from business divestitures (including royalties) and the sale and maturity of marketable securities.

The \$8.9 billion change in cash flow from investing activities compared to 2018 was primarily attributable to higher net acquisition and other payments of approximately \$23.4 billion primarily due to the acquisition of Celgene, partially offset by higher business divestiture proceeds of approximately \$14.6 billion primarily due to the divestitures of *Otezla** and UPSA consumer health business.

Financing Activities

Cash requirements from financing activities include cash used to pay dividends, repurchase common stock and repay long-term debt and other borrowings reduced by proceeds from the exercise of stock options and issuance of long-term debt and other borrowings.

The \$11.2 billion change in cash flow from financing activities compared to 2018 was primarily attributable to higher net borrowing activity of approximately \$18.2 billion primarily resulting from the issuance of new notes in connection with the acquisition of Celgene, partially offset by accelerated stock repurchase cash payment of \$7.0 billion.

Contractual Obligations and Off-Balance Sheet Arrangements

Payments due by period for our contractual obligations at December 31, 2019 were as follows:

Dollars in Millions	Obligations Expiring by Period						
	Total	2020	2021	2022	2023	2024	Later Years
Short-term borrowings	\$ 583	\$ 583	\$ —	\$ —	\$ —	\$ —	\$ —
Long-term debt	44,335	2,750	2,000	4,750	3,267	4,286	27,282
Interest on long-term debt ^(a)	21,659	1,627	1,483	1,428	1,292	1,191	14,638
Operating leases	966	165	145	130	104	68	354
Purchase obligations	3,353	1,143	717	526	384	262	321
Uncertain tax positions ^(b)	85	85	—	—	—	—	—
Deemed repatriation transition tax	3,416	119	339	339	567	798	1,254
Total ^(c)	\$ 74,397	\$ 6,472	\$ 4,684	\$ 7,173	\$ 5,614	\$ 6,605	\$ 43,849

(a) Includes estimated future interest payments and periodic cash settlements of derivatives.

(b) Includes only short-term uncertain tax benefits because of uncertainties regarding the timing of resolution.

(c) Excludes other non-current liabilities because of uncertainties regarding the timing of resolution.

We are committed to an aggregate \$20.7 billion of potential future research and development milestone payments to third parties for in-licensing, asset acquisitions and development programs including early-stage milestones of \$6.9 billion (milestones achieved through Phase III clinical studies) and late-stage milestones of \$13.8 billion (milestones achieved post Phase III clinical studies). Payments generally are due and payable only upon achievement of certain developmental and regulatory milestones for which the specific timing cannot be predicted. Certain agreements also provide for sales-based milestones aggregating to \$14.7 billion that we would be obligated to pay to alliance partners upon achievement of certain sales levels in addition to royalties. We also have certain manufacturing, development and commercialization obligations in connection with alliance arrangements. It is not practicable to estimate the amount of these obligations. Refer to “Consolidated Financial Statements—Note 3. Alliances” for further information regarding our alliances.

Contingent value rights were issued in connection with the Celgene acquisition. These rights are measured at fair value and payments are contingent upon the achievement of future regulatory milestones. Each CVR right will entitle the shareholder to receive a one-time potential payment of \$9.00 in cash only upon FDA approval of all three of the following milestones: (1) ozanimod by December 31, 2020, (2) liso-cel (JCAR017) by December 31, 2020, and (3) ide-cel (bb2121) by March 31, 2021. No payment will be made if any of the milestones are not achieved and the CVRs will expire. The maximum potential payment under the CVRs is approximately \$6.8 billion, payable no later than 20 business days after the date on which the last milestone is achieved.

We do not have any off-balance sheet arrangements that are material or reasonably likely to become material to our financial condition or results of operations.

SEC Consent Order / FCPA Settlement

As previously disclosed, on August 4, 2004, we entered into a final settlement with the SEC, concluding an investigation concerning certain wholesaler inventory and accounting matters. The settlement was reached through a Consent, a copy of which was attached as Exhibit 10 to our quarterly report on Form 10-Q for the period ended September 30, 2004.

Under the terms of the Consent, we agreed, subject to certain defined exceptions, to limit sales of all products sold to our direct customers (including wholesalers, distributors, hospitals, retail outlets, pharmacies and government purchasers) based on expected demand or on amounts that do not exceed approximately one month of inventory on hand, without making a timely public disclosure of any change in practice. We also agreed in the Consent to certain measures that we have implemented including: (a) establishing a formal review and certification process of our annual and quarterly reports filed with the SEC; (b) establishing a business risk and disclosure group; (c) retaining an outside consultant to comprehensively study and help re-engineer our accounting and financial reporting processes; (d) publicly disclosing any sales incentives offered to direct customers for the purpose of inducing them to purchase products in excess of expected demand; and (e) ensuring that our budget process gives appropriate weight to inputs that come from the bottom to the top, and not just from the top to the bottom, and adequately documenting that process.

We have established a company-wide policy concerning our sales to direct customers for the purpose of complying with the Consent, which includes the adoption of various procedures to monitor and limit sales to direct customers in accordance with the terms of the Consent. These procedures include a governance process to escalate to appropriate management levels potential questions or concerns regarding compliance with the policy and timely resolution of such questions or concerns. In addition, compliance with the policy is monitored on a regular basis.

We maintain DSAs with our U.S. pharmaceutical wholesalers, which account for nearly 100% of our gross U.S. revenues. Under the current terms of the DSAs, our wholesaler customers provide us with weekly information with respect to months on hand product-level inventories and the amount of out-movement of products. The three largest wholesalers currently account for approximately 93% of our gross U.S. revenues. The inventory information received from our wholesalers, together with our internal information, is used to estimate months on hand product level inventories at these wholesalers. We estimate months on hand product inventory levels for our U.S. business’s wholesaler customers other than the three largest wholesalers by extrapolating from the months on hand calculated for the three largest wholesalers. In contrast, our non-U.S. business has significantly more direct customers, limited information on direct customer product level inventory and corresponding out-movement information and the reliability of third-party demand information, where available, varies widely. Accordingly, we rely on a variety of methods to estimate months on hand product level inventories for these business units.

We believe the above-described procedures provide a reasonable basis to ensure compliance with the Consent.

Recently Issued Accounting Standards

For recently issued accounting standards, refer to “Consolidated Financial Statements—Note 1. Accounting Policies and Recently Issued Accounting Standards.”

Critical Accounting Policies

The preparation of financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of revenue and expenses. Our critical accounting policies are those that significantly affect our financial condition and results of operations and require the most difficult, subjective or complex judgments, often because of the need to make estimates about the effect of matters that are inherently uncertain. Because of this uncertainty, actual results may vary from these estimates.

Revenue Recognition

Our accounting policy for revenue recognition has a substantial impact on reported results and relies on certain estimates. Revenue is recognized following a five-step model: (1) identify the customer contract; (2) identify the contract's performance obligation; (3) determine the transaction price; (4) allocate the transaction price to the performance obligation; and (5) recognize revenue when or as a performance obligation is satisfied. Revenue is also reduced for GTN sales adjustments discussed below, all of which involve significant estimates and judgment after considering legal interpretations of applicable laws and regulations, historical experience, payer channel mix (e.g. Medicare or Medicaid), current contract prices under applicable programs, unbilled claims and processing time lags and inventory levels in the distribution channel. Estimates are assessed each period and adjusted as required to revise information or actual experience.

The following categories of GTN adjustments involve significant estimates, judgments and information obtained from external sources. Refer to "Consolidated Financial Statements—Note 2. Revenue." for further discussion and analysis of each significant category of GTN sales adjustments.

Charge-backs and cash discounts

Our U.S. business participates in programs with government entities, the most significant of which are the U.S. Department of Defense and the U.S. Department of Veterans Affairs, and other parties, including covered entities under the 340B Drug Pricing Program, whereby pricing on products is extended below wholesaler list price to participating entities. These entities purchase products through wholesalers at the lower program price and the wholesalers then charge us the difference between their acquisition cost and the lower program price. Accounts receivable is reduced for the estimated amount of unprocessed charge-back claims attributable to a sale (typically within a two to four week time lag).

In the U.S. and certain other countries, cash discounts are offered as an incentive for prompt payment, generally approximating 2% of the sales price. Accounts receivable is reduced for the estimated amount of unprocessed cash discounts (typically within a one month time lag).

Medicaid and Medicare rebates

Our U.S. business participates in state government Medicaid programs and other qualifying Federal and state government programs requiring discounts and rebates to participating state and local government entities. All discounts and rebates provided through these programs are included in our Medicaid rebate accrual. Medicaid rebates have also been extended to drugs used in managed Medicaid plans. The estimated amount of unpaid or unbilled rebates is presented as a liability.

Rebates and discounts are offered to managed healthcare organizations in the U.S. managing prescription drug programs and Medicare Advantage prescription drug plans covering the Medicare Part D drug benefit. We also pay a 70% point of service discount to the CMS when the Medicare Part D beneficiaries are in the coverage gap ("donut hole"). The estimated amount of unpaid or unbilled rebates and discounts is presented as a liability.

Other rebates, returns, discounts and adjustments

Other GTN sales adjustments include sales returns and all other programs based on applicable laws and regulations for individual non-U.S. countries as well as rebates offered to managed healthcare organizations in the U.S. to a lesser extent. The non-U.S. programs include several different pricing schemes such as cost caps, volume discounts, outcome-based pricing schemes and pricing claw-backs that are based on sales of individual companies or an aggregation of all companies participating in a specific market. The estimated amount of unpaid or unbilled rebates and discounts is presented as a liability.

Estimated returns for established products are determined after considering historical experience and other factors including levels of inventory in the distribution channel, estimated shelf life, product recalls, product discontinuances, price changes of competitive products, introductions of generic products, introductions of competitive new products and lower demand following the LOE. Estimated returns for new products are determined after considering historical sales return experience of similar products, such as those within the same product line, similar therapeutic area and/or similar distribution model and estimated levels of inventory in the distribution channel and projected demand. The estimated amount for product returns is presented as a liability.

Use of information from external sources

Information from external sources is used to estimate GTN adjustments. Our estimate of inventory at the wholesalers is based on the projected prescription demand-based sales for our products and historical inventory experience, as well as our analysis of third-party information, including written and oral information obtained from certain wholesalers with respect to their inventory levels and sell-through to customers and third-party market research data, and our internal information. The inventory information received from wholesalers is a product of their recordkeeping process and excludes inventory held by intermediaries to whom they sell, such as retailers and hospitals.

We have also continued the practice of combining retail and mail prescription volume on a retail-equivalent basis. We use this methodology for internal demand forecasts. We also use information from external sources to identify prescription trends, patient demand and average selling prices. Our estimates are subject to inherent limitations of estimates that rely on third-party information, as certain third-party information was itself in the form of estimates, and reflect other limitations including lags between the date as of which third-party information is generated and the date on which we receive third-party information.

Long-lived AssetsIntangible Assets Valuations

A significant amount of the purchase price for the Celgene acquisition was allocated to intangible assets, including commercially marketed products and IPRD assets. Our intangible assets were \$64.0 billion as of December 31, 2019 and \$1.1 billion as of December 31, 2018.

Identifiable intangible assets are measured at their respective fair values as of the acquisition date. We engaged an independent third-party valuation firm to assist in determining the fair values of these assets as of the acquisition date. The fair value of these assets were estimated using discounted cash flow models. These models required the use of the following significant estimates and assumptions among others:

- Identification of product candidates with sufficient substance requiring separate recognition;
- Estimates of revenues and operating profits related to commercial products or product candidates;
- Eligible patients, pricing and market share used in estimating future revenues;
- Probability of success for unapproved product candidates and additional indications for commercial products;
- Resources required to complete the development and approval of product candidates;
- Timing of regulatory approvals and exclusivity;
- Appropriate discount rate by products;
- Market participant income tax rates; and
- Allocation of expected synergies to products.

We believe the estimated and preliminary fair value assigned to intangible assets acquired used reasonable estimates and assumptions considering the facts and circumstances as of the acquisition date.

Impairment and Amortization of Long-lived Assets, including Intangible Assets

Long-lived assets include intangible assets and property, plant and equipment and are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable or at least annually for IPRD. Intangible assets are highly vulnerable to impairment charges, particularly newly acquired assets for recently launched products or IPRD. These assets are initially measured at fair value and therefore any reduction in expectations used in the valuations could potentially lead to impairment. Some of the more common potential risks leading to impairment include competition, earlier than expected LOE, pricing reductions, adverse regulatory changes or clinical study results, delay or failure to obtain regulatory approval for initial or follow on indications and unanticipated development costs, inability to achieve expected synergies resulting from cost savings and avoidance, higher operating costs, changes in tax laws and other macro-economic changes. The complexity in estimating the fair value of intangible assets in connection with an impairment test is similar to the initial valuation. If the carrying value of long-lived assets exceeds its fair value, then the asset is written-down to its fair value. Expectations of future cash flows are subject to change based upon the near and long-term production volumes and margins generated by the asset as well as any potential alternative future use. The estimated useful lives of long-lived assets is subjective and requires significant judgment regarding patent lives, future plans and external market factors. Long-lived assets are also periodically reviewed for changes in facts or circumstances resulting in a reduction to the estimated useful life of the asset, requiring the acceleration of depreciation.

Goodwill

Goodwill represents the excess of the consideration transferred over the estimated fair values of net assets acquired in a business combination. Goodwill was \$22.5 billion and \$6.5 billion as of December 31, 2019 and 2018, respectively.

We assess the goodwill balance within our single reporting unit annually and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable to determine whether any impairment in this asset may exist and, if so, the extent of such impairment. Goodwill is reviewed for impairment by assessing qualitative factors, including comparing our market capitalization to the carrying value of our assets. Events or circumstances that might require an interim evaluation include unexpected adverse business conditions, economic factors, unanticipated technological changes or competitive activities and acts by governments and courts.

Assets Held-for-Sale

The following criteria is considered before concluding assets are classified as held-for-sale: (1) management's commitment to a plan to sell, (2) availability for immediate sale in its present condition, (3) initiation of an active program to identify a buyer, (4) probability of a completed sale within one year, (5) actively marketed for sale at a reasonable price in relation to its current fair value, and (6) likelihood of significant changes to the plan will be made or that the plan will be withdrawn. If all of the criteria are met as of the balance sheet date, the assets and liabilities are presented separately in the balance sheet as held-for-sale at the lower of their carrying amount or fair value less costs to sell and are no longer depreciated or amortized while classified as held-for-sale.

Income Taxes

Valuation allowances are recognized to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. The assessment of whether or not a valuation allowance is required often requires significant judgment including long-range forecasts of future taxable income and evaluation of tax planning initiatives. Adjustments to the deferred tax valuation allowances are made to earnings in the period when such assessments are made. Our deferred tax assets were \$2.1 billion at December 31, 2019 (net of valuation allowances of \$2.8 billion) and \$1.6 billion at December 31, 2018 (net of valuation allowances of \$3.2 billion).

The U.S. federal net operating loss carryforwards were \$216 million at December 31, 2019. These carryforwards were acquired as a result of certain acquisitions and are subject to limitations under Section 382 of the Internal Revenue Code. The net operating loss carryforwards expire in varying amounts beginning in 2022. The foreign and state net operating loss carryforwards expire in varying amounts beginning in 2019 (certain amounts have unlimited lives).

As discussed more fully in "Consolidated Financial Statements—Note 7. Income Taxes", a provisional tax charge of \$2.6 billion attributable to the one-time deemed repatriation transition tax on certain foreign earnings was recognized in the fourth quarter of 2017. The accounting for the reduction of deferred tax assets to the 21% tax rate was complete as of December 31, 2017, and the tax charge for the deemed repatriation transition tax was completed as of December 31, 2018. The provisional tax charge for the deemed repatriation transition tax was reduced by \$56 million in 2018.

Prior to the Mead Johnson split-off in 2009, the following transactions occurred: (i) an internal spin-off of Mead Johnson shares while still owned by us; (ii) conversion of Mead Johnson Class B shares to Class A shares; and (iii) conversion of Mead Johnson & Company to a limited liability company. These transactions as well as the split-off of Mead Johnson through the exchange offer should qualify as tax-exempt transactions under the Internal Revenue Code based upon a private letter ruling received from the Internal Revenue Service related to the conversion of Mead Johnson Class B shares to Class A shares, and outside legal opinions.

Certain assumptions, representations and covenants by Mead Johnson were relied upon regarding the future conduct of its business and other matters which could affect the tax treatment of the exchange. For example, the current tax law generally creates a presumption that the exchange would be taxable to us, if Mead Johnson or its shareholders were to engage in transactions that result in a 50% or greater change in its stock ownership during a four year period beginning two years before the exchange offer, unless it is established that the exchange offer were not part of a plan or series of related transactions to effect such a change in ownership. If the internal spin-off or exchange offer were determined not to qualify as a tax exempt transaction, the transaction could be subject to tax as if the exchange was a taxable sale by us at market value.

In addition, a negative basis or excess loss account ("ELA") existed in our investment in stock of Mead Johnson prior to these transactions. We received an opinion from outside legal counsel to the effect that it is more likely than not that we eliminated the ELA as part of these transactions and do not have taxable income with respect to the ELA. The tax law in this area is complex and it is possible that even if the internal spin-off and the exchange offer is tax exempt under the Internal Revenue Code, the Internal Revenue Service could assert that we have additional taxable income for the period with respect to the ELA. We could be exposed to additional taxes if this were to occur. Based upon our understanding of the Internal Revenue Code and opinion from outside legal counsel, a tax reserve of \$244 million was established reducing the gain on disposal of Mead Johnson included in discontinued operations in 2009.

We agreed to certain tax related indemnities with Mead Johnson as set forth in the tax sharing agreement, including certain taxes related to its business prior to the completion of the initial public offering and created as part of the restructuring to facilitate the IPO. Mead Johnson has also agreed to indemnify us for potential tax effects resulting from the breach of certain representations discussed above as well as certain transactions related to the acquisition of Mead Johnson's stock or assets.

Liabilities are established for possible assessments by tax authorities resulting from known tax exposures including, but not limited to, transfer pricing matters, tax credits and deductibility of certain expenses. Such liabilities represent a reasonable provision for taxes ultimately expected to be paid and may need to be adjusted over time as more information becomes known.

For discussions on income taxes, refer to "Consolidated Financial Statements—Note 1. Accounting Policies and Recently Issued Accounting Standards—Income Taxes" and "—Note 7. Income Taxes."

Contingencies

In the normal course of business, we are subject to contingencies, such as legal proceedings and claims arising out of our business, that cover a wide range of matters, including, among others, government investigations, shareholder lawsuits, product and environmental liability, contractual claims and tax matters. We recognize accruals for such contingencies when it is probable that a liability will be incurred and the amount of the loss can be reasonably estimated. These estimates are subject to uncertainties that are difficult to predict and, as such, actual results could vary from these estimates.

For discussions on contingencies, refer to "Consolidated Financial Statements—Note 1. Accounting Policies and Recently Issued Accounting Standards—Contingencies," "—Note 7. Income Taxes" and "—Note 19. Legal Proceedings and Contingencies."

Product and Pipeline Developments

Our R&D programs are managed on a portfolio basis from early discovery through late-stage development and include a balance of early-stage and late-stage programs to support future growth. Our late stage R&D programs in Phase III development include both investigational compounds for initial indications and additional indications or formulations for marketed products. Spending on these programs represent approximately 40-50% of our annual R&D expenses in the last three years. *Opdivo* was the only investigational compound or marketed product that represented greater than 10% of our R&D expenses in the last three years. Our late-stage development programs could potentially have an impact on our revenue and earnings within the next few years if regulatory approvals are obtained and products are successfully commercialized. The following are the developments in our marketed products and our late-stage pipeline:

Product	Indication	Date	Developments
<i>Revlimid</i>	FL	December 2019	Announced the EC approval of a new indication for <i>Revlimid</i> , in combination with rituximab (anti-CD20 antibody), for the treatment of adult patients with previously treated FL (Grade 1-3a). This combination of <i>Revlimid</i> and rituximab (R ²) is the first chemotherapy-free combination regimen approved for the patients with FL by the EC.
<i>Eliquis</i>	NVAf/ACS	September 2019	Announced findings from NAXOS (Evaluation of ApiXaban in strOke and Systemic embolism prevention in patients with nonvalvular atrial fibrillation in the real-life setting in France), the largest real-world data analysis on OAC effectiveness and safety in Europe among patients with NVAf. In this analysis, <i>Eliquis</i> use was associated with a lower rate of major bleeding compared to a vitamin K antagonist, rivaroxaban and dabigatran. These data were featured as a late-breaking oral presentation at the European Society of Cardiology Congress 2019 in Paris, France.
		March 2019	Announced results from the Phase IV AUGUSTUS trial evaluating <i>Eliquis</i> versus vitamin K antagonists ("VKAs") in patients with NVAf and ACS and/or undergoing PCI. Results show that in patients receiving a P2Y12 inhibitor with or without aspirin (antiplatelet therapies), the proportion of patients with major or clinically relevant non-major bleeding at six months was significantly lower for those treated with <i>Eliquis</i> compared to those treated with a VKA.
	VTE	December 2019	Announced results from retrospective real-world data analyses reporting outcomes on the safety and effectiveness of <i>Eliquis</i> compared to low molecular weight heparin ("LMWH") or warfarin for the treatment of VTE in patients with active cancer. The real-world data analyses were highlighted during oral presentations at the American Society of Hematology Annual Meeting in Orlando, Florida. Results from the primary analysis showed that <i>Eliquis</i> use was associated with lower rates of major bleeding, clinically-relevant non-major ("CRNM") bleeding and recurrent VTE compared to LMWH. <i>Eliquis</i> was also associated with a lower rate of recurrent VTE and similar rates of major bleeding and CRNM bleeding compared to warfarin. Outcomes were defined based on diagnosis codes and setting of care.
	Atrial Fibrillation	November 2019	The BMS-Pfizer alliance announced the initiation of a new randomized controlled study, GUARD-AF, to determine if earlier detection of atrial fibrillation through screening in previously undiagnosed men and women at least 70 years of age in the U.S. ultimately impacts the rate of stroke, compared to usual standard medical care. This study will also assess potential bleeding leading to hospitalization, and therefore provide an evaluation of net clinical benefit or harm.

Product	Indication	Date	Developments
Opdivo	CRC	March 2019	Ono, our alliance partner for <i>Opdivo</i> in Japan, announced the submission of a supplemental application of <i>Opdivo</i> in Japan for additional indication of MSI-H unresectable advanced or recurrent CRC that has progressed following chemotherapy for a partial change in the approved items of the manufacturing and marketing approval. This is mainly based on the result from Phase II CheckMate-142 study evaluating <i>Opdivo</i> in patients with MSI-H or dMMR recurrent or metastatic CRC that has progressed on or after, or been intolerant of, at least one previous line of treatment with chemotherapy including fluoropyrimidine anticancer drugs.
	ESCC	September 2019	Announced results from the Phase III ATTRACTION-3 trial evaluating <i>Opdivo</i> versus chemotherapy for the treatment of patients with unresectable advanced or recurrent ESCC refractory or intolerant to combination therapy with fluoropyrimidine and platinum-based drugs. For the primary endpoint of overall survival, <i>Opdivo</i> demonstrated a statistically significant improvement over chemotherapy, with a 23% reduction in risk of death and a 2.5-month improvement in median overall survival compared to patients treated with chemotherapy. The safety profile for <i>Opdivo</i> in this trial was consistent with previously reported studies in ESCC and other solid tumors.
		May 2019	Ono, our alliance partner for <i>Opdivo</i> in Japan, announced the submission of a supplemental application of <i>Opdivo</i> for indication of unresectable advanced or recurrent esophageal cancer in Japan for a partial change in approved items of manufacturing and marketing approval.
	GBM	September 2019	Announced Phase III CheckMate-548 trial evaluating the addition of <i>Opdivo</i> to the current standard of care (temozolomide and radiation therapy) versus the standard of care alone did not meet one of its primary endpoints, progression-free survival, in patients with newly diagnosed GBM that is MGMT-methylated. The data monitoring committee recommended that the trial continue as planned to allow the other primary endpoint, overall survival, to mature. The Company remains blinded to all study data.
		May 2019	Announced Phase III CheckMate-498 trial evaluating <i>Opdivo</i> plus radiation versus temozolomide plus radiation in patients with newly diagnosed MGMT-unmethylated GBM did not meet its primary endpoint of overall survival at final analysis.
	HCC	June 2019	Announced topline results from CheckMate-459, a randomized Phase III study evaluating <i>Opdivo</i> versus sorafenib as a first-line treatment in patients with unresectable HCC. The trial did not achieve statistical significance for its primary endpoint of overall survival per the pre-specified analysis.
	Melanoma	October 2019	Announced the EC approval of <i>Opdivo</i> flat dosing schedule of 240 mg infused over 30 minutes every two weeks or 480 mg infused over 60 minutes every four weeks for the adjuvant treatment of adult patients with melanoma with involvement of lymph nodes or metastatic disease who have undergone complete resection.
		September 2019	Announced results of a three-year analysis of efficacy data from the Phase III CheckMate-238 study evaluating adjuvant use of <i>Opdivo</i> 3 mg/kg versus <i>Yervoy</i> 10 mg/kg in patients with Stage III or Stage IV melanoma who were at high risk of recurrence following complete surgical resection. At three years of follow-up, <i>Opdivo</i> continues to demonstrate superior recurrence-free survival compared to <i>Yervoy</i> , the active control, with recurrence-free survival rates of 58% and 45%, respectively.
		August 2019	Announced, with our alliance partner Nektar, that the FDA has granted Breakthrough Therapy Designation for investigational agent bempegaldesleukin (NKTR-214) in combination with <i>Opdivo</i> for the treatment of patients with previously untreated unresectable or metastatic melanoma. The Breakthrough Therapy Designation is based on clinical data which were recently reported in the 2019 American Society of Clinical Oncology Annual Meeting from the cohort of patients with metastatic melanoma that were treated with the doublet therapy in the ongoing PIVOT-02 Phase I/II clinical study.
	NSCLC	September 2019	Announced long-term pooled efficacy and safety results from the Phase III CheckMate-017 and CheckMate-057 studies in patients with previously treated advanced NSCLC. At five years, patients treated with <i>Opdivo</i> continued to experience long-term overall survival (“OS”) benefit versus docetaxel. OS rate at five years were 13.4% for <i>Opdivo</i> and 2.6% for docetaxel. The OS benefit for <i>Opdivo</i> -treated patients was observed across all subgroups.
		April 2019	Announced results from pooled analyses of survival data from four studies (CheckMate-017, -057, -063 and -003) in patients with previously-treated advanced NSCLC who were treated with <i>Opdivo</i> . In the pooled analysis of the four studies, 14% of all <i>Opdivo</i> -treated patients were alive at four years. Notably, in patients with PD-L1 greater than or equal to 1% and less than 1%, four-year overall survival rate were 19% and 11%, respectively.
	SCCHN	September 2019	Received approval in China for <i>Opdivo</i> , as a monotherapy in treatment of patients with SCCHN with disease progression on or after platinum-based therapy, and whose tumors have PD-L1 positive expression (defined as $\geq 1\%$ of tumor cells expressing PD-L1)
		January 2019	Acceptance in China of sBLA filing for patients who had previously been treated for metastatic or recurrent SCCHN.

Product	Indication	Date	Developments
<i>Opdivo+Yervoy</i>	HCC	November 2019	Announced that the FDA accepted our sBLA and granted Breakthrough Therapy Designation for <i>Opdivo</i> in combination with <i>Yervoy</i> for the treatment of patients with advanced HCC previously treated with sorafenib. The FDA granted the application Priority Review with a PDUFA goal date of March 10, 2020.
		June 2019	Announced first results from <i>Opdivo+Yervoy</i> cohort of the Phase I/II CheckMate-040 study, evaluating the IO combination in patients with advanced HCC previously treated with sorafenib. With a minimum follow-up of 28 months, the blinded independent central review objective response rate was 31% per Response Evaluation Criteria in Solid Tumors version 1.1. At the time of data cutoff the median duration of response was 17.5 months.
	mCRPC	February 2019	Announced results from an interim analysis of the Phase II CheckMate-650 trial evaluating <i>Opdivo+Yervoy</i> in patients with mCRPC showed that among 32 asymptomatic or minimally symptomatic patients whose disease had progressed after second-generation hormone therapy and who had not received chemotherapy (cohort 1), with a median follow-up of 11.9 months, the objective response rate was 25%. Additionally, among 30 patients whose disease progressed after taxane-based chemotherapy (cohort 2), with a median follow-up of 13.5 months, the objective response rate was 10%.
	Melanoma	November 2019	Announced results for one of the co-primary endpoints from CheckMate-915, a randomized Phase III study evaluating <i>Opdivo+Yervoy</i> versus <i>Opdivo</i> alone for the adjuvant treatment of patients who have had a complete surgical removal of stage IIb/c/d or stage IV (no evidence of disease) melanoma. A statistically significant benefit was not reached for the co-primary endpoint of recurrence-free survival ("RFS") in patients whose tumors expressed PD-L1 <1%. The Data Monitoring Committee recommended that the study continue unchanged. The study remains double-blinded and will continue to assess the other co-primary endpoint of RFS in the all-comer (intent-to-treat) population.
		September 2019	Announced five-year results from the Phase III CheckMate-067 clinical trial, which continues to demonstrate improved overall survival with the first-line combination of <i>Opdivo+Yervoy</i> , versus <i>Yervoy</i> alone, in patients with advanced metastatic melanoma. With a minimum follow-up of 60 months (five years), five-year overall survival rates were 52% for the <i>Opdivo+Yervoy</i> combination, 44% for <i>Opdivo</i> alone, and 26% for <i>Yervoy</i> alone.
		June 2019	Announced five-year analysis of the Phase I CA209-004 study, the longest follow-up for the <i>Opdivo+Yervoy</i> combination in patients with previously treated or untreated advanced melanoma to date. The analysis showed that with a median follow-up of 43.1 months (range: 0.9-76.7) in all patients, at four years or longer, overall survival rates were stable at 57%.
		June 2019	Announced that an analysis exploring long-term quality of life ("QoL") and symptom burden in the Phase III CheckMate-067 study found that QoL was maintained during the treatment-free interval, the period where a patient is off study treatment and free of subsequent therapy, in patients with previously untreated unresectable or metastatic melanoma following discontinuation of therapy with <i>Opdivo</i> or <i>Opdivo+Yervoy</i> .
		March 2019	Received FDA full approval for <i>Opdivo</i> in combination with <i>Yervoy</i> for the treatment of patients with unresectable or metastatic melanoma based on additional longer term efficacy data from CheckMate-067 (4-year overall survival) without restrictions in patient population. This approval fulfills two Post Marketing Requirements to verify and describe clinical benefit, thereby converting prior accelerated approval to full approval for nivolumab in combination with ipilimumab for patients with unresectable or metastatic melanoma and nivolumab monotherapy for BRAF Mutant subjects with unresectable or metastatic melanoma. Importantly, based on FDA review of the CheckMate-067 4-year overall survival data, the results of exploratory analyses by PD-L1 tumor expression have been removed entirely from the label.
	NSCLC	January 2020	Announced voluntary withdrawal of the Company's application in the EU for the combination of <i>Opdivo</i> and <i>Yervoy</i> for the treatment of advanced NSCLC based on data from CheckMate-227. The application was originally filed in 2018 for patients with first-line NSCLC who have tumor mutational burden ≥ 10 mutations/megabase, based on the final analysis of progression-free survival, a co-primary endpoint in the trial. The application was subsequently amended to include the statistically significant result of overall survival, a co-primary endpoint, from CheckMate-227 Part 1a evaluating <i>Opdivo+Yervoy</i> versus chemotherapy in patients whose tumors expressed PD-L1 $\geq 1\%$. Though the Committee for Medicinal Products for Human Use ("CHMP") acknowledged the integrity of the patient level data, the CHMP determined a full assessment of the application was not possible following multiple protocol changes the company made in response to rapidly evolving science and data. The company has no plans to refile this application in the EU.
		January 2020	Announced that the FDA accepted our sBLA for <i>Opdivo</i> in combination with <i>Yervoy</i> for the first-line treatment of patients with metastatic or recurrent NSCLC with no EGFR or ALK genomic tumor aberrations. This application is based on data from Part 1 of the Phase 3 CheckMate -227 trial evaluating <i>Opdivo</i> plus <i>Yervoy</i> versus chemotherapy in patients with previously untreated NSCLC, in which the dual immunotherapy combination demonstrated significant improvement in overall survival versus chemotherapy alone. The FDA granted the application Priority Review with a PDUFA goal date of May 15, 2020.

Product	Indication	Date	Developments
<i>Opdivo+Yervoy</i>	NSCLC	October 2019	Announced results from Phase III CheckMate-9LA trial evaluating <i>Opdivo</i> plus low-dose <i>Yervoy</i> given concomitantly with two cycles of chemotherapy as first-line treatment for patients with advanced NSCLC, met its primary endpoint of superior overall survival at a pre-specified interim analysis. The comparator in this study was chemotherapy alone for up to four cycles followed by optional maintenance therapy. The safety profile of <i>Opdivo</i> plus low-dose <i>Yervoy</i> and two cycles of chemotherapy in CheckMate-9LA was reflective of the known safety profiles of the immunotherapy and chemotherapy components in first-line NSCLC.
		September 2019	Announced results from Part 1 of the Phase III CheckMate-227 trial evaluating <i>Opdivo</i> plus low-dose <i>Yervoy</i> as first-line treatment for patients with advanced NSCLC. <i>Opdivo</i> plus low-dose <i>Yervoy</i> met the independent co-primary endpoint of overall survival, demonstrating superior benefit compared to chemotherapy in patients whose tumors expressed PD-L1 $\geq 1\%$. Additionally, in an exploratory analysis, results showed improved overall survival for patients treated with the combination of <i>Opdivo</i> plus low-dose <i>Yervoy</i> with PD-L1 $< 1\%$. The two-year survival rate for patients treated with the combination regimen was 40% for both patients whose tumors expressed PD-L1 $\geq 1\%$ and patients whose tumors expressed PD-L1 $< 1\%$. In the chemotherapy control arm, two-year survival rates were 33% and 23%, respectively.
		July 2019	Announced Part 2 of the Phase III CheckMate-227 study evaluating <i>Opdivo</i> plus chemotherapy versus chemotherapy did not meet its primary endpoint of overall survival in first-line non-squamous NSCLC patients regardless of PD-L1 status.
		January 2019	Announced voluntary withdrawal of the Company's sBLA for the <i>Opdivo</i> plus low-dose <i>Yervoy</i> for treatment of first-line advanced NSCLC in patients with TMB greater than or equal to 10 mutations per megabase as data from CheckMate-227, Part 1a. After discussions with FDA, the Company believes further evidence on the relationship between TMB and PD-L1 is required to fully evaluate the impact of <i>Opdivo</i> plus <i>Yervoy</i> on overall survival in first-line NSCLC patients. This analysis will require availability of the final data from CheckMate-227, Part 1a, which could not be provided on time within the review cycle of the current application.
	RCC	February 2019	Announced new results from the Phase III CheckMate-214 study, showing that therapy with <i>Opdivo</i> plus low-dose <i>Yervoy</i> continued to demonstrate long-term survival benefits in patients with previously untreated advanced or metastatic RCC.
		January 2019	Announced the EC approval of <i>Opdivo</i> plus low-dose <i>Yervoy</i> for previously untreated patients with intermediate and poor-risk advanced RCC.
	SCCHN	April 2019	Announced topline results from the Phase II CheckMate-714 trial evaluating <i>Opdivo</i> versus <i>Opdivo+Yervoy</i> in patients with recurrent or metastatic SCCHN. The study did not meet its primary endpoints.
<i>Orencia</i>	GvHD	December 2019	Announced that the FDA has granted Breakthrough Therapy Designation for <i>Orencia</i> for the prevention of moderate to severe acute GvHD in hematopoietic stem cell transplants from unrelated donors. There are no approved therapies for the prevention of acute GvHD, a potentially life-threatening medical complication that can impact patients receiving such transplants for the treatment of certain genetic diseases and hematologic cancers.
	JIA	April 2019	Received the EC notification on the adoption of the approval on our <i>Orencia</i> solution for subcutaneous injection in pre-filled syringe extension application (50 mg & 87.5 mg strength) and extension of indication for the treatment of polyarticular JIA in pediatric patients two years of age and older.
	RA	June 2019	Announced data from a Phase IV mechanistic study exploring differences in the cellular and molecular mechanisms by which <i>Orencia</i> and another treatment, adalimumab, interfere with disease progression in moderate-to-severe early RA patients seropositive for certain autoantibodies. Among 80 adult patients with early moderate-to-severe RA who had never been treated with a biologic medication and tested positive for autoantibodies called anti-citrullinated protein antibody and rheumatoid factor, numerically higher efficacy responses were seen with <i>Orencia</i> at week 24. These results, which are from a prospective analysis of the Early AMPLE head-to-head trial, are featured in a late-breaking oral presentation at the Annual European Congress of Rheumatology.
		March 2019	Announced the submission of supplemental applications of “ <i>Orencia</i> for Intravenous Infusion 250mg,” “ <i>Orencia</i> 125mg Syringe for Subcutaneous Injection 1mL” and “ <i>Orencia</i> 125mg Autoinjector for Subcutaneous Injection 1mL” to include the description of “inhibition of the structural damage of the joints” in the currently approved indication of RA for a partial change in approved items of the manufacturing and marketing approval in Japan.
<i>Sprycel</i>	ALL	February 2019	Announced the EC approval of <i>Sprycel</i> , in both tablet and powder for oral suspension formulations, in combination with chemotherapy for the treatment of pediatric patients with newly diagnosed Philadelphia chromosome-positive ALL.

Product	Indication	Date	Developments
<i>Empliciti</i>	Multiple Myeloma	November 2019	Announced the sJNDA for <i>Empliciti</i> in combination with pomalidomide and dexamethasone (EPd) was approved by the Japan Ministry of Health, Labour and Welfare. Approval was based on a global Phase II trial (ELOQUENT-3) in EPd for the treatment of patients with MM who have received at least two prior therapies, including lenalidomide and proteasome inhibitor.
		August 2019	Announced that the EC has approved <i>Empliciti</i> plus pomalidomide and low-dose dexamethasone (EPd) for the treatment of adult patients with RRMM who have received at least two prior therapies, including lenalidomide and a proteasome inhibitor, and have demonstrated disease progression on the last therapy.
		June 2019	Announced updated data from ELOQUENT-3, the international randomized Phase II study evaluating <i>Empliciti</i> plus pomalidomide and dexamethasone (EPd) versus pomalidomide and dexamethasone (Pd) alone in patients with RRMM. In a non-prespecified analysis conducted to provide a descriptive assessment of overall survival after extended follow-up of at least 18.3 months, patients treated with EPd continued to experience sustained and clinically relevant overall survival and progression-free survival benefits compared with patients treated with Pd. These data were presented at the 24th Congress of the European Hematology Association in a poster display.
		February 2019	Completed filing of a supplemental Japanese New Drug Application (sJNDA) for <i>Empliciti</i> in combination with pomalidomide and dexamethasone for the treatment of patients with multiple myeloma who have received at least two prior therapies, including <i>Revlimid</i> and proteasome inhibitor. The sJNDA filing was submitted based on the results of a global phase II study. The orphan designation was already granted for the indication of RRMM at the initial JNDA. This sJNDA will also be reviewed under “priority review.”
<i>Rebloyzl</i>	MDS	December 2019	Announced that following the late-cycle review meeting on December 4, 2019, BMS and Acceleron Pharma Inc. were notified by the FDA that <i>Rebloyzl</i> will not be reviewed at the Oncology Drugs Advisory Committee (“ODAC”) meeting scheduled for December 18, 2019. The agency has informed BMS that the original Prescription Drug User Fee Act, or target action, date of April 4, 2020 for its sBLA for <i>Rebloyzl</i> will remain, without the requirement for an ODAC review. BMS is seeking approval of <i>Rebloyzl</i> , an erythroid maturation agent representing a new class of therapy, for the treatment of adult patients with very low- to intermediate-risk MDS-associated anemia who have ring sideroblasts and require red blood cell transfusions.
liso-cel	Lymphoma	February 2020	Announced that the FDA has accepted for Priority Review its BLA for lisocabtagene maraleucel (liso-cel), the company's autologous anti-CD19 CAR T-cell immunotherapy with a defined composition of purified CD8+ and CD4+ CAR T cells for the treatment of adult patients with relapsed or refractory large B-cell lymphoma after at least two prior therapies. The FDA has set a Prescription Drug User Fee Act goal date of August 17, 2020. Liso-cel has been granted Breakthrough Therapy and Regenerative Medicine Advanced Therapy designations by the FDA for relapsed/refractory aggressive large B-cell non-Hodgkin lymphoma, including diffuse large B-cell lymphoma (“DLBCL”), not otherwise specified (de novo or transformed from indolent lymphoma), primary mediastinal B-cell lymphoma or Grade 3B follicular lymphoma and Priority Medicines scheme by the EMA for relapsed/refractory DLBC.

Special Note Regarding Forward-Looking Statements

This 2019 Form 10-K (including documents incorporated by reference) and other written and oral statements we make from time to time contain certain “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act. You can identify these forward-looking statements by the fact they use words such as “should,” “could,” “expect,” “anticipate,” “estimate,” “target,” “may,” “project,” “guidance,” “intend,” “plan,” “believe,” “will” and other words and terms of similar meaning and expression in connection with any discussion of future operating or financial performance. One can also identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. Such forward-looking statements are based on historical performance and current expectations and projections about our future financial results, goals, plans and objectives and involve inherent risks, assumptions and uncertainties, including internal or external factors that could delay, divert or change any of them in the next several years, and could cause our future financial results, goals, plans and objectives to differ materially from those expressed in, or implied by, the statements. These statements are likely to relate to, among other things, our goals, plans and objectives regarding our financial position, results of operations, cash flows, market position, product development, product approvals, sales efforts, expenses, performance or results of current and anticipated products, our ability to realize the projected benefits of the acquisition of Celgene and to successfully integrate Celgene's operations and the outcome of contingencies such as legal proceedings and financial results. No forward-looking statement can be guaranteed. We have included important factors in the cautionary statements included in our most recently filed 2019 Form 10-K, particularly under “Item 1A. Risk Factors,” that we believe could cause actual results to differ materially from any forward-looking statement.

Although we believe we have been prudent in our plans and assumptions, no assurance can be given that any goal or plan set forth in forward-looking statements can be achieved and readers are cautioned not to place undue reliance on such statements, which speak only as of the date made. Additional risks that we may currently deem immaterial or that are not presently known to us could also cause the forward-looking events discussed in this 2019 Form 10-K not to occur. Except as otherwise required by federal securities law, we undertake no obligation to release publicly any updates or revisions to any forward-looking statements as a result of new information, future events, changed circumstances or otherwise after the date of this 2019 Form 10-K.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk resulting from changes in currency exchange rates and interest rates. Certain derivative financial instruments are used when available on a cost-effective basis to hedge our underlying economic exposure. All of our financial instruments, including derivatives, are subject to counterparty credit risk considered as part of the overall fair value measurement. Derivative financial instruments are not used for trading purposes.

Foreign Exchange Risk

Significant amounts of our revenues, earnings and cash flow are exposed to changes in foreign currency rates. Our primary net foreign currency translation exposures are the euro and Japanese yen. Foreign currency forward contracts are used to manage risk primarily arising from certain intercompany sales and purchases transactions; we are also exposed to foreign exchange transaction risk arising from non-functional currency denominated assets and liabilities and earnings denominated in non-U.S. dollar currencies. Foreign currency forward contracts are used to offset these exposures but are not designated as hedges.

We estimate that a 10% appreciation in the underlying currencies being hedged from their levels against the U.S. dollar (with all other variables held constant) would decrease the fair value of foreign exchange forward contracts by \$358 million and \$231 million at December 31, 2019 and December 31, 2018, respectively, reducing earnings over the remaining life of the contracts.

We are also exposed to translation risk on non-U.S. dollar-denominated net assets. Non-U.S. dollar borrowings are used to hedge the foreign currency exposures of our net investment in certain foreign affiliates and are designated as hedges of net investments. The effective portion of foreign exchange gains or losses on these hedges is included in the foreign currency translation component of Accumulated other comprehensive loss. If our net investment decreases below the equivalent value of the non-U.S. debt borrowings, the change in the remeasurement basis of the debt would be subject to recognition in income as changes occur. For additional information, refer to “Consolidated Financial Statements—Note 9. Financial Instruments and Fair Value Measurements.”

Interest Rate Risk

We use fixed-to-floating interest rate swap contracts designated as fair value hedges to provide an appropriate balance of fixed and floating rate debt. We use cross-currency interest rate swap contracts designated to hedge the Company's net investment in its Japan subsidiary. The fair values of these contracts as well as our marketable debt securities are analyzed at year-end to determine their sensitivity to interest rate changes. In this sensitivity analysis, if there were a 100 basis point increase in short-term or long-term interest rates as of December 31, 2019 and December 31, 2018, the expected adverse impact on our earnings would not be material.

We estimate that an increase of 100 basis points in long-term interest rates at December 31, 2019 and December 31, 2018 would decrease the fair value of long-term debt by \$3.8 billion and \$482 million, respectively.

Credit Risk

We monitor our investments with counterparties with the objective of minimizing concentrations of credit risk. Our investment policy is to invest only in institutions that meet high credit quality standards and establishes limits on the amount and time to maturity of investments with any individual counterparty. The policy also requires that investments are only entered into with corporate and financial institutions that meet high credit quality standards.

The use of derivative instruments exposes us to credit risk if the counterparty fails to perform when the fair value of a derivative instrument contract is positive. If the counterparty fails to perform, collateral is not required by any party whether derivatives are in an asset or liability position. We have a policy of diversifying derivatives with counterparties to mitigate the overall risk of counterparty defaults. For additional information, refer to “Consolidated Financial Statements—Note 9. Financial Instruments and Fair Value Measurements.”

CONSOLIDATED STATEMENTS OF EARNINGS

Dollars in Millions, Except Per Share Data

EARNINGS	Year Ended December 31,		
	2019	2018	2017
Net product sales	\$ 25,174	\$ 21,581	\$ 19,258
Alliance and other revenues	971	980	1,518
Total Revenues	26,145	22,561	20,776
Cost of products sold ^(a)	8,078	6,467	6,014
Marketing, selling and administrative	4,871	4,551	4,751
Research and development	6,148	6,332	6,468
Amortization of acquired intangible assets	1,135	97	97
Other (income)/expense, net	938	(854)	(1,685)
Total Expenses	21,170	16,593	15,645
Earnings Before Income Taxes	4,975	5,968	5,131
Provision for Income Taxes	1,515	1,021	4,156
Net Earnings	3,460	4,947	975
Noncontrolling Interest	21	27	(32)
Net Earnings Attributable to BMS	\$ 3,439	\$ 4,920	\$ 1,007
Earnings per Common Share			
Basic	\$ 2.02	\$ 3.01	\$ 0.61
Diluted	2.01	3.01	0.61

(a) Excludes amortization of acquired intangible assets.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Dollars in Millions

COMPREHENSIVE INCOME	Year Ended December 31,		
	2019	2018	2017
Net Earnings	\$ 3,460	\$ 4,947	\$ 975
Other Comprehensive Income/(Loss), net of taxes and reclassifications to earnings:			
Derivatives qualifying as cash flow hedges	(32)	70	(57)
Pension and postretirement benefits	1,203	53	214
Available-for-sale securities	36	(25)	39
Foreign currency translation	35	(254)	18
Total Other Comprehensive Income/(Loss)	1,242	(156)	214
Comprehensive Income	4,702	4,791	1,189
Comprehensive Income/(Loss) Attributable to Noncontrolling Interest	21	27	(32)
Comprehensive Income Attributable to BMS	\$ 4,681	\$ 4,764	\$ 1,221

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEETS

Dollars in Millions, Except Share and Per Share Data

ASSETS	December 31,	
	2019	2018
Current Assets:		
Cash and cash equivalents	\$ 12,346	\$ 6,911
Marketable debt securities	3,047	1,848
Receivables	7,685	5,747
Inventories	4,293	1,195
Other current assets	1,983	2,015
Total Current Assets	29,354	17,716
Property, plant and equipment	6,252	5,027
Goodwill	22,488	6,538
Other intangible assets	63,969	1,091
Deferred income taxes	510	815
Marketable debt securities	767	1,775
Other non-current assets	6,604	2,024
Total Assets	\$ 129,944	\$ 34,986
LIABILITIES		
Current Liabilities:		
Short-term debt obligations	\$ 3,346	\$ 1,703
Accounts payable	2,445	1,892
Other current liabilities	12,513	7,059
Total Current Liabilities	18,304	10,654
Deferred income taxes	6,454	19
Long-term debt	43,387	5,646
Other non-current liabilities	10,101	4,540
Total Liabilities	78,246	20,859
Commitments and contingencies		
EQUITY		
Bristol-Myers Squibb Company Shareholders' Equity:		
Preferred stock, \$2 convertible series, par value \$1 per share: Authorized 10 million shares; issued and outstanding 3,568 in 2019 and 3,590 in 2018, liquidation value of \$50 per share	—	—
Common stock, par value of \$0.10 per share: Authorized 4.5 billion shares; 2.9 billion issued in 2019 and 2.2 billion issued in 2018	292	221
Capital in excess of par value of stock	43,709	2,081
Accumulated other comprehensive loss	(1,520)	(2,762)
Retained earnings	34,474	34,065
Less cost of treasury stock — 672 million common shares in 2019 and 576 million common shares in 2018	(25,357)	(19,574)
Total Bristol-Myers Squibb Company Shareholders' Equity	51,598	14,031
Noncontrolling interest	100	96
Total Equity	51,698	14,127
Total Liabilities and Equity	\$ 129,944	\$ 34,986

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Dollars in Millions

	Year Ended December 31,		
	2019	2018	2017
Cash Flows From Operating Activities:			
Net earnings	\$ 3,460	\$ 4,947	\$ 975
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization, net	1,746	637	789
Deferred income taxes	(924)	45	453
Stock-based compensation	441	221	199
Impairment charges	199	126	327
Pension settlements and amortization	1,688	186	236
Divestiture gains and royalties	(1,855)	(992)	(706)
Asset acquisition charges	25	85	760
Equity investment (gains)/losses	(279)	512	(23)
Contingent consideration fair value adjustments	523	—	—
Other adjustments	(22)	(44)	120
Changes in operating assets and liabilities:			
Receivables	752	(429)	(431)
Inventories	463	(216)	(29)
Accounts payable	229	(59)	320
Deferred income	12	84	(642)
Income taxes payable	907	203	3,154
Other	702	634	(227)
Net Cash Provided by Operating Activities	8,067	5,940	5,275
Cash Flows From Investing Activities:			
Sale and maturities of marketable debt securities	3,809	2,379	6,398
Purchase of marketable debt securities	(3,961)	(2,305)	(5,419)
Capital expenditures	(836)	(951)	(1,055)
Divestiture and other proceeds	15,852	1,249	736
Acquisition and other payments, net of cash acquired	(24,634)	(1,246)	(726)
Net Cash Used in Investing Activities	(9,770)	(874)	(66)
Cash Flows From Financing Activities:			
Short-term debt obligations, net	131	(543)	727
Issuance of long-term debt	26,778	—	1,488
Repayment of long-term debt	(9,256)	(5)	(1,224)
Repurchase of common stock	(7,300)	(320)	(2,469)
Dividends	(2,679)	(2,613)	(2,577)
Other	(53)	(54)	(22)
Net Cash Provided by/(Used in) Financing Activities	7,621	(3,535)	(4,077)
Effect of Exchange Rates on Cash, Cash Equivalents and Restricted Cash	(9)	(41)	52
Increase in Cash, Cash Equivalents and Restricted Cash	5,909	1,490	1,184
Cash, Cash Equivalents and Restricted Cash at Beginning of Year	6,911	5,421	4,237
Cash, Cash Equivalents and Restricted Cash at End of Year	\$ 12,820	\$ 6,911	\$ 5,421

The accompanying notes are an integral part of these consolidated financial statements.

Note 1. ACCOUNTING POLICIES AND RECENTLY ISSUED ACCOUNTING STANDARDS

Basis of Consolidation

The consolidated financial statements are prepared in conformity with U.S. GAAP, including the accounts of Bristol-Myers Squibb Company and all of its controlled majority-owned subsidiaries and certain variable interest entities. All intercompany balances and transactions are eliminated. Material subsequent events are evaluated and disclosed through the report issuance date. Refer to the Summary of Abbreviated Terms at the end of this 2019 Form 10-K for terms used throughout the document.

Alliance and license arrangements are assessed to determine whether the terms provide economic or other control over the entity requiring consolidation of an entity. Entities controlled by means other than a majority voting interest are referred to as variable interest entities and are consolidated when BMS has both the power to direct the activities of the variable interest entity that most significantly impacts its economic performance and the obligation to absorb losses or the right to receive benefits that could potentially be significant to the entity.

Business Segment Information

BMS operates in a single segment engaged in the discovery, development, licensing, manufacturing, marketing, distribution and sale of innovative medicines that help patients prevail over serious diseases. A global research and development organization and supply chain organization are responsible for the discovery, development, manufacturing and supply of products. Regional commercial organizations market, distribute and sell the products. The business is also supported by global corporate staff functions. Consistent with BMS's operational structure, the Chief Executive Officer ("CEO"), as the chief operating decision maker, manages and allocates resources at the global corporate level. Managing and allocating resources at the global corporate level enables the CEO to assess both the overall level of resources available and how to best deploy these resources across functions, therapeutic areas, regional commercial organizations and research and development projects in line with our overarching long-term corporate-wide strategic goals, rather than on a product or franchise basis. The determination of a single segment is consistent with the financial information regularly reviewed by the CEO for purposes of evaluating performance, allocating resources, setting incentive compensation targets, and planning and forecasting future periods. For further information on product and regional revenue, see "—Note 2. Revenue".

Use of Estimates and Judgments

The preparation of financial statements requires the use of management estimates, judgments and assumptions. The most significant assumptions are estimates used in determining accounting for business combinations; impairments of goodwill and intangible assets; sales rebate and return accruals; legal contingencies; and income taxes. Actual results may differ from estimates.

Reclassifications

Certain prior period amounts were reclassified to conform to the current period presentation including separate presentation of amortization of acquired intangible assets and reclassification of other assets and liabilities which did not change the reported amount of total assets or liabilities. These reclassifications did not have an impact on net assets, net earnings, or operating cash flows.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include bank deposits, time deposits, commercial paper and money market funds. Cash equivalents consist of highly liquid investments with original maturities of three months or less at the time of purchase and are recognized at cost, which approximates fair value.

Cash is restricted when withdrawal or general use is contractually or legally restricted. Determination of current and non-current classification is based on the expected duration of the restriction. Restricted cash consists of escrow for litigation settlements and funds restricted for annual Company contributions to the defined contribution plan in the U.S. Restricted cash of \$474 million was included in cash, cash equivalents and restricted cash at December 31, 2019 in the consolidated statements of cash flows.

Marketable Debt Securities

Marketable debt securities are classified as "available-for-sale" on the date of purchase and reported at fair value. Fair value is determined based on observable market quotes or valuation models using assessments of counterparty credit worthiness, credit default risk or underlying security and overall capital market liquidity. Marketable debt securities are reviewed for impairment by assessing if the decline in market value of the investment below the carrying value is other than temporary, which considers the intent and ability to retain the investment for a period of time sufficient to allow for any anticipated recovery in market value, the duration and extent that the market value has been less than cost and the investee's financial condition.

Investments in Equity Securities

Investments in equity securities with readily determinable fair values are recorded at fair value with changes in fair value recorded in Other (income)/expense, net. Investments in equity securities without readily determinable fair values are recorded at cost minus any impairment, plus or minus changes in their estimated fair value resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Changes in the estimated fair value of investments in equity securities without readily determinable fair values are recorded in Other (income)/expense, net. Investments in 50% or less owned companies are accounted for using the equity method of accounting when the ability to exercise significant influence over the operating and financial decisions of the investee is maintained. The share of net income or losses of equity investments accounted for using the equity method are included in Other (income)/expense, net. Investments in equity securities without readily determinable fair values and investments in equity accounted for using the equity method are assessed for potential impairment on a quarterly basis based on qualitative factors.

Inventory Valuation

Inventories are stated at the lower of average cost or net realizable value.

Property, Plant and Equipment and Depreciation

Expenditures for additions, renewals and improvements are capitalized at cost. Depreciation is computed on a straight-line method based on the estimated useful lives of the related assets ranging from 20 to 50 years for buildings and 3 to 20 years for machinery, equipment and fixtures.

Current facts or circumstances are periodically evaluated to determine if the carrying value of depreciable assets to be held and used may not be recoverable. If such circumstances exist, an estimate of undiscounted future cash flows generated by the long-lived asset, or appropriate grouping of assets, is compared to the carrying value to determine whether an impairment exists at its lowest level of identifiable cash flows. If an asset is determined to be impaired, the loss is measured based on the difference between the asset's fair value and its carrying value. An estimate of the asset's fair value is based on quoted market prices in active markets, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques using unobservable fair value inputs, such as a discounted value of estimated future cash flows.

Capitalized Software

Eligible costs to obtain internal use software are capitalized and amortized over the estimated useful life of the software.

Acquisitions

Businesses acquired are consolidated upon obtaining control. The fair value of assets acquired and liabilities assumed are recognized at the date of acquisition. Any excess of the purchase price over the estimated fair values of the net assets acquired is recognized as goodwill. Business acquisition costs are expensed when incurred. Contingent consideration from potential development, regulatory, approval and sales-based milestones and sales-based royalties are included in the purchase price for business combinations and are excluded for asset acquisitions. Amounts allocated to the lead investigational compounds for asset acquisitions are expensed at the date of acquisition.

Goodwill, Acquired In-Process Research and Development and Other Intangible Assets

The fair value of acquired intangible assets is determined using an income-based approach referred to as the excess earnings method utilizing Level 3 fair value inputs. Market participant valuations assume a global view considering all potential jurisdictions and indications based on discounted after-tax cash flow projections, risk adjusted for estimated probability of technical and regulatory success.

Finite-lived intangible assets, including licenses, developed technology rights and IPRD projects that reach commercialization are amortized on a straight-line basis over their estimated useful life. Estimated useful lives are determined considering the period assets are expected to contribute to future cash flows. Finite-lived intangible assets are tested for impairment when facts or circumstances suggest that the carrying value of the asset may not be recoverable. If the carrying value exceeds the projected undiscounted pretax cash flows of the intangible asset, an impairment loss equal to the excess of the carrying value over the estimated fair value (discounted after-tax cash flows) is recognized.

Goodwill is tested at least annually for impairment by assessing qualitative factors in determining whether it is more likely than not that the fair value of net assets is below their carrying amounts. Examples of qualitative factors assessed include BMS's share price, financial performance compared to budgets, long-term financial plans, macroeconomic, industry and market conditions as well as the substantial excess of fair value over the carrying value of net assets from the annual impairment test performed in a prior year. Each relevant factor is assessed both individually and in the aggregate.

IPRD is tested for impairment on an annual basis and more frequently if events occur or circumstances change that would indicate a potential reduction in the fair values of the assets below their carrying value. Impairment charges are recognized to the extent the carrying value of IPRD is determined to exceed its fair value.

Restructuring

Restructuring charges are recognized as a result of actions to streamline operations and reduce the number of facilities. Estimating the impact of restructuring plans, including future termination benefits, integration expenses and other exit costs requires judgment. Actual results could vary from these estimates. Restructuring charges are recognized upon meeting certain criteria, including finalization of committed plans, reliable estimates and discussions with local works councils in certain markets.

Contingencies

Loss contingencies from legal proceedings and claims may occur from government investigations, shareholder lawsuits, product and environmental liability, contractual claims, tax and other matters. Accruals are recognized when it is probable that a liability will be incurred and the amount of loss can be reasonably estimated. Gain contingencies (including contingent proceeds related to the divestitures) are not recognized until realized. Legal fees are expensed as incurred.

Revenue Recognition

Refer to “—Note 2. Revenue” for a detailed discussion of accounting policies related to revenue recognition, including deferred revenue and royalties. Refer to “—Note 3. Alliances” for further detail regarding alliances.

Research and Development

Research and development costs are expensed as incurred. Clinical study costs are accrued over the service periods specified in the contracts and adjusted as necessary based upon an ongoing review of the level of effort and costs actually incurred. Research and development costs are presented net of reimbursements from alliance partners. Upfront and contingent development milestone payments for asset acquisitions of investigational compounds are also included in research and development expense if there are no alternative future uses.

Advertising and Product Promotion Costs

Advertising and product promotion costs are expensed as incurred. Advertising and product promotion costs are included in Marketing, selling and administrative expenses and were \$633 million in 2019, \$672 million in 2018 and \$740 million in 2017.

Foreign Currency Translation

Foreign subsidiary earnings are translated into U.S. dollars using average exchange rates. The net assets of foreign subsidiaries are translated into U.S. dollars using current exchange rates. The U.S. dollar effects that arise from translating the net assets of these subsidiaries at changing rates are recognized in Other Comprehensive Income/(Loss).

Income Taxes

The provision for income taxes includes income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from differences between the financial and tax basis of assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances are recognized to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. The assessment of whether or not a valuation allowance is required often requires significant judgment including the long-range forecast of future taxable income and the evaluation of tax planning initiatives. Adjustments to the deferred tax valuation allowances are made to earnings in the period when such assessments are made.

Tax benefits are recognized from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefit recognized in the financial statements for a particular tax position is based on the largest benefit that is more likely than not to be realized upon settlement.

Cash Flow

Payments for licensing and asset acquisitions of investigational compounds are included in operating activities as well as out-licensing proceeds. Payments for the acquisition of an ownership interest in a legal entity, including acquisitions that do not meet the accounting definition of a business are included in investing activities, as well as divestiture proceeds, royalties and other consideration received subsequent to the related sale of the asset or business. Other adjustments reflected in operating activities include divestiture gains and losses and related royalties, asset acquisition charges, gains and losses on equity investments and gains and losses on debt redemption.

Recently Adopted Accounting Standards

Leases

Amended guidance for lease accounting was adopted on January 1, 2019 using the modified retrospective method with the cumulative effect of the change recognized in retained earnings in the period of adoption. The new guidance requires an entity to recognize a right-of-use asset and a lease liability initially measured at the present value of future lease payments. The cumulative effect of the accounting change was not material. BMS elected the package of practical expedients upon adoption, and will apply the practical expedient not to separate lease and non-lease components for new and modified leases commencing after adoption. In addition, BMS applied the short-term lease recognition exemption for leases with terms at inception not greater than 12 months. The amended guidance resulted in the recognition of the operating lease right-of-use asset and lease liability and did not impact BMS's results of operations. Refer to "—Note 13. Leases" for further information.

Goodwill Impairment Testing

Amended guidance that simplifies the recognition and measurement of a goodwill impairment loss by eliminating Step 2 of the quantitative goodwill impairment test was adopted prospectively in the first quarter of 2019. Under the amended guidance, a goodwill impairment loss is recognized for the amount by which the reporting units carrying amount, including goodwill, exceeds its fair value up to the amount of its allocated goodwill. The adoption of the amended guidance did not have an impact on BMS's results of operations.

Recently Issued Accounting Standards Not Yet Adopted

Financial Instruments - Measurement of Credit Losses

In June 2016, the FASB issued amended guidance for the measurement of credit losses on financial instruments. Entities will be required to use a forward-looking estimated loss model. Available-for-sale debt security credit losses will be recognized as allowances rather than a reduction in amortized cost. The guidance is effective January 1, 2020 on a modified retrospective approach. The amended guidance will not have a material impact to BMS's results of operations.

Note 2. REVENUE

The following table summarizes the disaggregation of revenue by nature:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Net product sales	\$ 25,174	\$ 21,581	\$ 19,258
Alliance revenues	597	647	962
Other revenues	374	333	556
Total Revenues	\$ 26,145	\$ 22,561	\$ 20,776

Net product sales represent more than 90% of BMS's total revenues for the years ended December 31, 2019, 2018 and 2017. Products are sold principally to wholesalers or distributors and to a lesser extent, directly to retailers, hospitals, clinics, government agencies and pharmacies. Customer orders are generally fulfilled within a few days of receipt resulting in minimal order backlog. Contractual performance obligations are usually limited to transfer of control of the product to the customer. The transfer occurs either upon shipment or upon receipt of the product after considering when the customer obtains legal title to the product and when BMS obtains a right of payment. At these points, customers are able to direct the use of and obtain substantially all of the remaining benefits of the product.

Gross revenue to the three largest pharmaceutical wholesalers in the U.S. as a percentage of global gross revenues was as follows:

	Year Ended December 31,		
	2019	2018	2017
McKesson Corporation	26%	25%	24%
AmerisourceBergen Corporation	20%	20%	18%
Cardinal Health, Inc.	17%	17%	15%

Wholesalers are initially invoiced at contractual list prices. Payment terms are typically 30 to 90 days based on customary practices in each country. Revenue is reduced from wholesaler list price at the time of recognition for expected charge-backs, discounts, rebates, sales allowances and product returns, which are referred to as GTN adjustments. These reductions are attributed to various commercial arrangements, managed healthcare organizations and government programs such as Medicare, Medicaid and the 340B Drug Pricing Program containing various pricing implications such as mandatory discounts, pricing protection below wholesaler list price or other discounts when Medicare Part D beneficiaries are in the coverage gap. In addition, non-U.S. government programs include different pricing schemes such as cost caps, volume discounts, outcome-based pricing and pricing claw-backs determined on sales of individual companies or an aggregation of companies participating in a specific market. Charge-backs and cash discounts are reflected as a reduction to receivables and settled through the issuance of credits to the customer, typically within one month. All other rebates, discounts and adjustments, including Medicaid and Medicare, are reflected as a liability and settled through cash payments to the customer, typically within various time periods ranging from a few months to one year.

Significant judgment is required in estimating GTN adjustments considering legal interpretations of applicable laws and regulations, historical experience, payer channel mix, current contract prices under applicable programs, unbilled claims, processing time lags and inventory levels in the distribution channel.

The following table summarizes GTN adjustments:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Gross product sales	\$ 37,206	\$ 30,174	\$ 25,499
GTN adjustments ^(a)			
Charge-backs and cash discounts	(3,675)	(2,735)	(2,084)
Medicaid and Medicare rebates	(4,941)	(3,225)	(2,086)
Other rebates, returns, discounts and adjustments	(3,416)	(2,633)	(2,071)
Total GTN adjustments	(12,032)	(8,593)	(6,241)
Net product sales	\$ 25,174	\$ 21,581	\$ 19,258

(a) Includes adjustments for provisions for product sales made in prior periods resulting from changes in estimates of \$132 million, \$96 million and \$71 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Alliance and other revenues consist primarily of amounts related to collaborations and out-licensing arrangements. Each of these arrangements are evaluated for whether they represent contracts that are within the scope of the revenue recognition guidance in their entirety or contain aspects that are within the scope of the guidance, either directly or by reference based upon the application of the guidance related to the derecognition of nonfinancial assets (ASC 610).

Performance obligations are identified and separated when the other party can benefit directly from the rights, goods or services either on their own or together with other readily available resources and when the rights, goods or services are not highly interdependent or interrelated.

Transaction prices for these arrangements may include fixed up-front amounts as well as variable consideration such as contingent development and regulatory milestones, sales-based milestones and royalties. The most likely amount method is used to estimate contingent development, regulatory and sales-based milestones because the ultimate outcomes are binary in nature. The expected value method is used to estimate royalties because a broad range of potential outcomes exist, except for instances in which such royalties relate to a license. Variable consideration is included in the transaction price only to the extent a significant reversal in the amount of cumulative revenue recognized is not probable of occurring when the uncertainty associated with the variable consideration is subsequently resolved. Significant judgment is required in estimating the amount of variable consideration to recognize when assessing factors outside of BMS's influence such as likelihood of regulatory success, limited availability of third party information, expected duration of time until resolution, lack of relevant past experience, historical practice of offering fee concessions and a large number and broad range of possible amounts. To the extent arrangements include multiple performance obligations that are separable, the transaction price assigned to each distinct performance obligation is reflective of the relative stand-alone selling price and recognized at a point in time upon the transfer of control.

Three types of out-licensing arrangements are typically utilized: (1) arrangements when BMS out-licenses intellectual property to another party and has no further performance obligations; (2) arrangements that include a license and an additional performance obligation to supply product upon the request of the third party; and (3) collaboration arrangements, which include transferring a license to a third party to jointly develop and commercialize a product.

Most out-licensing arrangements consist of a single performance obligation that is satisfied upon execution of the agreement when the development and commercialization rights are transferred to a third party. Up-front fees are recognized immediately and included in Other (income)/expense, net. Although contingent development and regulatory milestone amounts are assessed each period for the likelihood of achievement, they are typically constrained and recognized when the uncertainty is subsequently resolved for the full amount of the milestone and included in Other (income)/expense, net. Sales-based milestones and royalties are recognized when the milestone is achieved or the subsequent sales occur. Sales-based milestones are included in Other (income)/expense, net and royalties are included in Alliance and other revenue.

Certain out-licensing arrangements may also include contingent performance obligations to supply commercial product to the third party upon its request. The license and supply obligations are accounted for as separate performance obligations as they are considered distinct because the third party can benefit from the license either on its own or together with other supply resources readily available to it and the obligations are separately identifiable from other obligations in the contract in accordance with the revenue recognition guidance. After considering the standalone selling prices in these situations, up-front fees, contingent development and regulatory milestone amounts and sales-based milestone and royalties are allocated to the license and recognized in the manner described above. Consideration for the supply obligation is usually based upon stipulated cost-plus margin contractual terms which represent a standalone selling price. The supply consideration is recognized at a point in time upon transfer of control of the product to the third party and included in Alliance and other revenue. The above fee allocation between the license and the supply represents the amount of consideration that BMS expects to be entitled to for the satisfaction of the separate performance obligations.

Although collaboration arrangements are unique in nature, both parties are active participants in the operating activities and are exposed to significant risks and rewards depending on the commercial success of the activities. Performance obligations inherent in these arrangements may include the transfer of certain development or commercialization rights, ongoing development and commercialization services and product supply obligations. Except for certain product supply obligations which are considered distinct and accounted for as separate performance obligations similar to the manner discussed above, all other performance obligations are not considered distinct and are combined into a single performance obligation since the transferred rights are highly integrated and interrelated to BMS's obligation to jointly develop and commercialize the product with the third party. As a result, up-front fees are recognized ratably over time throughout the expected period of the collaboration activities and included in Other (income)/expense, net as the license is combined with other development and commercialization obligations. Contingent development and regulatory milestones that are no longer constrained are recognized in a similar manner on a prospective basis. Royalties and profit sharing are recognized when the underlying sales and profits occur and are included in Alliance and other revenue. Refer to “—Note 3. Alliances” for further information.

The following table summarizes the disaggregation of revenue by product and region:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Prioritized Brands			
<i>Revlimid</i>	\$ 1,299	\$ —	\$ —
<i>Eliquis</i>	7,929	6,438	4,872
<i>Opdivo</i>	7,204	6,735	4,948
<i>Orencia</i>	2,977	2,710	2,479
<i>Pomalyst/Imnovid</i>	322	—	—
<i>Sprycel</i>	2,110	2,000	2,005
<i>Yervoy</i>	1,489	1,330	1,244
<i>Abraxane</i>	166	—	—
<i>Empliciti</i>	357	247	231
<i>Inrebic</i>	5	—	—
Established Brands			
<i>Baraclude</i>	555	744	1,052
<i>Vidaza</i>	58	—	—
Other Brands ^(a)	1,674	2,357	3,945
Total Revenues	\$ 26,145	\$ 22,561	\$ 20,776
United States	\$ 15,342	\$ 12,586	\$ 11,358
Europe	6,266	5,658	4,988
Rest of World	4,013	3,733	3,877
Other ^(b)	524	584	553
Total Revenues	\$ 26,145	\$ 22,561	\$ 20,776

(a) Includes BMS and Celgene products in 2019.

(b) Other revenues include royalties and alliance-related revenues for products not sold by BMS's regional commercial organizations.

Contract assets are primarily estimated future royalties and termination fees not eligible for the licensing exclusion and therefore recognized upon the adoption of ASC 606 and ASC 610. Contract assets are reduced and receivables are increased in the period the underlying sales occur. Cumulative catch-up adjustments to revenue affecting contract assets or contract liabilities were not material during the year ended December 31, 2019 and 2018. Revenue recognized from performance obligations satisfied in prior periods was \$411 million and \$495 million for the years ended December 31, 2019 and 2018, respectively, consisting primarily of royalties for out-licensing arrangements and revised estimates for GTN adjustments related to prior period sales. Contract assets were not material at December 31, 2019 and 2018.

Sales commissions and other incremental costs of obtaining customer contracts are expensed as incurred as the amortization periods would be less than one year.

Note 3. ALLIANCES

BMS enters into collaboration arrangements with third parties for the development and commercialization of certain products. Although each of these arrangements is unique in nature, both parties are active participants in the operating activities of the collaboration and exposed to significant risks and rewards depending on the commercial success of the activities. BMS may either in-license intellectual property owned by the other party or out-license its intellectual property to the other party. These arrangements also typically include research, development, manufacturing, and/or commercial activities and can cover a single investigational compound or commercial product or multiple compounds and/or products in various life cycle stages. The rights and obligations of the parties can be global or limited to geographic regions. BMS refer to these collaborations as alliances and its partners as alliance partners.

The most common activities between BMS and its alliance partners are presented in results of operations as follows:

- When BMS is the principal in the end customer sale, 100% of product sales are included in Net product sales. When BMS's alliance partner is the principal in the end customer sale, BMS's contractual share of the third-party sales and/or royalty income are included in Alliance revenues as the sale of commercial products are considered part of BMS's ongoing major or central operations. Refer to “—Note 2. Revenue” for information regarding recognition criteria.

- Amounts payable to BMS by alliance partners (who are the principal in the end customer sale) for supply of commercial products are included in Alliance revenues as the sale of commercial products are considered part of BMS's ongoing major or central operations.
- Profit sharing, royalties and other sales-based fees payable by BMS to alliance partners are included in Cost of products sold as incurred.
- Cost reimbursements between the parties are recognized as incurred and included in Cost of products sold; Marketing, selling and administrative expenses; or Research and development expenses, based on the underlying nature of the related activities subject to reimbursement.
- Upfront and contingent development and approval milestones payable to BMS by alliance partners for investigational compounds and commercial products are deferred and amortized over the expected period of BMS's development and co-promotion obligation through the market exclusivity period or the periods in which the related compounds or products are expected to contribute to future cash flows. The amortization is presented consistent with the nature of the payment under the arrangement. For example, amounts received for investigational compounds are presented in Other (income)/expense, net as the activities being performed at that time are not related to the sale of commercial products included in BMS's ongoing major or central operations; amounts received for commercial products are presented in alliance revenue as the sale of commercial products are considered part of BMS's ongoing major or central operations.
- Upfront and contingent approval milestones payable by BMS to alliance partners for commercial products are capitalized and amortized over the shorter of the contractual term or the periods in which the related products are expected to contribute to future cash flows.
- Upfront and contingent milestones payable by BMS to alliance partners prior to regulatory approval are expensed as incurred and included in Research and development expense.
- Royalties and other contingent consideration payable to BMS by alliance partners related to the divestiture of such businesses are included in Other (income)/expense, net when earned.
- All payments between BMS and its alliance partners are presented in Cash Flows From Operating Activities.

Selected financial information pertaining to alliances was as follows, including net product sales when BMS is the principal in the third-party customer sale for products subject to the alliance. Expenses summarized below do not include all amounts attributed to the activities for the products in the alliance, but only the payments between the alliance partners or the related amortization if the payments were deferred or capitalized.

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Revenues from alliances:			
Net product sales	\$ 9,944	\$ 8,359	\$ 6,917
Alliance revenues	597	647	962
Total Revenues	\$ 10,541	\$ 9,006	\$ 7,879
Payments to/(from) alliance partners:			
Cost of products sold	\$ 4,169	\$ 3,439	\$ 2,718
Marketing, selling and administrative	(127)	(104)	(62)
Research and development	42	1,044	(28)
Other (income)/expense, net	(60)	(67)	(46)
Selected Alliance Balance Sheet Information:			
Dollars in Millions	December 31,		
	2019	2018	
Receivables – from alliance partners	\$ 347	\$ 395	
Accounts payable – to alliance partners	1,026	904	
Deferred income from alliances ^(a)	431	491	

(a) Includes unamortized upfront and milestone payments.

Specific information pertaining to significant alliances is discussed below, including their nature and purpose; the significant rights and obligations of the parties; specific accounting policy elections; and the statements of earnings classification of and amounts attributable to payments between the parties.

Pfizer

BMS and Pfizer jointly develop and commercialize *Eliquis*, an anticoagulant discovered by BMS. Pfizer funds between 50% and 60% of all development costs depending on the study. Profits and losses are shared equally on a global basis except in certain countries where Pfizer commercializes *Eliquis* and pays BMS a sales-based fee.

Co-exclusive license rights were granted to Pfizer in exchange for an upfront payment and potential milestone payments. Both parties assumed certain obligations to actively participate in a joint executive committee and various other operating committees and have joint responsibilities for the research, development, distribution, sales and marketing activities of the alliance using resources in their own infrastructures. BMS and Pfizer manufacture the product in the alliance and BMS is the principal in the end customer product sales in the U.S., significant countries in Europe, as well as Canada, Australia, China, Japan and South Korea. In 2015, BMS transferred full commercialization rights to Pfizer in certain smaller countries in order to simplify operations. In the transferred countries, BMS supplies the product to Pfizer at cost plus a percentage of the net sales price to end-customers which is recorded in full upon transfer of control of the product to Pfizer.

BMS did not allocate consideration to the rights transferred to Pfizer as such rights were not sold separately by BMS or any other party, nor could Pfizer receive any benefit for the delivered rights without the fulfillment of other ongoing obligations by BMS under the alliance agreement. As such, the global alliance was treated as a single unit of accounting and upfront proceeds and any subsequent contingent milestone proceeds are amortized over the expected period of BMS's co-promotion obligation through the market exclusivity period. BMS received \$884 million in non-refundable upfront, milestone and other licensing payments related to *Eliquis* through December 31, 2019. Amortization of the *Eliquis* deferred income is included in Other (income)/expense, net as *Eliquis* was not a commercial product at the commencement of the alliance.

Summarized financial information related to this alliance was as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Revenues from Pfizer alliance:			
Net product sales	\$ 7,711	\$ 6,329	\$ 4,808
Alliance revenues	218	109	64
Total Revenues	\$ 7,929	\$ 6,438	\$ 4,872
Payments to/(from) Pfizer:			
Cost of products sold – Profit sharing	\$ 3,745	\$ 3,078	\$ 2,314
Other (income)/expense, net – Amortization of deferred income	(55)	(55)	(55)
Selected Alliance Balance Sheet Information:			
Dollars in Millions	December 31,		
	2019	2018	
Receivables	\$ 247	\$ 220	
Accounts payable	922	786	
Deferred income	355	410	

Otsuka

BMS and Otsuka co-promoted *Sprycel* in the U.S. and the EU through 2019. BMS is responsible for the development and manufacture of the product and is also the principal in the end customer product sales. A fee is paid to Otsuka through 2020 based on net sales levels in the Oncology Territory (U.S., Japan and the EU) that equates to \$294 million on the first \$1 billion of annual net sales plus 1% of net sales in excess of \$1 billion.

Summarized financial information related to this alliance was as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Revenues from Otsuka alliances:			
Net product sales – Oncology territory	\$ 1,794	\$ 1,705	\$ 1,699
Payments to Otsuka:			
Cost of products sold – Oncology fee	302	297	299

Ono

BMS and Ono jointly develop and commercialize *Opdivo*, *Yervoy* and several BMS investigational compounds in Japan, South Korea and Taiwan. BMS is responsible for supply of the products. Profits, losses and development costs are shared equally for all combination therapies involving compounds of both parties. Otherwise, sharing is 80% and 20% for activities involving only one of the party's compounds.

BMS and Ono also jointly develop and commercialize *Orencia* in Japan. BMS is responsible for the order fulfillment and distribution of the intravenous formulation and Ono is responsible for the subcutaneous formulation. Both formulations are jointly promoted by both parties with assigned customer accounts and BMS is responsible for the product supply. A co-promotion fee of 60% is paid when a sale is made to the other party's assigned customer.

In 2017, Ono granted BMS an exclusive license for the development and commercialization of ONO-4578, Ono's Prostaglandin E2 receptor 4 antagonist. BMS acquired worldwide rights except in Japan, South Korea, and Taiwan where it was added to the existing collaboration and in China and ASEAN countries where Ono retained exclusive rights. BMS paid \$40 million to Ono, which was included in Research and development expense in 2017. Ono is eligible to receive subsequent clinical, regulatory and sales-based milestone payments of up to \$480 million and royalties in countries where BMS has exclusive licensing rights.

In 2018, BMS provided Ono with a right to accept NKTR-214 into their alliance upon completion of a Phase I clinical study of *Opdivo* and NKTR-214 in the Ono Territory. If the right is exercised, Ono will partially reimburse BMS for development costs incurred with the study and share in certain future development costs, contingent milestone payments, profits and losses under the collaboration with Nektar. Ono exercised the right to accept NKTR-214 into its alliance with BMS in 2019.

Summarized financial information related to this alliance was as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Revenues from Ono alliances:			
Net product sales	\$ 194	\$ 165	\$ 145
Alliance revenues	305	294	268
Total Revenues	\$ 499	\$ 459	\$ 413

BMS is the principal in the end customer product sales and has the exclusive right to develop, manufacture and commercialize *Opdivo* worldwide except in Japan, South Korea and Taiwan. Ono is entitled to receive royalties of 4% in North America and 15% in all territories excluding the three countries listed above, subject to customary adjustments.

Nektar

In 2018, BMS and Nektar commenced a worldwide license and collaboration for the development and commercialization of Bempegaldesleukin (NKTR-214), Nektar's investigational immuno-stimulatory therapy designed to selectively expand specific cancer-fighting T cells and natural killer cells directly in the tumor micro-environment. In January 2020, the parties amended the collaboration agreement. The *Opdivo* and NKTR-214 combination therapy is currently in Phase III clinical studies for melanoma, muscle-invasive bladder cancer and RCC. A joint development plan agreed by the parties as part of the original agreement, and updated as part of the January 2020 amendment, specifies development in certain indications and tumor types with each party responsible for the supply of their own product. BMS's share of the development costs associated with therapies comprising a BMS medicine used in combination with NKTR-214 is 67.5%, subject to certain cost caps for Nektar. The January 2020 amendment retains the cost sharing percentages from the original agreement. The parties will also jointly commercialize the therapies, subject to regulatory approval. BMS's share of global NKTR-214 profits and losses will be 35% subject to certain annual loss caps for Nektar.

BMS paid Nektar \$1.85 billion for the rights discussed above and 8.3 million shares of Nektar common stock representing a 4.8% ownership interest. BMS's equity ownership is subject to certain lock-up, standstill and voting provisions for a five-year period. The amount of the up-front payment allocated to the equity investment was \$800 million after considering Nektar's stock price on the date of closing and current limitations on trading the securities. The remaining \$1.05 billion of the up-front payment was allocated to the rights discussed above and included in Research and development expense in the second quarter of 2018. BMS will also pay up to \$1.8 billion upon the achievement of contingent development, regulatory and sales-based milestones over the life of the alliance period. Research and development expense payable under this agreement with Nektar was \$108 million and \$59 million for the years ended December 31, 2019 and 2018, respectively.

Note 4. ACQUISITIONS, DIVESTITURES, LICENSING AND OTHER ARRANGEMENTS**Acquisitions*****Business Combination******Celgene***

On November 20, 2019, BMS completed the Celgene acquisition. The acquisition is expected to create a leading biopharmaceutical company, well positioned for sustained innovation and long-term growth and to address the needs of patients with cancer, inflammatory, immunologic or cardiovascular diseases through high-value innovative medicines and leading scientific capabilities. Each share of Celgene common stock was converted into a right to receive one share of BMS common stock and \$50.00 in cash. Celgene shareholders also received one tradeable contingent value right (“CVR”) for each share of Celgene common stock representing the right to receive \$9.00 in cash, subject to the achievement of future regulatory milestones.

The aggregate cash paid in connection with the Celgene acquisition was \$35.7 billion (or \$24.6 billion net of cash acquired). BMS funded the acquisition through cash on-hand and debt proceeds, as described in “—Note 9. Financial Instruments and Fair Value Measurements.”

The transaction was accounted for as a business combination which requires that assets acquired and liabilities assumed be recognized at their fair value as of the acquisition date. The purchase price allocation is preliminary and subject to change, including the valuation of inventory, property, plant and equipment and intangible assets and income taxes and legal contingencies among other items. The amounts recognized will be finalized as the information necessary to complete the analysis is obtained, but no later than one year after the acquisition date.

The total consideration for the acquisition consisted of the following:

Amounts in Millions, Except Per Share Data	Total Consideration
Celgene shares outstanding at November 19, 2019	714.9
Cash per share	\$ 50
Cash consideration for outstanding shares	35,745
Celgene shares outstanding at November 19, 2019	714.9
Closing price of BMS common stock on November 19, 2019	\$ 56.48
Estimated fair value of share consideration	40,378
Celgene shares outstanding at November 19, 2019	714.9
Closing price of CVR ^(a)	\$ 2.30
Fair value of CVRs	1,644
Fair value of replacement options	1,428
Fair value of replacement restricted share awards	987
Fair value of CVRs issued to option and share award holders	87
Fair value of share-based compensation awards attributable to pre-combination service ^(b)	2,502
Total consideration transferred	\$ 80,269

(a) The closing price of CVR is based on the first trade on November 21, 2019.

(b) Fair value of the awards attributed to post-combination services of \$1.0 billion will be included in compensation costs. Refer to “—Note 18. Employee Stock Benefit Plans” for more information.

The preliminary purchase price allocation resulted in the following amounts being allocated to the assets acquired and liabilities assumed at the Acquisition Date based upon their respective preliminary fair values summarized below:

Dollars in Millions	Preliminary Purchase Price Allocation
Cash and cash equivalents	\$ 11,179
Receivables	2,652
Inventories	4,511
Property, plant and equipment	1,342
Intangible assets ^(a)	64,027
<i>Otezla</i> * assets held-for-sale ^(b)	13,400
Other assets	3,408
Accounts payable	(363)
Income taxes payable	(2,718)
Deferred income tax liabilities	(7,339)
Debt	(21,782)
Other liabilities	(4,017)
Identifiable net assets acquired	64,300
Goodwill ^(c)	15,969
Total consideration transferred	\$ 80,269

- (a) Intangible assets consists of currently marketed product rights of approximately \$44.5 billion (amortized over 5.1 years calculated using the weighted-average useful life of the assets) and IPRD of approximately \$19.5 billion (not amortized), and were valued using the multi-period excess earnings method. This method starts with a forecast of all of the expected future net cash flows associated with the asset and then involves adjusting the forecast to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams.
- (b) Amount includes \$381 million of inventory, \$13.0 billion of developed product rights, \$19 million of accrued liabilities and \$5 million of other non-current liabilities. Refer to “—Divestitures” for more information.
- (c) Goodwill represents the going-concern value associated with future product discovery beyond the existing pipeline and expected value of synergies resulting from cost savings and avoidance not attributed to identifiable assets. Goodwill is not deductible for tax purposes.

BMS's Consolidated Statement of Earnings for the year ended December 31, 2019, include \$1.9 billion of Revenues and \$1.6 billion of Net Loss associated with the result of operations of Celgene from the acquisition date to December 31, 2019.

Acquisition expenses were \$657 million during the year ended December 31, 2019, including financial advisory, legal, proxy filing, regulatory, financing fees and hedge costs.

The following unaudited pro forma information has been prepared as if the Celgene acquisition and the *Otezla** divestiture had occurred on January 1, 2018. The unaudited supplemental pro forma consolidated results do not purport to reflect what the combined Company's results of operations would have been nor do they project the future results of operations of the combined Company. The unaudited supplemental pro forma consolidated results reflect the historical financial information of BMS and Celgene, adjusted to give effect to the Celgene acquisition and the *Otezla** divestitures as if it had occurred on January 1, 2018, primarily for the following adjustments:

- Amortization expenses primarily related to fair value adjustments to Celgene's intangible assets, inventories and debt.
- Non-recurring acquisition-related costs directly attributable to the Celgene acquisition and tax expense directly attributable to the *Otezla** divestiture.
- Interest expense, including amortization of deferred financing fees, attributable to the Celgene acquisition financing.
- Elimination of historical revenue and expenses related to *Otezla**. Refer to “—Divestitures.”

The above adjustments were adjusted for the applicable tax impact using an estimated weighted-average statutory tax rate applied to the applicable pro forma adjustments.

Amounts in Million	Year Ended December 31,	
	2019	2018
Total Revenues	\$ 39,759	\$ 36,243
Net Earnings/(Loss)	3,369	(4,083)

Asset Acquisitions

Certain transactions are accounted for as asset acquisitions since they were determined not to be a business as that term is defined in ASC 805 primarily because no significant processes were acquired. As a result, the amounts allocated to the lead investigational compounds are expensed and not capitalized.

In 2017, BMS acquired all of the outstanding shares of IFM Therapeutics, Inc. ("IFM"), a private biotechnology company focused on developing therapies that modulate novel targets in the innate immune system to treat cancer, autoimmunity and inflammatory diseases. The acquisition provided BMS with full rights to IFM's preclinical STING and NLRP3 agonist programs focused on enhancing the innate immune response for treating cancer. The transaction price included an upfront payment of \$325 million and contingent consideration of \$2.0 billion. The up-front payment was included in Research and development expense except for \$14 million that was allocated to net operating loss and tax credit carryforwards. Contingent consideration includes development, regulatory and sales-based milestone payments, of which \$25 million was included in Research and development expense in both 2019 and 2018, following the commencement of two Phase I clinical studies. BMS may pay up to \$555 million in additional contingent milestones for any subsequent products selected from IFM's preclinical STING and NLRP3 agonist programs.

Research and development expense also includes \$60 million in 2018 and \$450 million in 2017 resulting from the occurrence of certain development and regulatory events attributed to asset acquisition completed prior to 2017, including Flexus Biosciences, Inc., Cardioxyl Pharmaceuticals, Inc. and Cormorant Pharmaceuticals.

Divestitures

The following table summarizes the financial impact of divestitures including royalties, which are included in Other (income)/expense, net. Revenue and pretax earnings related to all divestitures and assets held-for-sale were not material in all periods presented (excluding divestiture gains or losses).

Dollars in Millions	Proceeds ^(a)			Divestiture Gains			Royalty Income		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
<i>Otezla</i> *	\$13,400	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
UPSA Business	1,508	—	—	(1,157)	—	—	—	—	—
Diabetes Business	661	579	405	—	—	(126)	(650)	(661)	(329)
<i>Erbix</i> * Business	15	216	218	—	—	—	(23)	(145)	(224)
Manufacturing Operations	48	160	—	1	—	—	—	—	—
<i>Plavix</i> * and <i>Avapro</i> */ <i>Avalide</i> *	—	80	—	—	—	—	—	—	—
Investigational HIV Business	—	—	—	—	—	(11)	—	—	—
Mature Brands and Other	10	212	28	(12)	(178)	(24)	(13)	(8)	(4)
Total	\$15,642	\$ 1,247	\$ 651	\$ (1,168)	\$ (178)	\$ (161)	\$ (686)	\$ (814)	\$ (557)

(a) Includes royalties received subsequent to the related sale of the asset or business.

*Otezla**

In order to complete the Celgene acquisition, BMS was required by the FTC to divest certain products. To allow the acquisition to close on a timely basis in light of concerns expressed by the FTC, Celgene entered into a purchase agreement with Amgen on August 25, 2019 under which Amgen would acquire the global rights to *Otezla** (apremilast) for \$13.4 billion of cash. On November 21, 2019, BMS completed the divestiture of *Otezla** to Amgen. The transaction was accounted for as an asset divestiture. *Otezla** was acquired as part of the Celgene acquisition and was classified as held-for-sale at the time of the acquisition. The estimated fair value of *Otezla** net assets consisted of \$13.0 billion of developed product rights and \$381 million of inventory.

UPSA Business

In 2019, BMS sold its UPSA consumer health business, including the shares of UPSA SAS and BMS's assets and liabilities relating to the UPSA product portfolio, to Taisho Pharmaceutical Co., Ltd. The transaction was accounted for as the sale of a business. The UPSA business was treated as a single disposal group held-for-sale as of December 31, 2018.

Diabetes Business

In February 2014, BMS and AstraZeneca terminated their diabetes business alliance agreements and BMS sold to AstraZeneca substantially all of the diabetes business comprising the alliance. Consideration for the transaction included tiered royalty payments ranging from 10% to 25% based on net sales through 2025. Royalties were \$533 million in 2019, \$457 million in 2018 and \$229 million in 2017. Contingent consideration of \$100 million was received in 2017 resulting in an additional gain upon achievement of a regulatory approval milestone.

In September 2015, BMS transferred a percentage of its future royalty rights on Amylin net product sales in the U.S. to CPPIB. The transferred rights represent approximately 70% of potential future royalties BMS is entitled to in 2019 to 2025. In exchange for the transfer, BMS received an additional tiered-based royalty on Amylin net product sales in the U.S. from CPPIB in 2016 through 2018 including \$45 million in 2018 and \$100 million in 2017, and paid \$48 million in 2019.

In November 2017, BMS transferred a percentage of its future royalty rights on a portion of *Onglyza** and *Farxiga** net product sales to Royalty Pharma. The transferred rights represent approximately 20% to 25% of potential future royalties BMS is entitled to for those products in 2020 to 2025. In exchange for the transfer, BMS received an additional tiered-based royalty on *Onglyza** and *Farxiga** net product sales from Royalty Pharma including \$165 million in 2019 and \$159 million in 2018.

Erbitux* Business

BMS had a commercialization agreement with Lilly through Lilly's subsidiary ImClone for the co-development and promotion of *Erbitux** in the U.S., Canada and Japan. BMS was the principal in the end customer product sales in North America and paid Lilly a distribution fee for 39% of *Erbitux** net sales in North America plus a share of certain royalties paid by Lilly.

In October 2015, BMS transferred its rights to *Erbitux** in North America to Lilly in exchange for tiered sales-based royalties through September 2018, including \$145 million in 2018 and \$207 million in 2017.

BMS transferred its co-commercialization rights in Japan to Merck KGaA in 2015 in exchange for sales-based royalties through 2032. Royalties earned were \$17 million in 2017. As a result of the adoption of ASC 610 in the first quarter of 2018, estimated future royalties resulting from the transfer of rights to Merck KGaA were recorded as a cumulative effect adjustment in Retained earnings. A \$23 million change in estimated future royalties was included in 2019.

Manufacturing Operations

In 2019, BMS sold its manufacturing and packaging facility in Anagni, Italy to Catalent Inc. The transaction was accounted for as the sale of a business. The divestiture includes the transfer of the facility, the majority of employees at the site, inventories and certain third-party contract manufacturing obligations. The assets were reduced to their relative fair value after considering the purchase price resulting in an impairment charge of \$121 million that was included in Cost of products sold. Catalent Inc. will provide certain manufacturing and packaging services for BMS for a period of time.

In 2017, BMS sold its small molecule active pharmaceutical ingredient manufacturing operations in Swords, Ireland to SK Biotek Co., Ltd. Proceeds were received in the first quarter of 2018. The transaction was accounted for as the sale of a business. The divestiture includes the transfer of the facility, the majority of employees at the site, inventories and certain third-party contract manufacturing obligations. The assets were reduced to their relative fair value after considering the purchase price resulting in an impairment charge of \$146 million that was included in Cost of products sold. SK Biotek Co., Ltd. will provide certain manufacturing services for BMS for a period of time.

Plavix* and Avapro*/Avalide*

Sanofi reacquired BMS's co-development and co-commercialization agreements for *Plavix** and *Avapro**/*Avalide** in 2013. Consideration for the transfer of rights included quarterly royalties through December 31, 2018 and a \$200 million terminal payment received in 2018 of which \$120 million was allocated to opt-out markets and \$80 million was allocated to BMS's 49.9% interest in the Europe and Asia territory partnership. Royalties expected to be received in 2018 and the portion of terminal payment allocated to opt-out markets was reflected as a contract asset and cumulative effect adjustment upon adoption of ASC 610 in 2018 as BMS had fulfilled its performance obligation. The \$80 million allocated to BMS's partnership interest was deferred as of December 31, 2018 and recognized when transferred to Sanofi in 2019.

Royalties earned from Sanofi in the territory covering the Americas and Australia and opt-out markets were presented in Alliance revenues and aggregated \$26 million in 2018 and \$200 million in 2017. Royalties attributed to the territory covering Europe and Asia earned by the territory partnership and paid to BMS were included in equity in net loss/(income) of affiliates and amounted to \$96 million in 2018 and \$95 million in 2017.

Investigational HIV Business

In 2016, BMS sold its investigational HIV medicines business consisting of a number of R&D programs at different stages of discovery and development to ViiV Healthcare. BMS received \$350 million and is also entitled to receive from ViiV Healthcare contingent development and regulatory milestone payments of up to \$1.1 billion, sales-based milestone payments of up to \$4.3 billion and future tiered royalties. BMS earned transitional fees of \$10 million for certain R&D and other services in 2017.

Mature Brands and Other

Divestitures include several brands sold to Cheplapharm resulting in proceeds of \$153 million and divestiture gains of \$127 million in 2018.

Assets Held-For-Sale

The following table summarizes the UPSA consumer health business net assets held-for-sale as of December 31, 2018:

Dollars in Millions	December 31, 2018
Receivables	\$ 79
Inventories	81
Property, plant and equipment	187
Goodwill	127
Other	5
Assets held-for-sale	479
Accounts payable	35
Other current liabilities	78
Deferred income taxes	25
Other liabilities	14
Liabilities related to assets held-for-sale	152
Net assets held-for-sale	\$ 327

Licensing and Other Arrangements

Halozyme

In 2017, BMS and Halozyme entered into a global collaboration and license agreement to develop subcutaneously administered BMS IO medicines using Halozyme's *ENHANZE** drug-delivery technology. This technology may allow for more rapid delivery of large volume injectable medications through subcutaneous delivery. BMS paid \$105 million to Halozyme for access to the technology which was included in Research and development expense. BMS designated multiple IO targets, including PD-1, to develop using the *ENHANZE** technology and has an option to select additional targets within five years from the effective date up to a maximum of 11 targets. BMS may pay contingent development, regulatory and sales-based milestones up to \$160 million if achieved for each of the nominated collaboration targets, additional milestone payments for combination products and future royalties on sales of products using the *ENHANZE** technology.

CytomX

In 2017, BMS expanded its strategic collaboration with CytomX to discover novel therapies using CytomX's proprietary Probody platform. As part of the original May 2014 collaboration to discover, develop and commercialize Probody therapeutics, BMS selected four oncology targets, including CTLA-4. Pursuant to the expanded agreement, CytomX granted BMS exclusive worldwide rights to develop and commercialize Probody therapeutics for up to eight additional targets. BMS paid CytomX \$75 million for the rights to the initial four targets which was expensed as R&D prior to 2017. BMS paid \$200 million to CytomX for access to the additional targets which was included in Research and development expense in 2017. BMS will also reimburse CytomX for certain research costs over the collaboration period, pay contingent development, regulatory and sales-based milestones up to \$448 million if achieved for each collaboration target and future royalties.

Biogen

In 2017, BMS out-licensed to Biogen exclusive rights to develop and commercialize BMS-986168, an anti-eTau compound in development for Progressive Supranuclear Palsy and Alzheimer's disease. Biogen paid \$300 million to BMS which was included in Other (income)/expense, net. BMS is also entitled to contingent development, regulatory and sales-based milestone payments of up to \$360 million if achieved and future royalties. BMS originally acquired the rights to this compound in 2014 through its acquisition of iPierian, Inc. Biogen assumed all of BMS's applicable remaining obligations to the former stockholders of iPierian, Inc.

Roche

In 2017, BMS out-licensed to Roche exclusive rights to develop and commercialize BMS-986089, an anti-myostatin adnectin in development for Duchenne Muscular Dystrophy. Roche paid \$170 million to BMS which was included in Other (income)/expense, net. Roche has ceased the development in Duchenne Muscular Dystrophy in 2019.

F-Star

In 2014, BMS acquired an exclusive option to purchase F-Star and its lead asset FS102, an anti-HER2 antibody fragment, in development for the treatment of breast and gastric cancer among a well-defined population of HER2-positive patients. In 2017, BMS discontinued development of FS102 and did not exercise its option, resulting in an IPRD charge of \$75 million included in Research and development expense and attributed to noncontrolling interest.

Note 5. OTHER (INCOME)/EXPENSE, NET

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Interest expense	\$ 656	\$ 183	\$ 196
Pension and postretirement	1,599	(27)	(1)
Royalties and licensing income	(1,360)	(1,353)	(1,351)
Divestiture gains	(1,168)	(178)	(164)
Acquisition expenses	657	—	—
Contingent value rights	523	—	—
Investment income	(464)	(173)	(126)
Integration expenses	415	—	—
Provision for restructuring	301	131	293
Equity investment (gains)/losses	(279)	512	(23)
Litigation and other settlements	77	76	(487)
Transition and other service fees	(37)	(12)	(37)
Intangible asset impairment	15	64	—
Equity in net loss/(income) of affiliates	4	(93)	(75)
Loss on debt redemption	—	—	109
Other	(1)	16	(19)
Other (income)/expense, net	\$ 938	\$ (854)	\$ (1,685)

Note 6. RESTRUCTURING

A restructuring and integration plan is being implemented as an initiative to realize \$2.5 billion of expected cost synergies resulting from cost savings and avoidance from the Celgene acquisition. The synergies are expected to be realized in Cost of products sold (10%), Marketing, selling and administrative expenses (55%) and Research and development expenses (35%). The majority of charges are expected to be incurred through 2022, and range between \$2.8 billion to \$3.0 billion. These costs consist of integration planning and execution expenses, employee termination benefit costs and accelerated stock-based compensation, contract termination costs and other shutdown costs associated with site exits. Cash outlays in connection with these actions are expected to be approximately \$2.5 billion. Employee workforce reductions were approximately 125 in 2019.

The following tables summarize the charges and activity related to the Celgene acquisition:

Dollars in Millions	Year Ended December 31, 2019
Provision for restructuring	\$ 256
Integration expenses	415
Asset impairments	3
Total charges	\$ 674

Dollars in Millions	Year Ended December 31, 2019
Research and development	\$ 3
Other (income)/expense, net	671
Total charges	\$ 674

Dollars in Millions	Year Ended December 31, 2019
Liability at January 1	\$ —
Provision for restructuring ^(a)	111
Payments	(34)
Liability at December 31	\$ 77

(a) Excludes \$145 million of accelerated stock-based compensation.

In October 2016, a restructuring plan was announced to evolve and streamline BMS's operating model. The majority of charges are expected to be incurred through 2020, range between \$1.5 billion to \$2.0 billion, and consist of employee termination benefit costs, contract termination costs, accelerated depreciation and impairment charges and other costs associated with manufacturing and R&D site exits. Cash outlays in connection with these actions are expected to be approximately 40% to 50% of the total charges. Charges of approximately \$1.4 billion have been recognized for these actions since the announcement. Employee workforce reductions were approximately 100 in 2019, 900 in 2018 and 1,900 in 2017.

The following tables summarize the charges and activity related to the Company transformation:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Employee termination costs	\$ 17	\$ 87	\$ 267
Other termination costs	28	44	26
Provision for restructuring	45	131	293
Accelerated depreciation	133	113	289
Asset impairments	127	16	241
Other shutdown costs	—	8	3
Total charges	\$ 305	\$ 268	\$ 826

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Cost of products sold	\$ 180	\$ 57	\$ 149
Marketing, selling and administrative	1	1	1
Research and development	79	79	383
Other (income)/expense, net	45	131	293
Total charges	\$ 305	\$ 268	\$ 826

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Liability at December 31	\$ 99	\$ 186	\$ 114
Cease-use liability reclassification	(3)	—	—
Liability at January 1	96	186	114
Charges	49	148	319
Change in estimates	(4)	(17)	(26)
Provision for restructuring	45	131	293
Foreign currency translation and other	(1)	1	18
Payments	(117)	(219)	(239)
Liability at December 31	\$ 23	\$ 99	\$ 186

Note 7. INCOME TAXES

The provision/(benefit) for income taxes consisted of:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Current:			
U.S.	\$ 1,002	\$ 566	\$ 3,304
Non-U.S.	1,437	410	399
Total Current	2,439	976	3,703
Deferred:			
U.S.	(113)	(51)	541
Non-U.S.	(811)	96	(88)
Total Deferred	(924)	45	453
Total Provision	\$ 1,515	\$ 1,021	\$ 4,156

Effective Tax Rate

The reconciliation of the effective tax rate to the U.S. statutory Federal income tax rate was as follows:

Dollars in Millions	% of Earnings Before Income Taxes					
	2019		2018		2017	
Earnings before income taxes:						
U.S.	\$ 542		\$ 2,338		\$ 2,280	
Non-U.S.	4,433		3,630		2,851	
Total	4,975		5,968		5,131	
U.S. statutory rate	1,045	21.0 %	1,253	21.0 %	1,796	35.0 %
Deemed repatriation transition tax	—	—	(56)	(0.9)%	2,611	50.9 %
Deferred tax remeasurement	—	—	—	—	285	5.6 %
Global intangible low taxed income (GILTI)	849	17.1 %	94	1.6 %	—	—
Foreign tax effect of certain operations in Ireland, Puerto Rico and Switzerland	(68)	(1.4)%	(202)	(3.4)%	(561)	(10.9)%
U.S. Federal valuation allowance	25	0.5 %	119	2.0 %	—	—
U.S. Federal, state and foreign contingent tax matters	(13)	(0.3)%	(55)	(0.9)%	72	1.4 %
U.S. Federal research based credits	(138)	(2.8)%	(138)	(2.3)%	(144)	(2.8)%
Fair value adjustments for contingent value rights	110	2.2 %	—	—	—	—
Non-deductible R&D charges	5	0.1 %	17	0.3 %	266	5.2 %
Puerto Rico excise tax	(163)	(3.3)%	(152)	(2.6)%	(131)	(2.6)%
Domestic manufacturing deduction	—	—	—	—	(78)	(1.5)%
State and local taxes (net of valuation allowance)	(16)	(0.3)%	67	1.1 %	77	1.5 %
Foreign and other	(121)	(2.3)%	74	1.2 %	(37)	(0.8)%
Total	\$ 1,515	30.5 %	\$ 1,021	17.1 %	\$ 4,156	81.0 %

The effective tax rate in 2017 reflects the additional tax expense of \$2.9 billion recognized upon enactment of the Act, increasing the effective tax rate by 56.7%. The effective tax rate in 2018 includes favorable measurement period adjustments to the provisional amounts recorded in 2017 associated with the Act of \$56 million, or 0.9%. The accounting for the reduction of deferred tax assets to the 21% tax rate was complete as of December 31, 2017, and the tax charge for the deemed repatriation transition tax was complete as of December 31, 2018.

A GILTI tax associated with the *Otezla** divestiture was \$808 million in 2019.

Prior to the enactment of the Act, earnings for certain of BMS's manufacturing operations in low tax jurisdictions, such as Switzerland, Ireland and Puerto Rico, were indefinitely reinvested. As a result of the transition tax under the Act, BMS is no longer indefinitely reinvested with respect to its undistributed earnings from foreign subsidiaries and has provided a deferred tax liability or foreign and state income and withholding tax that would apply. BMS remains indefinitely reinvested with respect to its financial statement basis in excess of tax basis of its foreign subsidiaries. A determination of the deferred tax liability with respect to this basis difference is not practicable. BMS operates under a favorable tax grant in Puerto Rico not scheduled to expire prior to 2023.

A U.S. Federal valuation allowance was established in 2018 and 2019 as a result of the Nektar equity investment fair value losses that would be considered limited as a capital loss.

U.S. Federal, state and foreign contingent tax matters includes a \$81 million tax benefit in 2019 and \$119 million tax benefit in 2018 with respect to lapse of statutes.

Fair value adjustments for contingent value rights are not deductible for tax purposes.

Non deductible R&D charges primarily result from acquisition related and milestone payments to former shareholders including Flexus Biosciences, Inc., Cardioxyl Pharmaceuticals, Inc. and IFM Therapeutics, Inc. in 2017.

Puerto Rico imposes an excise tax on the gross company purchase price of goods sold from BMS's manufacturer in Puerto Rico. The excise tax is recognized in Cost of products sold when the intra-entity sale occurs. For U.S. income tax purposes, the excise tax is not deductible but results in foreign tax credits that are generally recognized in BMS's provision for income taxes when the excise tax is incurred.

Deferred Taxes and Valuation Allowance

The components of current and non-current deferred income tax assets/(liabilities) were as follows:

Dollars in Millions	December 31,	
	2019	2018
Deferred tax assets		
Foreign net operating loss carryforwards	\$ 2,480	\$ 2,978
State net operating loss and credit carryforwards	263	121
U.S. Federal net operating loss and credit carryforwards	88	67
Deferred income	160	188
Milestone payments and license fees	558	552
Inventory	56	114
Other foreign deferred tax assets	370	327
Share-based compensation	521	54
Other	434	377
Total deferred tax assets	4,930	4,778
Valuation allowance	(2,844)	(3,193)
Deferred tax assets net of valuation allowance	\$ 2,086	\$ 1,585
Deferred tax liabilities		
Depreciation	\$ (113)	\$ (61)
Acquired intangible assets	(7,387)	(220)
Goodwill and other	(530)	(533)
Total deferred tax liabilities	\$ (8,030)	\$ (814)
Deferred tax (liabilities)/assets, net	\$ (5,944)	\$ 771
Recognized as:		
Deferred income taxes assets – non-current	\$ 510	\$ 815
Deferred income taxes liabilities – non-current	(6,454)	(19)
Liabilities related to assets held-for-sale	—	(25)
Total	\$ (5,944)	\$ 771

The U.S. Federal net operating loss carryforwards were \$216 million at December 31, 2019. These carryforwards were acquired as a result of certain acquisitions and are subject to limitations under Section 382 of the Internal Revenue Code. The net operating loss carryforwards expire in varying amounts beginning in 2022. The foreign and state net operating loss carryforwards expire in varying amounts beginning in 2019 (certain amounts have unlimited lives).

At December 31, 2019, a valuation allowance of \$2.8 billion was established for the following items: \$2.4 billion primarily for foreign net operating loss and tax credit carryforwards, \$206 million for state deferred tax assets including net operating loss and tax credit carryforwards and \$218 million for U.S. Federal deferred tax assets including equity fair value adjustments and U.S. Federal net operating loss carryforwards.

Changes in the valuation allowance were as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Balance at beginning of year	\$ 3,193	\$ 2,827	\$ 3,078
Provision	75	458	50
Utilization	(423)	(43)	(335)
Foreign currency translation	(132)	(48)	341
Acquisitions	228	—	2
Non U.S. rate change	(97)	(1)	(309)
Balance at end of year	\$ 2,844	\$ 3,193	\$ 2,827

Income tax payments were \$1,503 million in 2019, \$747 million in 2018 and \$546 million in 2017.

Business is conducted in various countries throughout the world and is subject to tax in numerous jurisdictions. A significant number of tax returns that are filed are subject to examination by various Federal, state and local tax authorities. Tax examinations are often complex, as tax authorities may disagree with the treatment of items reported requiring several years to resolve. Liabilities are established for possible assessments by tax authorities resulting from known tax exposures including, but not limited to, transfer pricing matters, tax credit deductibility of certain expenses, and deemed repatriation transition tax. Such liabilities represent a reasonable provision for taxes ultimately expected to be paid and may need to be adjusted over time as more information becomes known. The effect of changes in estimates related to contingent tax liabilities is included in the effective tax rate reconciliation above.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is as follows (excluding interest and penalties):

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Balance at beginning of year	\$ 995	\$ 1,155	\$ 995
Gross additions to tax positions related to current year	170	48	173
Gross additions to tax positions related to prior years	19	21	30
Gross additions to tax positions assumed in acquisitions	852	—	—
Gross reductions to tax positions related to prior years	(35)	(106)	(22)
Settlements	(23)	2	(20)
Reductions to tax positions related to lapse of statute	(72)	(119)	(13)
Cumulative translation adjustment	(1)	(6)	12
Balance at end of year	\$ 1,905	\$ 995	\$ 1,155

Additional information regarding unrecognized tax benefits is as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Unrecognized tax benefits that if recognized would impact the effective tax rate	\$ 1,809	\$ 853	\$ 1,002
Accrued interest	292	167	148
Accrued penalties	10	11	15

Accrued interest and penalties payable for unrecognized tax benefits are included in either current or non-current income taxes payable. Interest and penalties related to unrecognized tax benefits are included in income tax expense.

BMS is currently under examination by a number of tax authorities which have proposed or are considering proposing material adjustments to tax positions for issues such as transfer pricing, certain tax credits and the deductibility of certain expenses. It is reasonably possible that new issues will be raised by tax authorities which may require adjustments to the amount of unrecognized tax benefits; however, an estimate of such adjustments cannot reasonably be made at this time.

It is also reasonably possible that the total amount of unrecognized tax benefits at December 31, 2019 could decrease in the range of approximately \$290 million to \$330 million in the next twelve months as a result of the settlement of certain tax audits and other events. The expected change in unrecognized tax benefits may result in the payment of additional taxes, adjustment of certain deferred taxes and/or recognition of tax benefits. The following is a summary of major tax jurisdictions for which tax authorities may assert additional taxes based upon tax years currently under audit and subsequent years that will likely be audited:

U.S.	2008 to 2019
Canada	2012 to 2019
France	2016 to 2019
Germany	2008 to 2019
Italy	2015 to 2019
Japan	2014 to 2019
Switzerland	2015 to 2019
UK	2012 to 2019

Note 8. EARNINGS PER SHARE

Amounts in Millions, Except Per Share Data	Year Ended December 31,		
	2019	2018	2017
Net Earnings Attributable to BMS used for Basic and Diluted EPS Calculation	\$ 3,439	\$ 4,920	\$ 1,007
Weighted-average common shares outstanding - basic	1,705	1,633	1,645
Incremental shares attributable to share-based compensation plans	7	4	7
Weighted-average common shares outstanding - diluted	1,712	1,637	1,652
Earnings per Common Share			
Basic	\$ 2.02	\$ 3.01	\$ 0.61
Diluted	2.01	3.01	0.61

Note 9. FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Financial instruments include cash and cash equivalents, marketable securities, accounts receivable and payable, debt instruments and derivatives.

Changes in exchange rates and interest rates create exposure to market risk. Certain derivative financial instruments are used when available on a cost-effective basis to hedge the underlying economic exposure. These instruments qualify as cash flow, net investment and fair value hedges upon meeting certain criteria, including effectiveness of offsetting hedged exposures. Changes in fair value of derivatives that do not qualify for hedge accounting are recognized in earnings as they occur. Derivative financial instruments are not used for trading purposes.

Financial instruments are subject to counterparty credit risk which is considered as part of the overall fair value measurement. Counterparty credit risk is monitored on an ongoing basis and mitigated by limiting amounts outstanding with any individual counterparty, utilizing conventional derivative financial instruments and only entering into agreements with counterparties that meet high credit quality standards. The consolidated financial statements would not be materially impacted if any counterparty failed to perform according to the terms of its agreement. Collateral is not required by any party whether derivatives are in an asset or liability position under the terms of the agreements.

Fair Value Measurements — The fair value of financial instruments are classified into one of the following categories:

Level 1 inputs utilize unadjusted quoted prices in active markets accessible at the measurement date for identical assets or liabilities. The fair value hierarchy provides the highest priority to Level 1 inputs.

Level 2 inputs utilize observable prices for similar instruments and quoted prices for identical or similar instruments in non-active markets. Additionally, certain corporate debt securities utilize a third-party matrix pricing model using significant inputs corroborated by market data for substantially the full term of the assets. Equity and fixed income funds are primarily invested in publicly traded securities valued at the respective NAV of the underlying investments. Level 2 derivative instruments are valued using LIBOR yield curves, less credit valuation adjustments, and observable forward foreign exchange rates at the reporting date. Valuations of derivative contracts may fluctuate considerably from volatility in underlying foreign currencies and underlying interest rates driven by market conditions and the duration of the contract.

Level 3 unobservable inputs are used when little or no market data is available. Level 3 financial liabilities consist of other acquisition related contingent consideration and success payments related to undeveloped product rights resulting from the Celgene acquisition.

Financial assets and liabilities measured at fair value on a recurring basis are summarized below:

Dollars in Millions	December 31, 2019			December 31, 2018		
	Level 1	Level 2	Level 3	Level 1	Level 2	
Cash and cash equivalents - Money market and other securities	\$ —	\$ 10,448	\$ —	\$ —	\$ —	6,173
Marketable debt securities:						
Certificates of deposit	—	1,227	—	—	—	971
Commercial paper	—	1,093	—	—	—	273
Corporate debt securities	—	1,494	—	—	—	2,379
Derivative assets	—	140	—	—	—	44
Equity investments	2,020	175	—	88	—	391
Derivative liabilities	—	(40)	—	—	—	(31)
Contingent consideration liability:						
Contingent value rights	2,275	—	—	—	—	—
Other acquisition related contingent consideration	—	—	106	—	—	—

Contingent consideration obligations are recorded at their estimated fair values and BMS revalues these obligations each reporting period until the related contingencies are resolved. The contingent value rights are adjusted to fair value using the traded price of the securities at the end of each reporting period. The fair value measurements for other contingent consideration liabilities are estimated using probability-weighted discounted cash flow approaches that are based on significant unobservable inputs related to product candidates acquired in business combinations and are reviewed quarterly. These inputs include, as applicable, estimated probabilities and timing of achieving specified development and regulatory milestones, estimated annual sales and the discount rate used to calculate the present value of estimated future payments. Significant changes which increase or decrease the probabilities of achieving the related development and regulatory events, shorten or lengthen the time required to achieve such events, or increase or decrease estimated annual sales would result in corresponding increases or decreases in the fair values of these obligations. The fair value of our contingent consideration as of December 31, 2019 was calculated using the following significant unobservable inputs:

Inputs	Ranges (weighted average) utilized as of:
	December 31, 2019
Discount rate	2.2% to 3.2% (2.6%)
Probability of payment	0% to 68% (4.1%)
Projected year of payment for development and regulatory milestones	2020 to 2029 (2024)
Projected year of payment for sales-based milestones and other amounts calculated as a percentage of annual sales	N/A

There were no transfers between levels 1, 2 and 3 during the year ended December 31, 2019. The following table represents a roll-forward of the fair value of level 3 instruments:

Dollars in Millions	Year Ended December 31, 2019
Fair value as of January 1	\$ —
Celgene acquisition	106
Fair value as of December 31	\$ 106

Available-for-sale Debt Securities and Equity Investments

Changes in fair value of equity investments are included in Other (income)/expense, net. The following table summarizes BMS's available-for-sale debt securities and equity investments:

Dollars in Millions	December 31, 2019				December 31, 2018			
	Amortized Cost	Gross Unrealized		Fair Value	Amortized Cost	Gross Unrealized		Fair Value
		Gains	Losses			Gains	Losses	
Certificates of deposit	\$ 1,227	\$ —	\$ —	\$ 1,227	\$ 971	\$ —	\$ —	\$ 971
Commercial paper	1,093	—	—	1,093	273	—	—	273
Corporate debt securities	1,487	8	(1)	1,494	2,416	—	(37)	2,379
	\$ 3,807	\$ 8	\$ (1)	\$ 3,814	\$ 3,660	\$ —	\$ (37)	\$ 3,623
Equity investments				2,195				479
Total				\$ 6,009				\$ 4,102

Dollars in Millions	December 31,	
	2019	2018
Marketable debt securities - current	\$ 3,047	\$ 1,848
Other current assets	—	125
Marketable debt securities - non-current ^(a)	767	1,775
Other non-current assets	2,195	354
Total	\$ 6,009	\$ 4,102

(a) All non-current marketable debt securities mature within five years as of December 31, 2019 and December 31, 2018.

Equity investments not measured at fair value and excluded from the above table were limited partnerships and other equity method investments of \$429 million at December 31, 2019 and \$114 million at December 31, 2018 and other equity investments without readily determinable fair values of \$781 million at December 31, 2019 and \$206 million at December 31, 2018. These amounts are included in Other non-current assets.

The following table summarizes net gain/(loss) recorded for equity investments with readily determinable fair values held as of December 31, 2019:

Dollars in Millions	Year Ended December 31,	
	2019	2018
Net gain/(loss) recognized	\$ 170	\$ (530)
Less: Net gain recognized for equity investments sold	14	7
Net unrealized gain/(loss) on equity investments held	\$ 156	\$ (537)

Qualifying Hedges and Non-Qualifying Derivatives

Cash Flow Hedges — Foreign currency forward contracts are used to hedge certain forecasted intercompany inventory purchases and sales transactions and certain foreign currency transactions. The fair value for contracts designated as cash flow hedges is temporarily reported in Accumulated other comprehensive loss and included in earnings when the hedged item affects earnings. Upon adoption of the amended guidance for derivatives and hedging, the entire change in fair value of the hedging instrument included in the assessment of hedge effectiveness is recorded in the derivatives qualifying as cash flow hedges component of Other Comprehensive Income/(Loss). The net gain or loss on foreign currency forward contracts is expected to be reclassified to net earnings (primarily included in Cost of products sold and Other (income)/expense, net) within the next 12 months. The notional amount of outstanding foreign currency forward contracts was primarily attributed to the euro of \$1.8 billion and Japanese yen of \$911 million at December 31, 2019.

The earnings impact related to discontinued cash flow hedges and hedge ineffectiveness was not significant during all periods presented. Cash flow hedge accounting is discontinued when the forecasted transaction is no longer probable of occurring within 60 days after the originally forecasted date or when the hedge is no longer effective. Assessments to determine whether derivatives designated as qualifying hedges are highly effective in offsetting changes in the cash flows of hedged items are performed at inception and on a quarterly basis. Foreign currency forward contracts not designated as hedging instruments are used to offset exposures in certain foreign currency denominated assets, liabilities and earnings. Changes in the fair value of these derivatives are recognized in earnings as they occur.

BMS may hedge a portion of its future foreign currency exposure by utilizing a strategy that involves both a purchased local currency put option and a written local currency call option that are accounted for as hedges of future sales denominated in that local currency. Specifically, BMS sells (or writes) a local currency call option and purchases a local currency put option with the same expiration dates and local currency notional amounts but with different strike prices. The premium collected from the sale of the call option is equal to the premium paid for the purchased put option, resulting in no net premium being paid. This combination of transactions is generally referred to as a “zero-cost collar.” The expiration dates and notional amounts correspond to the amount and timing of forecasted foreign currency sales. The foreign currency zero-cost collar contracts outstanding as of December 31, 2019 had settlement dates within 12 months. If the U.S. Dollar weakens relative to the currency of the hedged anticipated sales, the purchased put option value reduces to zero and we benefit from the increase in the U.S. Dollar equivalent value of our anticipated foreign currency cash flows; however, this benefit would be capped at the strike level of the written call, which forms the upper end of the collar.

Net Investment Hedges — Non-U.S. dollar borrowings of €950 million (\$1.1 billion) at December 31, 2019 are designated as net investment hedges to hedge euro currency exposures of the net investment in certain foreign affiliates and are recognized in long-term debt. The effective portion of foreign exchange gain on the remeasurement of euro debt was included in the foreign currency translation component of Accumulated other comprehensive loss with the related offset in long-term debt.

In January 2018, \$300 million of cross-currency interest rate swap contracts maturing in December 2022 were entered into and designated to hedge Japanese yen currency exposures of BMS's net investment in its Japan subsidiary. Contract fair value changes are recorded in the foreign currency translation component of Other Comprehensive Income/(Loss) with a related offset in Other non-current assets or Other non-current liabilities.

Fair Value Hedges — Fixed to floating interest rate swap contracts are designated as fair value hedges and used as an interest rate risk management strategy to create an appropriate balance of fixed and floating rate debt. The contracts and underlying debt for the hedged benchmark risk are recorded at fair value. The effective interest rate for the contracts is one-month LIBOR (1.8% as of December 31, 2019) plus an interest rate spread of 4.6%. Gains or losses resulting from changes in fair value of the underlying debt attributable to the hedged benchmark interest rate risk are recorded in interest expense with an associated offset to the carrying value of debt. Since the specific terms and notional amount of the swap are intended to align with the debt being hedged, all changes in fair value of the swap are recorded in interest expense with an associated offset to the derivative asset or liability on the consolidated balance sheet. As a result, there was no net impact in earnings. When the underlying swap is terminated prior to maturity, the fair value adjustment to the underlying debt is amortized as a reduction to interest expense over the remaining term of the debt.

Following the announcement of the Celgene acquisition, forward starting interest rate swap option contracts were entered into with a total notional value of \$7.6 billion to hedge future interest rate risk associated with the anticipated issuance of long-term debt to fund the acquisition. In April 2019, deal contingent forward starting interest rate swap contracts were entered into, with an aggregate notional principal amount of \$10.4 billion to hedge interest rate risk associated with the anticipated issuance of long-term debt to fund the acquisition and the forward starting interest rate swap option contracts were terminated. The deal contingent forward starting interest rate swap contracts were terminated upon the completion of the Celgene acquisition.

The following summarizes the fair value of outstanding derivatives:

Dollars in Millions	December 31, 2019				December 31, 2018			
	Asset ^(a)		Liability ^(b)		Asset ^(a)		Liability ^(b)	
	Notional	Fair Value	Notional	Fair Value	Notional	Fair Value	Notional	Fair Value
Derivatives designated as hedging instruments:								
Interest rate swap contracts	\$ 255	\$ 6	\$ —	\$ —	\$ —	\$ —	\$ 755	\$ (10)
Cross-currency interest rate swap contracts	175	2	125	(1)	50	—	250	(5)
Foreign currency forward contracts	766	27	980	(20)	1,503	44	496	(10)
Derivatives not designated as hedging instruments:								
Foreign currency forward contracts	2,342	91	1,173	(10)	54	—	600	(6)
Foreign currency zero-cost collar contracts	2,482	14	2,235	(9)	—	—	—	—

(a) Included in Other current assets and Other non-current assets.

(b) Included in Other current liabilities and Other non-current liabilities.

The following table summarizes the financial statement classification and amount of (gain)/loss recognized on hedging instruments:

	Year Ended December 31,					
	2019		2018		2017	
	Cost of products sold	Other (income)/expense, net	Cost of products sold	Other (income)/expense, net	Cost of products sold	Other (income)/expense, net
Dollars in Millions						
Interest rate swap contracts	\$ —	\$ (24)	\$ —	\$ (23)	\$ —	\$ (31)
Cross-currency interest rate swap contracts	—	(9)	—	(8)	—	—
Foreign currency forward contracts	(103)	11	(4)	(14)	(12)	52
Forward starting interest rate swap option contracts	—	35	—	—	—	—
Deal contingent forward starting interest rate swap contracts	—	240	—	—	—	—
Foreign currency zero-cost collar contracts	—	2	—	—	—	—

The following table summarizes the effect of derivative and non-derivative instruments designated as hedging instruments in Other Comprehensive Income/(Loss):

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Derivatives qualifying as cash flow hedges			
Foreign currency forward contracts gain/(loss):			
Recognized in Other Comprehensive Income/(Loss) ^(a)	\$ 65	\$ 86	\$ (108)
Reclassified to Cost of products sold	(103)	(4)	(12)
Reclassified to Other (income)/expense, net	—	—	36
Derivatives qualifying as net investment hedges			
Cross-currency interest rate swap contracts gain/(loss):			
Recognized in Other Comprehensive Income/(Loss)	6	(5)	—
Non-derivatives qualifying as net investment hedges			
Non U.S. dollar borrowings gain/(loss):			
Recognized in Other Comprehensive Income/(Loss)	29	45	(134)

(a) The amount is expected to be reclassified into earnings in the next 12 months.

Debt Obligations

In 2019, BMS issued an aggregate principal amount of approximately \$19.0 billion of floating rate and fixed rate unsecured senior notes with proceeds net of discount and deferred loan issuance costs of \$18.8 billion. The notes rank equally in right of payment with all of BMS's existing and future senior unsecured indebtedness and the fixed rate notes are redeemable at any time, in whole, or in part, at varying specified redemption prices plus accrued and unpaid interest.

In 2017, BMS issued an aggregate principal amount of \$1.5 billion of senior unsecured notes in registered public offerings with proceeds net of discount and deferred loan issuance costs of \$1.5 billion. The notes rank equally in right of payment with all of BMS's existing and future senior unsecured indebtedness and are redeemable at any time, in whole, or in part, at varying specified redemption prices plus accrued and unpaid interest.

In connection with the Celgene acquisition, BMS commenced offers to exchange outstanding notes issued by Celgene of approximately \$19.9 billion for a like-amount of new notes to be issued by BMS (the "exchange offers"). This exchange transaction was accounted for as a modification of the assumed debt instruments. Following the settlement of the exchange offers, BMS issued approximately \$18.5 billion of new notes in exchange for the Celgene notes tendered in the exchange offers. The aggregate principal amount of Celgene notes that remained outstanding following the settlement of the exchange offers was approximately \$1.3 billion.

The fair value of long-term debt was \$50.7 billion and \$7.1 billion at December 31, 2019 and 2018, respectively, valued using Level 2 inputs which are based upon the quoted market prices for the same or similar debt instruments. The fair value of short-term borrowings approximates the carrying value due to the short maturities of the debt instruments.

Repayment of Notes at maturity aggregated \$1.3 billion in 2019 and \$750 million in 2017.

Interest payments were \$414 million in 2019, \$218 million in 2018 and \$221 million in 2017.

At December 31, 2019, BMS had four separate revolving credit facilities totaling \$6.0 billion, which consisted of a 364-day \$2.0 billion facility that was renewed to January 2021, a \$1.0 billion facility expiring in January 2022, and two five-year \$1.5 billion facilities that were extended to September 2023 and July 2024, respectively. The facilities provide for customary terms and conditions with no financial covenants and may be used to provide backup liquidity for BMS's commercial paper borrowings. BMS's \$1.0 billion facility and its two \$1.5 billion revolving facilities are extendable annually by one year on the anniversary date with the consent of the lenders. BMS's 364-day \$2.0 billion facility can be renewed for one year on each anniversary date, subject to certain terms and conditions. No borrowings were outstanding under any revolving credit facility at December 31, 2019 or 2018.

BMS also entered into an \$8.0 billion term loan credit agreement consisting of a \$1.0 billion 364-day tranche, a \$4.0 billion three-year tranche and a \$3.0 billion five-year tranche in connection with the Celgene acquisition. The term loan is subject to customary terms and conditions and does not have any financial covenants. The proceeds under the term loan were used to fund a portion of the cash to be paid in the Celgene acquisition and the payment of related fees and expenses. Subsequent to the completion of the acquisition, BMS repaid the term loan in its entirety using cash proceeds generated from the *Otezla** divestiture. Refer to “—Note 4. Acquisitions, Divestitures, Licensing and Other Arrangements” for more information.

Available financial guarantees provided in the form of bank overdraft facilities, stand-by letters of credit and performance bonds were approximately \$850 million at December 31, 2019. Stand-by letters of credit are issued through financial institutions in support of guarantees for various obligations. Performance bonds are issued to support a range of ongoing operating activities, including sale of products to hospitals and foreign ministries of health, bonds for customs, duties and value added tax and guarantees related to miscellaneous legal actions.

Short-term debt obligations include:

Dollars in Millions	December 31,	
	2019	2018
Non-U.S. short-term borrowings	\$ 351	\$ 320
Current portion of long-term debt	2,763	1,249
Other	232	134
Total	\$ 3,346	\$ 1,703

Long-term debt and the current portion of long-term debt includes:

Dollars in Millions	December 31,	
	2019	2018
Principal Value:		
1.600% Notes due 2019	\$ —	\$ 750
1.750% Notes due 2019	—	500
Floating Rate Notes due 2020	750	—
2.875% Notes due 2020	1,500	—
3.950% Notes due 2020	500	—
2.250% Notes due 2021	500	—
2.550% Notes due 2021	1,000	—
2.875% Notes due 2021	500	—
Floating Rate Notes due 2022	500	—
2.000% Notes due 2022	750	750
2.600% Notes due 2022	1,500	—
3.250% Notes due 2022	1,000	—
3.550% Notes due 2022	1,000	—
2.750% Notes due 2023	750	—
3.250% Notes due 2023	500	500
3.250% Notes due 2023	1,000	—
4.000% Notes due 2023	700	—
7.150% Notes due 2023	302	302
2.900% Notes due 2024	3,250	—
3.625% Notes due 2024	1,000	—
1.000% Euro Notes due 2025	638	655
3.875% Notes due 2025	2,500	—
3.200% Notes due 2026	2,250	—
6.800% Notes due 2026	256	256
3.250% Notes due 2027	750	750
3.450% Notes due 2027	1,000	—
3.900% Notes due 2028	1,500	—
3.400% Notes due 2029	4,000	—
1.750% Euro Notes due 2035	638	655
5.875% Notes due 2036	287	287
6.125% Notes due 2038	226	226
4.125% Notes due 2039	2,000	—
5.700% Notes due 2040	250	—
3.250% Notes due 2042	500	500
5.250% Notes due 2043	400	—
4.500% Notes due 2044	500	500
4.625% Notes due 2044	1,000	—
5.000% Notes due 2045	2,000	—
4.350% Notes due 2047	1,250	—
4.550% Notes due 2048	1,500	—
4.250% Notes due 2049	3,750	—
6.875% Notes due 2097	87	87
0.13% - 5.75% Other - maturing through 2024	51	58
Total	\$ 44,335	\$ 6,776

Dollars in Millions	December 31,	
	2019	2018
Principal Value	\$ 44,335	\$ 6,776
Adjustments to Principal Value:		
Fair value of interest rate swap contracts	6	(10)
Unamortized basis adjustment from swap terminations	175	201
Unamortized bond discounts and issuance costs	(280)	(72)
Unamortized purchase price adjustments of Celgene debt	1,914	—
Total	\$ 46,150	\$ 6,895
Current portion of long-term debt	2,763	1,249
Long-term debt	43,387	5,646
Total	\$ 46,150	\$ 6,895

Note 10. RECEIVABLES

Dollars in Millions	December 31,	
	2019	2018
Trade receivables	\$ 6,888	\$ 4,914
Less charge-backs and cash discounts	(391)	(245)
Less bad debt allowances	(21)	(33)
Net trade receivables	6,476	4,636
Alliance, Royalties, VAT and other	1,209	1,111
Receivables	\$ 7,685	\$ 5,747

Non-U.S. receivables sold on a nonrecourse basis were \$797 million in 2019, \$756 million in 2018 and \$637 million in 2017. In the aggregate, receivables from three pharmaceutical wholesalers in the U.S. represented approximately 50% and 70% of total trade receivables at December 31, 2019 and 2018, respectively.

Changes to the allowances for bad debt, charge-backs and cash discounts were as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Balance at beginning of year	\$ 278	\$ 252	\$ 174
Celgene acquisition	116	—	—
Provision	3,725	2,739	2,090
Utilization	(3,705)	(2,707)	(2,015)
Other	(2)	(6)	3
Balance at end of year	\$ 412	\$ 278	\$ 252

Note 11. INVENTORIES

Dollars in Millions	December 31,	
	2019	2018
Finished goods	\$ 2,227	\$ 356
Work in process	3,267	1,152
Raw and packaging materials	172	116
Total Inventories	\$ 5,666	\$ 1,624
Inventories	\$ 4,293	\$ 1,195
Other non-current assets	1,373	429

Prior year amounts of certain inventory balances are presented as work in process to conform to the current year presentation rather than finished goods and raw materials. Total Inventories include fair value adjustments resulting from the Celgene acquisition of \$3.5 billion, which will be recognized in future periods. Other non-current assets include inventory expected to remain on hand beyond one year in both periods.

Note 12. PROPERTY, PLANT AND EQUIPMENT

Dollars in Millions	December 31,	
	2019	2018
Land	\$ 187	\$ 104
Buildings	6,336	5,231
Machinery, equipment and fixtures	3,157	2,962
Construction in progress	527	548
Gross property, plant and equipment	10,207	8,845
Less accumulated depreciation	(3,955)	(3,818)
Property, plant and equipment	\$ 6,252	\$ 5,027
United States	\$ 4,835	\$ 3,772
Europe	1,291	1,140
Rest of the World	126	115
Total	\$ 6,252	\$ 5,027

Depreciation expense was \$554 million in 2019, \$505 million in 2018 and \$682 million in 2017.

Note 13. LEASES

Leased facilities for office, research and development, and storage and distribution purposes, comprise approximately 90% of the total lease obligation. Lease terms vary based on the nature of operations and the market dynamics in each country; however, all leased facilities are classified as operating leases with remaining lease terms between one year and 20 years. Most leases contain specific renewal options for periods ranging between one year and 10 years where notice to renew must be provided in advance of lease expiration or automatic renewals where no advance notice is required. Periods covered by an option to extend the lease were included in the non-cancellable lease term when exercise of the option was determined to be reasonably certain. Certain leases also contain termination options that provide the flexibility to terminate the lease ahead of its expiration with sufficient advance notice. Periods covered by an option to terminate the lease were included in the non-cancellable lease term when exercise of the option was determined not to be reasonably certain. Judgment is required in assessing whether renewal and termination options are reasonably certain to be exercised. Factors are considered such as contractual terms compared to current market rates, leasehold improvements expected to have significant value, costs to terminate a lease and the importance of the facility to operations. Costs determined to be variable and not based on an index or rate were not included in the measurement of real estate lease liabilities. These variable costs include real estate taxes, insurance, utilities, common area maintenance and other operating costs. As the implicit rate on most leases is not readily determinable, an incremental borrowing rate was applied on a portfolio approach to discount its real estate lease liabilities.

The remaining 10% of lease obligations are comprised of vehicles used primarily by salesforce and an R&D facility operated by a third party under management's direction. Vehicle lease terms vary by country with terms generally between one year and four years.

The following table summarizes the components of lease expense:

Dollars in Millions	Year Ended December 31, 2019
Operating lease cost	\$ 115
Variable lease cost	25
Short-term lease cost	20
Sublease income	(4)
Total operating lease expense	\$ 156

Operating lease right-of-use assets and liabilities were as follows:

Dollars in Millions	December 31, 2019	January 1, 2019
Other non-current assets	\$ 704	\$ 543
Other current liabilities	133	40
Other non-current liabilities	672	548
Total liabilities	\$ 805	\$ 588

Future lease payments for non-cancellable operating leases as of December 31, 2019 were as follows:

Dollars in Millions		
2020	\$	165
2021		145
2022		130
2023		104
2024		68
Thereafter		354
Total future lease payments		966
Less imputed interest		161
Total lease liability	\$	805

Future minimum lease payments under non-cancelable operating leases as of December 31, 2018 were approximately \$100 million per year from 2019 through 2023 and \$200 million thereafter.

Right-of-use assets obtained in exchange for new operating lease obligations were \$231 million for the year ended December 31, 2019, primarily relates to \$223 million of right-of-use assets acquired in the Celgene acquisition. Cash paid for amounts included in the measurement of operating lease liabilities was \$79 million for the year ended December 31, 2019, net of a \$33 million lease incentive received in the second quarter. The weighted-average remaining lease term was 9 years and the discount rate was 4% as of December 31, 2019.

Note 14. GOODWILL AND OTHER INTANGIBLE ASSETS

Dollars in Millions	Estimated Useful Lives	December 31,	
		2019	2018
Goodwill ^(a)		\$ 22,488	\$ 6,538
Other intangible assets ^(a) :			
Licenses	5 – 15 years	482	510
Acquired developed product rights	3 – 15 years	46,827	2,357
Capitalized software	3 – 10 years	1,297	1,156
IPRD		19,500	32
Gross other intangible assets		68,106	4,055
Less accumulated amortization		(4,137)	(2,964)
Other intangible assets		\$ 63,969	\$ 1,091

(a) Includes goodwill and other intangible assets recognized as part of the Celgene acquisition in 2019. Refer to “—Note 4. Acquisitions, Divestitures, Licensing and Other Arrangements” for more information related to the Celgene acquisition.

Amortization expense of other intangible assets was \$1,255 million in 2019, \$198 million in 2018 and \$190 million in 2017. Future annual amortization expense of other intangible assets is expected to be approximately \$9.3 billion in 2020, \$9.3 billion in 2021, \$9.1 billion in 2022, \$8.4 billion in 2023, and \$7.4 billion in 2024.

Other intangible asset impairment charges were \$66 million in 2019, \$84 million in 2018 and \$80 million in 2017. A \$32 million IPRD impairment charge was recorded in Research and development in 2019 following a decision to discontinue development of an investigational compound obtained in the acquisition of Medarex. A \$64 million impairment charge was recorded in Other (income)/expense, net in 2018 for an out-licensed asset obtained in the 2010 acquisition of ZymoGenetics, Inc., which did not meet its primary endpoint in a Phase II clinical study. A \$75 million IPRD impairment charge was recognized and attributed to noncontrolling interest in 2017 after the option to purchase F-Star was not exercised.

Note 15. SUPPLEMENTAL FINANCIAL INFORMATION

Dollars in Millions	December 31,	
	2019	2018
Prepaid and refundable income taxes	\$ 754	\$ 774
Research and development	410	337
Assets held-for-sale	—	479
Other	819	425
Other current assets	\$ 1,983	\$ 2,015

Dollars in Millions	December 31,	
	2019	2018
Equity investments	\$ 3,405	\$ 674
Inventories	1,373	429
Operating leases	704	—
Pension and postretirement	456	809
Restricted cash	390	—
Other	276	112
Other non-current assets	\$ 6,604	\$ 2,024

Dollars in Millions	December 31,	
	2019	2018
Rebates and returns	\$ 4,275	\$ 2,417
Income taxes payable	1,517	398
Employee compensation and benefits	1,457	848
Research and development	1,324	805
Dividends	1,025	669
Interest	493	69
Royalties	418	391
Operating leases	133	—
Other	1,871	1,462
Other current liabilities	\$ 12,513	\$ 7,059

Dollars in Millions	December 31,	
	2019	2018
Income taxes payable	\$ 5,368	\$ 3,024
Contingent value rights	2,275	—
Pension and postretirement	725	566
Operating leases	672	—
Deferred income	424	468
Deferred compensation	287	231
Other	350	251
Other non-current liabilities	\$ 10,101	\$ 4,540

Note 16. EQUITY

Dollars and Shares in Millions	Common Stock		Capital in Excess of Par Value of Stock	Accumulated Other Comprehensive Loss	Retained Earnings	Treasury Stock		Noncontrolling Interest
	Shares	Par Value				Shares	Cost	
Balance at January 1, 2017	2,208	\$ 221	\$ 1,725	\$ (2,503)	\$ 33,513	536	\$(16,779)	\$ 170
Accounting change - cumulative effect ^(a)	—	—	—	—	(787)	—	—	—
Adjusted balance at January 1, 2017	2,208	221	1,725	(2,503)	32,726	536	(16,779)	170
Net earnings	—	—	—	—	1,007	—	—	27
Other Comprehensive Income/(Loss)	—	—	—	214	—	—	—	—
Cash dividends declared ^(c)	—	—	—	—	(2,573)	—	—	—
Share repurchase program	—	—	—	—	—	44	(2,477)	—
Stock compensation	—	—	173	—	—	(5)	7	—
Variable interest entity	—	—	—	—	—	—	—	(59)
Distributions	—	—	—	—	—	—	—	(32)
Balance at December 31, 2017	2,208	221	1,898	(2,289)	31,160	575	(19,249)	106
Accounting change - cumulative effect ^(b)	—	—	—	(34)	332	—	—	—
Adjusted balance at January 1, 2018	2,208	221	1,898	(2,323)	31,492	575	(19,249)	106
Net earnings	—	—	—	—	4,920	—	—	27
Other Comprehensive Income/(Loss)	—	—	—	(156)	—	—	—	—
Cash dividends declared ^(c)	—	—	—	—	(2,630)	—	—	—
Share repurchase program	—	—	—	—	—	5	(313)	—
Stock compensation	—	—	183	—	—	(4)	(12)	—
Adoption of ASU 2018-02 ^(b)	—	—	—	(283)	283	—	—	—
Distributions	—	—	—	—	—	—	—	(37)
Balance at December 31, 2018	2,208	221	2,081	(2,762)	34,065	576	(19,574)	96
Accounting change - cumulative effect ^(b)	—	—	—	—	5	—	—	—
Adjusted balance at January 1, 2019	2,208	221	2,081	(2,762)	34,070	576	(19,574)	96
Net earnings	—	—	—	—	3,439	—	—	21
Other Comprehensive Income/(Loss)	—	—	—	1,242	—	—	—	—
Celgene acquisition	715	71	42,721	—	—	—	—	—
Cash dividends declared ^(c)	—	—	—	—	(3,035)	—	—	—
Share repurchase program	—	—	(1,400)	—	—	105	(5,900)	—
Stock compensation	—	—	307	—	—	(9)	117	—
Distributions	—	—	—	—	—	—	—	(17)
Balance at December 31, 2019	2,923	\$ 292	\$ 43,709	\$ (1,520)	\$ 34,474	672	\$(25,357)	\$ 100

(a) Cumulative effect resulting from adoption of ASU 2016-16.

(b) Cumulative effect resulting from adoption of ASU 2014-09.

(c) Cash dividends declared per common share were \$1.68, \$1.61 and \$1.57 in 2019, 2018 and 2017, respectively.

BMS has a share repurchase program, authorized by its Board of Directors, allowing for repurchases of its shares effected in the open market or through privately negotiated transactions in compliance with Rule 10b-18 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), including through Rule 10b5-1 trading plans. The share repurchase program does not have an expiration date and may be suspended or discontinued at any time. Treasury stock is recognized at the cost to reacquire the shares. Shares issued from treasury are recognized utilizing the first-in first-out method.

In the fourth quarter of 2019, BMS executed accelerated share repurchase agreements (“ASR”) with Morgan Stanley & Co. LLC and Barclays Bank PLC to repurchase an aggregate \$7 billion of common stock. The ASR was funded with cash on-hand. Approximately 99 million shares of common stock, representing approximately 80% of the \$7 billion aggregate repurchase price at the then current stock price, were delivered to BMS and included in treasury stock. The agreements are expected to settle during the second quarter of 2020, upon which additional shares of common stock may be delivered to BMS or, under certain circumstances, BMS may be required to make a cash payment or may elect to deliver shares of common stock to the counterparties. The total number of shares ultimately repurchased under the ASRs will be determined upon final settlement and will be based on a discount to the volume-weighted average price of BMS’s common stock during the ASR period.

BMS completed accelerated share repurchase agreements that repurchased approximately 36.5 million shares of common stock for an aggregate \$2 billion in 2017. The agreements were funded through a combination of debt and cash.

The components of Other Comprehensive Income/(Loss) were as follows:

Dollars in Millions	Year Ended December 31,								
	2019			2018			2017		
	Pretax	Tax	After Tax	Pretax	Tax	After Tax	Pretax	Tax	After Tax
Derivatives qualifying as cash flow hedges:									
Unrealized gains/(losses)	\$ 65	\$ (7)	\$ 58	\$ 86	\$ (9)	\$ 77	\$ (101)	\$ 33	\$ (68)
Reclassified to net earnings ^(a)	(103)	13	(90)	(4)	(3)	(7)	19	(8)	11
Derivatives qualifying as cash flow hedges	(38)	6	(32)	82	(12)	70	(82)	25	(57)
Pension and postretirement benefits:									
Actuarial (losses)/gains	(143)	28	(115)	(89)	(3)	(92)	47	11	58
Amortization ^(b)	55	(11)	44	65	(13)	52	77	(31)	46
Settlements ^(b)	1,640	(366)	1,274	121	(28)	93	167	(57)	110
Pension and postretirement benefits	1,552	(349)	1,203	97	(44)	53	291	(77)	214
Available-for-sale securities:									
Unrealized gains/(losses)	42	(9)	33	(30)	5	(25)	38	6	44
Realized losses/(gains) ^(b)	3	—	3	—	—	—	(7)	2	(5)
Available-for-sale securities	45	(9)	36	(30)	5	(25)	31	8	39
Foreign currency translation	43	(8)	35	(245)	(9)	(254)	(20)	38	18
Other Comprehensive Income/(Loss)	\$ 1,602	\$ (360)	\$ 1,242	\$ (96)	\$ (60)	\$ (156)	\$ 220	\$ (6)	\$ 214

(a) Included in Cost of products sold.

(b) Included in Other (income)/expense, net.

The accumulated balances related to each component of Other Comprehensive Income/(Loss), net of taxes, were as follows:

Dollars in Millions	December 31,	
	2019	2018
Derivatives qualifying as cash flow hedges	\$ 19	\$ 51
Pension and postretirement benefits	(899)	(2,102)
Available-for-sale securities	6	(30)
Foreign currency translation	(646)	(681)
Accumulated other comprehensive loss	\$ (1,520)	\$ (2,762)

Note 17. RETIREMENT BENEFITS

BMS sponsors defined benefit pension plans, defined contribution plans and termination indemnity plans for regular full-time employees. The principal defined benefit pension plan was the Bristol-Myers Squibb Retirement Income Plan (the “Plan”), which covered most U.S. employees. Future benefits related to service for the Plan were eliminated in 2009. BMS contributed at least the minimum amount required by ERISA. Plan benefits were based primarily on the participant’s years of credited service and final average compensation.

In December 2018, BMS announced plans to fully terminate the Plan. Pension obligations related to the Plan were to be distributed through a combination of lump sum payments to eligible Plan participants who elected such payments and through the purchase of group annuity contracts from wholly owned insurance subsidiaries of Athene Holding Ltd. (“Athene”). In 2019, \$1.3 billion was distributed to Plan participants who elected lump sum payments during the election window, and group annuity contracts were purchased from Athene for \$2.6 billion for the remaining Plan participants for whom Athene irrevocably assumed the pension obligations. These transactions fully terminated the Plan and resulted in a \$1.5 billion non-cash pre-tax pension settlement charge in 2019.

BMS acquired Celgene on November 20, 2019. Certain of Celgene’s international subsidiaries have both funded and unfunded defined benefit pension plans. We have recorded the fair value of the Celgene plans using assumptions and accounting policies consistent with those disclosed by BMS. Upon acquisition, the excess of projected benefit obligation over the plan assets was recognized as a liability and previously existing deferred actuarial gains and losses and unrecognized service costs or benefits were eliminated.

The net periodic benefit cost/(credit) of defined benefit pension plans includes:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Service cost — benefits earned during the year	\$ 26	\$ 26	\$ 25
Interest cost on projected benefit obligation	115	193	188
Expected return on plan assets	(200)	(386)	(411)
Amortization of prior service credits	(4)	(4)	(4)
Amortization of net actuarial loss	59	74	82
Settlements and Curtailments	1,640	121	159
Special termination benefits	—	—	3
Net periodic pension benefit cost/(credit)	\$ 1,636	\$ 24	\$ 42

Pension settlement charges were recognized after determining the annual lump sum payments will exceed the annual interest and service costs for certain pension plans, including the primary U.S. pension plan in 2019, 2018 and 2017.

Changes in defined benefit pension plan obligations, assets, funded status and amounts recognized in the consolidated balance sheets were as follows:

Dollars in Millions	Year Ended December 31,	
	2019	2018
Benefit obligations at beginning of year	\$ 5,966	\$ 6,749
Service cost—benefits earned during the year	26	26
Interest cost	115	193
Settlements and Curtailments	(4,105)	(278)
Actuarial losses/(gains)	777	(523)
Benefits paid	(109)	(123)
Acquisition/Divestiture	262	—
Foreign currency and other	8	(78)
Benefit obligations at end of year	\$ 2,940	\$ 5,966
Fair value of plan assets at beginning of year	\$ 6,129	\$ 6,749
Actual return on plan assets	804	(203)
Employer contributions	63	71
Settlements	(4,104)	(276)
Benefits paid	(109)	(123)
Asset transfer	(424)	—
Acquisition/Divestiture	164	—
Foreign currency and other	13	(89)
Fair value of plan assets at end of year	\$ 2,536	\$ 6,129
(Unfunded)/Funded status	\$ (404)	\$ 163
Assets/(Liabilities) recognized:		
Other non-current assets	\$ 192	\$ 622
Other current liabilities	(27)	(32)
Other non-current liabilities	(569)	(427)
Funded status	\$ (404)	\$ 163
Recognized in Accumulated other comprehensive loss:		
Net actuarial losses	\$ 1,192	\$ 2,717
Prior service credit	(26)	(30)
Total	\$ 1,166	\$ 2,687

The accumulated benefit obligation for defined benefit pension plans was \$2.9 billion and \$6.0 billion at December 31, 2019 and 2018, respectively.

Additional information related to pension plans was as follows:

Dollars in Millions	December 31,	
	2019	2018
Pension plans with projected benefit obligations in excess of plan assets:		
Projected benefit obligation	\$ 1,652	\$ 1,275
Fair value of plan assets	1,056	817
Pension plans with accumulated benefit obligations in excess of plan assets:		
Accumulated benefit obligation	1,417	1,181
Fair value of plan assets	875	757

Actuarial Assumptions

Weighted-average assumptions used to determine defined benefit pension plan obligations were as follows:

	December 31,	
	2019	2018
Discount rate	1.6%	3.5%
Rate of compensation increase	1.3%	0.5%

Weighted-average actuarial assumptions used to determine defined benefit pension plan net periodic benefit cost/(credit) were as follows:

	Year Ended December 31,		
	2019	2018	2017
Discount rate	3.2%	3.1%	3.5%
Expected long-term return on plan assets	4.5%	6.2%	7.0%
Rate of compensation increase	0.5%	0.5%	0.5%

The yield on high quality corporate bonds matching the duration of the benefit obligations is used in determining the discount rate. The Citi Pension Discount curve is used in developing the discount rate for the U.S. plans.

The expected return on plan assets assumption for each plan is based on management's expectations of long-term average rates of return to be achieved by the underlying investment portfolio. Several factors are considered in developing the expected return on plan assets, including long-term historical returns and input from external advisors. Individual asset class return forecasts were developed based upon market conditions, for example, price-earnings levels and yields and long-term growth expectations. The expected long-term rate of return is the weighted-average of the target asset allocation of each individual asset class.

Actuarial gains and losses resulted from changes in actuarial assumptions (such as changes in the discount rate and revised mortality rates) and from differences between assumed and actual experience (such as differences between actual and expected return on plan assets). Actuarial losses in 2019 related to plan benefit obligations were primarily the result of decreases in discount rates. Actuarial gains in 2018 related to plan benefit obligations were primarily the result of increases in discount rates. Gains and losses are amortized over the life expectancy of the plan participants for U.S. plans (26 years in 2020) and expected remaining service periods for most other plans to the extent they exceed 10% of the higher of the market-related value or the projected benefit obligation for each respective plan.

Postretirement Benefit Plans

Comprehensive medical and group life benefits are provided for substantially all legacy BMS U.S. retirees electing to participate in comprehensive medical and group life plans and to a lesser extent certain benefits for non-U.S. employees. The medical plan is contributory. Contributions are adjusted periodically and vary by date of retirement. The life insurance plan is noncontributory. Plan assets consist principally of fixed-income securities. Postretirement benefit plan obligations were \$255 million and \$253 million at December 31, 2019 and 2018, respectively, and the fair value of plan assets were \$398 million and \$331 million at December 31, 2019 and 2018, respectively. The weighted-average discount rate used to determine benefit obligations was 2.9% and 3.9% at December 31, 2019 and 2018, respectively. The net periodic benefit credits were not material.

Plan Assets

The fair value of pension and postretirement plan assets by asset category at December 31, 2019 and 2018 was as follows:

Dollars in Millions	December 31, 2019				December 31, 2018			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Plan Assets								
Equity securities	\$ 87	\$ —	\$ —	\$ 87	\$ 124	\$ —	\$ —	\$ 124
Equity funds	4	544	—	548	2	475	—	477
Fixed income funds	—	769	—	769	—	606	—	606
Corporate debt securities	—	764	—	764	—	3,865	—	3,865
U.S. Treasury and agency securities	—	168	—	168	—	553	—	553
Short-term investment funds	—	—	—	—	—	55	—	55
Insurance contracts	—	—	128	128	—	—	134	134
Cash and cash equivalents	24	—	—	24	311	—	—	311
Other	—	111	33	144	—	105	19	124
Plan assets subject to leveling	\$ 115	\$ 2,356	\$ 161	\$ 2,632	\$ 437	\$ 5,659	\$ 153	\$ 6,249
Plan assets measured at NAV as a practical expedient								
Venture capital and limited partnerships				\$ 1				\$ 121
Other				301				91
Total plan assets measured at NAV as a practical expedient				302				212
Net plan assets				\$ 2,934				\$ 6,461

The investment valuation policies per investment class are as follows:

Level 1 inputs utilize unadjusted quoted prices in active markets accessible at the measurement date for identical assets or liabilities. The fair value hierarchy provides the highest priority to Level 1 inputs. These instruments include equity securities, equity funds and fixed income funds publicly traded on a national securities exchange, and cash and cash equivalents. Cash and cash equivalents are highly liquid investments with original maturities of three months or less at the time of purchase and are recognized at cost, which approximates fair value. Pending trade sales and purchases are included in cash and cash equivalents until final settlement.

Level 2 inputs utilize observable prices for similar instruments, quoted prices for identical or similar instruments in non-active markets, and other observable inputs that can be corroborated by market data for substantially the full term of the assets or liabilities. Equity funds, fixed income funds, and short-term investment funds classified as Level 2 within the fair value hierarchy are valued at the NAV of their shares held at year end, which represents fair value. Corporate debt securities and U.S. Treasury and agency securities classified as Level 2 within the fair value hierarchy are valued utilizing observable prices for similar instruments and quoted prices for identical or similar instruments in markets that are not active.

Level 3 unobservable inputs are used when little or no market data is available. Insurance contracts are held by certain foreign pension plans and are carried at contract value, which approximates the estimated fair value and is based on the fair value of the underlying investment of the insurance company.

Essentially all venture capital and limited partnership investments were liquidated by the end of 2019. The remaining investments using the practical expedient consist of multi-asset funds and are redeemable on a either a daily or weekly or monthly basis.

The investment strategy is to maximize return while maintaining an appropriate level of risk to provide sufficient liquidity for benefit obligations and plan expenses. Individual plan investment allocations are determined by local fiduciary committees and the composition of total assets for all pension plans at December 31, 2019 was broadly characterized as an allocation between equity securities (28%), debt securities (63%) and other investments (9%).

The principal U.S. defined benefit pension plan was over-funded at termination. As a result, excess Plan assets of \$424 million are reflected as BMS assets as of December 31, 2019. These assets are primarily reported in long term restricted cash due to the election to contribute these assets to the Bristol-Myers Squibb Savings and Investment Program, a qualified replacement plan. This election requires that these assets be used to fund future annual Company contribution to the Bristol-Myers Squibb Savings and Investment Program.

Contributions and Estimated Future Benefit Payments

Contributions to pension plans were \$63 million in 2019, \$71 million in 2018 and \$396 million in 2017 and are not expected to be material in 2020. Estimated annual future benefit payments for non-terminating plans (including lump sum payments) will be approximately \$120 million in each of the next five years and in the subsequent five year period.

Savings Plans

The principal defined contribution plan is the Bristol-Myers Squibb Savings and Investment Program. The contributions are based on employee contributions and the level of Company match. The expense attributed to defined contribution plans in the U.S. was approximately \$200 million in 2019, 2018 and 2017.

Note 18. EMPLOYEE STOCK BENEFIT PLANS

On May 1, 2012, the shareholders approved the 2012 Plan, which replaced the 2007 Stock Incentive Plan. The 2012 Plan provides for 109 million shares to be authorized for grants, plus any shares from outstanding awards under the 2007 Plan as of February 29, 2012 that expire, are forfeited, canceled, or withheld to satisfy tax withholding obligations. As of December 31, 2019, 98 million shares were available for award. Shares are issued from treasury stock to satisfy BMS's obligations under this Plan.

As part of the Celgene acquisition, BMS assumed the 2017 Stock Incentive Plan and the 2014 Equity Incentive Plan (referred together with the BMS plans as the "Plans"). These plans provided for the granting of Options, Restricted Stock Units ("RSUs"), Performance Share Units ("PSUs") and other share-based and performance-based awards to former Celgene employees, officers and non-employee directors. Additionally, the terms of these plans provided for accelerated vesting of awards upon a change in control followed by an involuntary termination without cause. As at the acquisition date, 29 million shares were available for award under the Celgene Plans. Outstanding Celgene equity awards were assumed by BMS and converted into BMS equity awards. The replacement BMS awards generally have the same terms and conditions (including vesting) as the former Celgene awards for which they were exchanged. Shares are issued from treasury stock to satisfy BMS's obligations under the Plans.

CVRs were also issued to the holders of vested and unexercised "in the money" Options that were outstanding at the acquisition date. Celgene RSU holders and unvested "in the money" Options that were outstanding at the acquisition date, with awards vesting prior to March 31, 2021 are also eligible to receive CVRs. Celgene RSU holders and unvested "in the money" Options that were outstanding at the acquisition date with awards vesting after March 31, 2021 are eligible to receive a cash value of \$9.00 per pre-converted Celgene RSU and "in the money" Options if all CVR milestones are achieved.

Executive officers and key employees may be granted options to purchase common stock at no less than the market price on the date the option is granted. Options generally become exercisable ratably over four years and have a maximum term of 10 years. The Plans provide for the granting of stock appreciation rights whereby the grantee may surrender exercisable rights and receive common stock and/or cash measured by the excess of the market price of the common stock over the option exercise price. We primarily utilize treasury shares to satisfy the exercise of stock options.

RSUs may be granted to key employees, subject to restrictions as to continuous employment. Generally, vesting occurs ratably over a three to four year period from grant date. A stock unit is a right to receive stock at the end of the specified vesting period but has no voting rights.

Market share units ("MSUs") are granted to executives. Vesting is conditioned upon continuous employment until the vesting date and a payout factor of at least 60% of the share price on the award date. The payout factor is the share price on vesting date divided by share price on award date, with a maximum of 200%. The share price used in the payout factor is calculated using an average of the closing prices on the grant or vest date, and the nine trading days immediately preceding the grant or vest date. Vesting occurs ratably over four years.

PSUs are granted to executives, have a three year cycle and are granted as a target number of units subject to adjustment. The number of shares issued when PSUs vest is determined based on the achievement of performance goals and based on BMS's three-year total shareholder return relative to a peer group of companies. Vesting is conditioned upon continuous employment and occurs on the third anniversary of the grant date.

Stock-based compensation expense for awards ultimately expected to vest is recognized over the vesting period. Forfeitures are estimated based on historical experience at the time of grant and revised in subsequent periods if actual forfeitures differ from those estimates. Components of stock-based compensation benefits in the consolidated statement of earnings are as follows:

Dollars in Millions	Year Ended December 31,		
	2019	2018	2017
Cost of products sold	\$ 19	\$ 15	\$ 16
Marketing, selling and administrative	162	122	103
Research and development	115	84	80
Other (income)/expense, net	145	—	—
Total stock-based compensation expense	\$ 441	\$ 221	\$ 199
Income tax benefit	\$ 87	\$ 41	\$ 59

The total stock-based compensation expense for the year ended December 31, 2019 includes \$66 million related to Celgene post-combination service period and \$145 million of accelerated vesting of awards related to the Celgene acquisition. It also includes \$10 million related to CVR obligation on unvested stock awards for the post combination service period. Refer to “—Note 4. Acquisitions, Divestitures, Licensing and Other Arrangements” for more information related to the Celgene acquisition.

The replacement stock options granted to Celgene option holders on acquisition were issued consistent with the vesting conditions of the replaced award. Replacement stock options have contractual terms of 10 years from the initial grant date. The majority of stock options outstanding vest in one-fourth increments over a four year period, although certain awards cliff vest or have longer or shorter service periods. Celgene option holders may elect to exercise options at any time during the option term. However, any shares so purchased which have not vested as of the date of exercise shall be subject to forfeiture, which will lapse in accordance with the established vesting time period. The fair value on the acquisition date attributable to post-combination service, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the remaining vesting period. BMS estimated the fair value of replacement options, using a Black-Scholes Option pricing model, with the following assumptions:

	Year Ended December 31, 2019
Weighted average risk-free interest rate	1.59%
Expected volatility	25.7%
Weighted average expected term (years)	2.65
Expected dividend yield	2.89%

The risk-free interest rate is based on rates available for U.S. Federal Reserve treasury constant maturities with a remaining term equal to the options' expected life at the time of the replacement award. Expected volatility of replacement stock option awards is estimated based on a 50/50 blend of implied volatility and five year historical volatility of BMS' publicly traded stocks. The expected term of an employee share option is the period of time for which the option is expected to be outstanding and is based on historical and forecasted exercise behavior. Dividend yield is estimated based on BMS' annual dividend rate at the time of award replacement.

The following table summarizes the stock compensation activity for the year ended December 31, 2019:

Shares in Millions	Stock Options ^(a)		Restricted Stock Units		Market Share Units		Performance Share Units	
	Number of Options	Weighted- Average Exercise Price of Shares	Number of Nonvested Awards	Weighted- Average Grant-Date Fair Value	Number of Nonvested Awards	Weighted- Average Grant-Date Fair Value	Number of Nonvested Awards	Weighted- Average Grant-Date Fair Value
Balance at January 1, 2019	1.7	\$ 17.51	5.0	\$ 58.83	1.5	\$ 66.76	2.8	\$ 63.28
Replacement Awards	105.3	47.77	32.4	56.37	—	—	—	—
Granted	—	—	3.9	47.16	0.8	51.52	1.3	49.99
Released/Exercised	(5.5)	32.22	(5.9)	57.24	(0.5)	65.76	(0.8)	64.87
Adjustments for actual payout	—	—	—	—	—	—	0.1	—
Forfeited/Canceled	(0.3)	54.98	(0.7)	54.43	(0.3)	59.12	(0.5)	56.71
Balance at December 31, 2019	101.2	48.08	34.7	55.58	1.6	59.25	3.0	57.46
Expected to vest			32.3	55.66	1.4	59.45	3.6	58.27

(a) At December 31, 2019, substantially all of the 22.6 million unvested stock options with a weighted-average exercise price of \$53.10 are expected to vest.

Dollars in Millions	Stock Options	Restricted Stock Units	Market Share Units	Performance Share Units
Unrecognized compensation cost	\$ 121	\$ 918	\$ 39	\$ 78
Expected weighted-average period in years of compensation cost to be recognized	2.0	2.1	2.7	1.6
Amounts in Millions, except per share data	2019	2018	2017	
Weighted-average grant date fair value (per share):				
Stock options - replacement awards	\$ 15.00	\$ —	\$ —	
Restricted stock units - replacement awards	56.37	—	—	
Restricted stock units	47.16	61.40	54.39	
Market share units	51.52	72.33	60.14	
Performance share units	49.99	67.60	57.91	
Fair value of awards that vested:				
Restricted stock units - replacement awards	\$ 233	\$ —	\$ —	
Restricted stock units	105	98	91	
Market share units	30	40	33	
Performance share units	53	103	84	
Total intrinsic value of stock options exercised	148	89	84	

The fair value of RSUs, MSUs and PSUs approximates the closing trading price of BMS's common stock on the grant date after adjusting for the units not eligible for accrued dividends. In addition, the fair value of MSUs and PSUs considers the probability of satisfying the payout factor and total shareholder return, respectively.

The fair value of the replacement RSUs approximates the closing trading price of BMS' common stock on the date of acquisition after adjusting for the units not eligible for accrued dividends. The fair value on the acquisition date attributable to post-combination service, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the remaining vesting period.

The following table summarizes significant outstanding and exercisable options at December 31, 2019:

Range of Exercise Prices	Number of Options (in millions)	Weighted-Average Remaining Contractual Life (in years)	Weighted-Average Exercise Price Per Share	Aggregate Intrinsic Value (in millions)
\$10 - \$40	27.2	2.7	\$ 24.81	\$ 1,071
\$40 - \$55	31.3	5.7	48.69	485
\$55 - \$65	30.4	5.0	59.48	143
\$65+	12.3	5.7	69.89	—
Outstanding	101.2	4.7	\$ 48.08	\$ 1,700
Exercisable	78.6	3.9	\$ 46.65	\$ 1,430

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on the closing stock price of \$64.19 on December 31, 2019.

Note 19. LEGAL PROCEEDINGS AND CONTINGENCIES

BMS and certain of its subsidiaries are involved in various lawsuits, claims, government investigations and other legal proceedings that arise in the ordinary course of business. These claims or proceedings can involve various types of parties, including governments, competitors, customers, suppliers, service providers, licensees, employees, or shareholders, among others. These matters may involve patent infringement, antitrust, securities, pricing, sales and marketing practices, environmental, commercial, contractual rights, licensing obligations, health and safety matters, consumer fraud, employment matters, product liability and insurance coverage, among others. The resolution of these matters often develops over a long period of time and expectations can change as a result of new findings, rulings, appeals or settlement arrangements. Legal proceedings that are significant or that BMS believes could become significant or material are described below.

While BMS does not believe that any of these matters, except as otherwise specifically noted below, will have a material adverse effect on its financial position or liquidity as BMS believes it has substantial defenses in the matters, the outcomes of BMS's legal proceedings and other contingencies are inherently unpredictable and subject to significant uncertainties. There can be no assurance that there will not be an increase in the scope of one or more of these pending matters or any other or future lawsuits, claims, government investigations or other legal proceedings will not be material to BMS's financial position, results of operations or cash flows for a particular period. Furthermore, failure to enforce BMS's patent rights would likely result in substantial decreases in the respective product revenues from generic competition.

Unless otherwise noted, BMS is unable to assess the outcome of the respective matters nor is it able estimate the possible loss or range of losses that could potentially result for such matters. Contingency accruals are recognized when it is probable that a liability will be incurred and the amount of the related loss can be reasonably estimated. Developments in legal proceedings and other matters that could cause changes in the amounts previously accrued are evaluated each reporting period. For a discussion of BMS's tax contingencies, see "—Note 7. Income Taxes".

INTELLECTUAL PROPERTY

Abraxane - U.S.

In November 2018, Celgene received a Notice Letter from HBT Labs, Inc. ("HBT") notifying Celgene that it had filed a 505(b)(2) NDA containing paragraph IV certifications against certain patents that are listed in the FDA Orange Book for *Abraxane*. HBT is seeking to market a generic version of *Abraxane* in the U.S. In response, Celgene initiated a patent infringement action under the Drug Price Competition and Patent Term Restoration Act, known as the "Hatch-Waxman Act," against HBT in the U.S. District Court for the District of Delaware. HBT filed an answer and counterclaims asserting that each of the patents is invalid and/or not infringed. In February 2020, Celgene entered into a settlement with HBT to terminate this patent litigation. As part of the settlement, Celgene agreed to provide HBT with a license to its patents required to manufacture and sell a generic paclitaxel protein-bound particles for injectable suspension product in the U.S. beginning on September 27, 2022.

In June 2019, Celgene also received a Notice Letter from Sun Pharma Advanced Research Company, Ltd. ("SPARC") notifying Celgene that it had filed a 505(b)(2) NDA containing paragraph IV certifications against certain patents that are listed in the FDA Orange Book for *Abraxane*. SPARC is seeking to market a paclitaxel injection concentrate suspension product in the U.S. In response, Celgene initiated a patent infringement action under the Hatch-Waxman Act against SPARC in the U.S. District Court for the District of New Jersey in August 2019. In December 2019, Celgene voluntarily dismissed this action without prejudice.

Anti-PD-1 Antibody Litigation

In September 2015, Dana-Farber Cancer Institute ("Dana-Farber") filed a complaint in the U.S. District Court for the District of Massachusetts seeking to correct the inventorship on up to six related U.S. patents directed to methods of treating cancer using PD-1 and PD-L1 antibodies. Specifically, Dana-Farber is seeking to add two scientists as inventors to these patents. In October 2017, Pfizer was allowed to intervene in this case alleging that one of the scientists identified by Dana-Farber was employed by a company eventually acquired by Pfizer during the relevant period. In February 2019, BMS settled the lawsuit with Pfizer. A bench trial in the lawsuit with Dana-Farber took place in February 2019. In May 2019, the Court issued an opinion ruling that the two scientists should be added as inventors to the patents. The decision was appealed to the Federal Circuit. In June 2019, Dana Farber filed a new lawsuit in the District of Massachusetts against BMS seeking damages as a result of the Court's decision adding the scientists as inventors. This case has been stayed pending the outcome of BMS's appeal to the Federal Circuit.

CAR T Litigation

On October 18, 2017, the day on which the FDA approved Kite Pharma, Inc.'s ("Kite") *Yescarta** product, Juno, along with Sloan Kettering Institute for Cancer Research ("SKI"), filed a complaint against Kite in the U.S. District Court for the Central District of California. The complaint alleged that *Yescarta** infringes certain claims of U.S. Patent No. 7,446,190 ("the '190 Patent") concerning CAR T cell technologies. Kite filed an answer and counterclaims asserting non-infringement and invalidity of the '190 Patent. In December 2019, following an eight-day trial, the jury rejected Kite's defenses, finding that Kite willfully infringed the '190 Patent and awarding to Juno and SKI a reasonable royalty consisting of a \$585 million upfront payment and a 27.6% running royalty on Kite's sales of *Yescarta** through the expiration of the '190 Patent in August 2024. Briefing on post-trial motions is scheduled to be completed by February 24, 2020.

***Eliquis* - U.S.**

In 2017, BMS received Notice Letters from twenty-five generic companies notifying BMS that they had filed aNDAs containing paragraph IV certifications seeking approval of generic versions of *Eliquis*. As a result, two *Eliquis* patents listed in the FDA Orange Book are being challenged: the composition of matter patent claiming apixaban specifically and a formulation patent. In response, BMS, along with its partner Pfizer, initiated patent infringement actions under the Hatch-Waxman Act against all generic filers in the U.S. District Court for the District of Delaware in April 2017. In August 2017, the U.S. Patent and Trademark Office granted patent term restoration to the composition of matter patent, thereby restoring the term of the *Eliquis* composition of matter patent, which is BMS's basis for projected LOE, from February 2023 to November 2026. BMS settled with a number of aNDA filers. These settlements do not affect BMS's projected LOE for *Eliquis*. A trial with the remaining aNDA filers took place in late 2019. Post-trial briefing is expected to be complete by the end of February 2020 and a decision is expected some time after.

***Plavix** - Australia**

Sanofi was notified that, in August 2007, GenRx Proprietary Limited ("GenRx") obtained regulatory approval of an application for clopidogrel bisulfate 75mg tablets in Australia. GenRx, formerly a subsidiary of Apotex Inc., subsequently changed its name to Apotex ("GenRx-Apotex"). In August 2007, GenRx-Apotex filed an application in the Federal Court of Australia seeking revocation of Sanofi's Australian Patent No. 597784 (Case No. NSD 1639 of 2007). Sanofi filed counterclaims of infringement and sought an injunction. On September 21, 2007, the Federal Court of Australia granted Sanofi's injunction. A subsidiary of BMS was subsequently added as a party to the proceedings. In February 2008, a second company, Spirit Pharmaceuticals Pty. Ltd., also filed a revocation suit against the same patent. This case was consolidated with the GenRx-Apotex case. On August 12, 2008, the Federal Court of Australia held that claims of Patent No. 597784 covering clopidogrel bisulfate, hydrochloride, hydrobromide, and taurocholate salts were valid. The Federal Court also held that the process claims, pharmaceutical composition claims, and claim directed to clopidogrel and its pharmaceutically acceptable salts were invalid. BMS and Sanofi filed notices of appeal in the Full Court of the Federal Court of Australia ("Full Court") appealing the holding of invalidity of the claim covering clopidogrel and its pharmaceutically acceptable salts, process claims, and pharmaceutical composition claims. GenRx-Apotex appealed the holding of validity of the clopidogrel bisulfate, hydrochloride, hydrobromide, and taurocholate claims. On September 29, 2009, the Full Court held all of the claims of Patent No. 597784 invalid. In March 2010, the High Court of Australia denied a request by BMS and Sanofi to hear an appeal of the Full Court decision. The case was remanded to the Federal Court for further proceedings related to damages sought by GenRx-Apotex. BMS and GenRx-Apotex settled, and the GenRx-Apotex case was dismissed. The Australian government intervened in this matter seeking maximum damages up to 449 million AUD (\$311 million), plus interest, which would be split between BMS and Sanofi, for alleged losses experienced for paying a higher price for branded *Plavix** during the period when the injunction was in place. BMS and Sanofi dispute that the Australian government is entitled to any damages. A trial was concluded in September 2017, and BMS is expecting a decision in 2020.

***Pomalyst* - U.S.**

Celgene has received Notice letters on behalf of Teva Pharmaceuticals USA, Inc.; Apotex Inc. ("Apotex") and Apotex Corp.; Hetero Labs Limited, Hetero Labs Limited Unit-V, Hetero Drugs Limited, Hetero USA, Inc. (together, "Hetero"); Aurobindo Pharma Ltd.; Mylan Pharmaceuticals Inc.; and Breckenridge Pharmaceutical, Inc. notifying Celgene that they had filed aNDAs containing paragraph IV certifications seeking approval to market generic versions of *Pomalyst* in the U.S. In response, Celgene filed patent infringement actions against the companies in the U.S. District Court for the District of New Jersey asserting certain FDA Orange Book-listed patents as well as other litigations asserting other non-FDA Orange Book-listed patents, and the companies filed answers, counterclaims, and/or declaratory judgment actions alleging that the asserted patents are invalid, unenforceable, and/or not infringed. These litigations were subsequently consolidated and a trial is scheduled from July 27 through August 14, 2020.

Celgene subsequently filed additional patent infringement actions in the U.S. District Court for the District of New Jersey against the companies asserting certain patents not listed in the FDA Orange Book that cover polymorphic forms of pomalidomide, and the companies filed answer and/or counterclaims alleging that each of these patents is invalid and/or not infringed. In these actions, the Court has ordered that the parties be ready for trial by April 15, 2021.

In June 2019, Celgene received a Notice Letter from Dr. Reddy's Laboratories, Ltd. and Dr. Reddy's Laboratories, Inc. (together, "DRL") notifying Celgene that they had filed aNDAs containing paragraph IV certifications seeking approval to market generic versions of *Pomalyst*. In response, Celgene initiated a patent infringement action against DRL in the U.S. District Court for the District of New Jersey asserting certain FDA Orange Book-listed patents, and DRL filed an answer and counterclaims alleging that each of the patents is invalid and/or not infringed. No trial date has been set.

***Revlimid* - Canada**

Celgene received two Notices of Allegation in July 2018 from Natco Pharma (Canada) Inc. ("Natco Canada") notifying Celgene of the filing of Natco Canada's two separate aNDAs with Canada's Minister of Health with respect to certain of Celgene's Canadian letters patents. Natco Canada is seeking to market a generic version of *Revlimid* in Canada. In response, Celgene initiated patent infringement actions in the Federal Court of Canada and sought an injunction. Natco alleges that the asserted patents are invalid and/or not infringed. Trial is scheduled to start on March 30, 2020.

Celgene also received four Notices of Allegation in October 2018 from Apotex notifying Celgene of the filing of Apotex's aNDA with Canada's Minister of Health with respect to certain of Celgene's Canadian letters patents. Apotex is seeking to market a generic version of *Revlimid* in Canada. In response, Celgene initiated patent infringement actions in the Federal Court of Canada and sought an injunction. Celgene entered into a confidential settlement agreement with Apotex concerning this case and these actions were discontinued in November 2019.

***Revlimid* - U.S.**

Celgene has received Notice Letters on behalf of DRL; Zydus Pharmaceuticals (USA) Inc.; Cipla Ltd., India; Apotex; Sun Pharma Global FZE, Sun Pharma Global Inc., Sun Pharmaceutical Industries, Inc., and Sun Pharmaceutical Industries Limited; Hetero; Mylan Pharmaceuticals Inc., Mylan Inc., and Mylan N.V.; and Aurobindo Pharma Limited, Eugia Pharma Specialities Limited, Aurobindo Pharma USA, Inc., and Aurolife Pharma LLC notifying Celgene that they had filed aNDAs containing paragraph IV certifications seeking approval to market generic versions of *Revlimid* in the U.S. In response, Celgene filed patent infringement actions against the companies in the U.S. District Court for the District of New Jersey asserting certain FDA Orange Book-listed patents as well as other litigations asserting other non-FDA Orange Book-listed patents and the companies filed answers and/or counterclaims alleging that the asserted patents are invalid, unenforceable, and/or not infringed. These litigations have different schedules and no trial date has been set in any of the litigations. The case with the earliest potential trial date is against DRL with respect to certain FDA Orange Book-listed patents and a final pretrial conference in that case has been set for June 1, 2020.

***Sprycel* - Europe**

In January 2016, the Opposition Division of the EPO revoked European Patent No. 1169038 ("the '038 patent") covering dasatinib, the active ingredient in *Sprycel*, a decision which was upheld by the EPO Board of Appeal in February 2017. Orphan drug exclusivity and data exclusivity for *Sprycel* in the EU expired in November 2016. The EPO Board of Appeal's decision does not affect the validity of BMS's other *Sprycel* patents within and outside Europe, including different patents that cover the monohydrate form of dasatinib and the use of dasatinib to treat CML. Additionally, in February 2017, the EPO Board of Appeal reversed and remanded an invalidity decision on European Patent No. 1610780 and its claim to the use of dasatinib to treat CML, which the EPO's Opposition Division had revoked in October 2012. In December 2018, the EPO's Opposition Division upheld the validity of the patent directed to the use of dasatinib to treat CML, which expires in 2024. A number of generic companies have launched a generic dasatinib product throughout Europe for the ALL indication.

***Sprycel* - U.S.**

In August 2019, BMS received a Notice Letter from Dr. Reddy's Laboratories, Inc. notifying BMS that it had filed an aNDA containing paragraph IV certifications seeking approval of a generic version of *Sprycel* in the U.S. and challenging two FDA Orange Book-listed monohydrate form patents expiring in 2025 and 2026. In response, BMS initiated a patent infringement lawsuit under the Hatch-Waxman Act in the U.S. District Court for the District of New Jersey. No trial date has been set. In 2013, BMS entered into a settlement agreement with Apotex regarding a patent infringement suit covering the monohydrate form of dasatinib whereby Apotex can launch its generic dasatinib monohydrate aNDA product in September 2024 or earlier in certain circumstances.

PRICING, SALES AND PROMOTIONAL PRACTICES LITIGATION

***Plavix** State Attorneys General Lawsuits**

BMS and certain Sanofi entities are defendants in consumer protection and/or false advertising actions brought by the attorneys general of Hawaii and New Mexico relating to the sales and promotion of *Plavix**. The Hawaii matter is currently scheduled for trial in May 2020.

PRODUCT LIABILITY LITIGATION

BMS is a party to various product liability lawsuits. Plaintiffs in these cases seek damages and other relief on various grounds for alleged personal injury and economic loss. As previously disclosed, in addition to lawsuits, BMS also faces unfilled claims involving its products.

Abilify*

BMS and Otsuka are co-defendants in product liability litigation related to *Abilify**. Plaintiffs allege *Abilify** caused them to engage in compulsive gambling and other impulse control disorders. There have been over 2,000 cases filed in state and federal courts and additional cases are pending in Canada. The Judicial Panel on Multidistrict Litigation consolidated the federal court cases for pretrial purposes in the U.S. District Court for the Northern District of Florida. In February 2019, BMS and Otsuka entered into a master settlement agreement establishing a proposed settlement program to resolve all *Abilify** compulsivity claims filed as of January 28, 2019 in the MDL as well as various state courts, including California and New Jersey. Approximately 175 cases remain pending on behalf of 280 plaintiffs who chose not to participate in the settlement program or filed their claims after the settlement cut-off date.

Byetta*

Amylin, a former subsidiary of BMS, and Lilly are co-defendants in product liability litigation related to *Byetta**. To date, there are approximately 580 separate lawsuits pending on behalf of approximately 2,225 active plaintiffs (including pending settlements), which include injury plaintiffs as well as claims by spouses and/or other beneficiaries, in various courts in the U.S. The majority of these cases have been brought by individuals who allege personal injury sustained after using *Byetta**, primarily pancreatic cancer, and, in some cases, claiming alleged wrongful death. The majority of cases are pending in federal court in San Diego in an MDL or in a coordinated proceeding in California Superior Court in Los Angeles (“JCCP”). In November 2015, the defendants’ motion for summary judgment based on federal preemption was granted in both the MDL and the JCCP. In November 2017, the Ninth Circuit reversed the MDL summary judgment order and remanded the case to the MDL. In November 2018, the California Court of Appeal reversed the state court summary judgment order and remanded those cases to the JCCP for further proceedings. Amylin had product liability insurance covering a substantial number of claims involving *Byetta** (which has been exhausted). As part of BMS’s global diabetes business divestiture, BMS sold *Byetta** to AstraZeneca in February 2014 and any additional liability to Amylin with respect to *Byetta** is expected to be shared with AstraZeneca.

Onglyza*

BMS and AstraZeneca are co-defendants in product liability litigation related to *Onglyza**. Plaintiffs assert claims, including claims for wrongful death, as a result of heart failure or other cardiovascular injuries they allege were caused by their use of *Onglyza**. As of January 2020, claims are pending in state and federal court on behalf of approximately 290 individuals who allege they ingested the product and suffered an injury. In February 2018, the Judicial Panel on Multidistrict Litigation ordered all federal cases to be transferred to an MDL in the U.S. District Court for the Eastern District of Kentucky. A significant majority of the claims are pending in the MDL. As part of BMS’s global diabetes business divestiture, BMS sold *Onglyza** to AstraZeneca in February 2014 and any potential liability with respect to *Onglyza** is expected to be shared with AstraZeneca.

SECURITIES LITIGATION**BMS Securities Class Action**

Since February 2018, two separate putative class action complaints were filed in the U.S. District for the Northern District of California and in the U.S. District Court for the Southern District of New York against BMS, BMS’s Chief Executive Officer, Giovanni Caforio, BMS’s Chief Financial Officer at the time, Charles A. Bancroft and certain former and current executives of BMS. The case in California has been voluntarily dismissed. The remaining complaint alleges violations of securities laws for BMS’s disclosures related to the CheckMate-026 clinical trial in lung cancer. In September 2019, the Court granted BMS’s motion to dismiss, but allowed the plaintiffs leave to file an amended complaint. In October 2019, the plaintiffs filed an amended complaint. BMS has moved to dismiss the amended complaint.

Celgene Securities Class Action

Beginning in March 2018, two putative class actions were filed against Celgene and certain of its officers in the U.S. District Court for the District of New Jersey (the “Celgene Securities Class Action”). The complaints allege that the defendants violated federal securities laws by making misstatements and/or omissions concerning (1) trials of GED-0301, (2) Celgene’s 2020 outlook and projected sales of *Otezla*, and (3) the new drug application for *Ozanimod*. The Court consolidated the two actions and appointed a lead plaintiff, lead counsel, and co-liaison counsel for the putative class. In February 2019, the defendants filed a motion to dismiss plaintiff’s amended complaint in full. In December 2019, the Court denied the motion to dismiss in part and granted the motion to dismiss in part (including all claims arising from alleged misstatements regarding GED-0301). Although the Court gave the plaintiff leave to re-plead the dismissed claims, it elected not to do so, and the dismissed claims are now dismissed with prejudice. No trial date has been set for the claims that survived the Court’s order.

Gerold Derivative Action

On October 11, 2018, Sam Baran Gerold filed a shareholder derivative complaint against certain members of Celgene’s board of directors in the Superior Court of New Jersey. The complaint alleges that (i) the defendants breached certain fiduciary duties related to, among other things, its actions with respect to clinical trials of GED-0301, *Otezla*, and the new drug application for *Ozanimod* and (ii) because of the breach, the defendants caused Celgene to waste its corporate assets and the defendants were unjustly enriched. In October 2018, the defendants removed this matter to the U.S. District Court for the District of New Jersey. On January 3, 2020, the parties entered into a stipulation and proposed order voluntarily dismissing this matter without prejudice, which the Court entered on January 6, 2020.

Saratoga Derivative Action

On July 12, 2018, Saratoga Advantage Trust Health and Biotechnology Portfolio (“Saratoga”) filed a shareholder derivative complaint against certain members of Celgene’s board of directors in the U.S. District Court for the District of New Jersey. The complaint alleges that (i) certain defendants made misrepresentations and omissions of material fact concerning, among other things, the clinical trials of GED-0301, the sales of *Otezla*, Celgene’s 2017 and 2020 fiscal guidance, and the new drug application for *Ozanimod* and (ii) all defendants failed to adequately supervise Celgene with regard to clinical trials of GED-0301, sales of *Otezla*, Celgene’s 2017 and 2020 fiscal guidance, the new drug application for *Ozanimod*, and the promotion and marketing of *Revlimid*. Saratoga has agreed to stay the defendants’ obligation to answer or otherwise respond to the allegations in the complaint in deference to the Celgene Securities Class Action. In August 2018, the Court entered an order staying the proceedings until the disposition of the first motion to dismiss in the Celgene Securities Class Action. The order also administratively terminated the proceedings.

OTHER LITIGATION

Average Manufacturer Price Litigation

BMS is a defendant in a *qui tam* (whistleblower) lawsuit in the U.S. District Court for the Eastern District of Pennsylvania, in which the U.S. Government declined to intervene. The complaint alleges that BMS inaccurately reported its average manufacturer prices to the Centers for Medicare and Medicaid Services to lower what it owed. Similar claims have been filed against other companies. In January 2020, BMS reached an agreement in principle to resolve this matter subject to the negotiation of a definitive settlement agreement and other contingencies. BMS cannot provide assurances that its efforts to reach a final settlement will be successful.

HIV Medication Antitrust Lawsuits

BMS and several other manufacturers of HIV medications are defendants in related lawsuits brought by indirect purchasers in 2019 and direct purchasers in 2020 in the U.S. District Court for the Northern District of California, and by indirect purchasers in 2020 in the U.S. District Court for the Southern District of Florida, in each case alleging that the defendants’ agreements to develop and sell fixed-dose combination products for the treatment of HIV, including *Atripla** and *Evotaz*, violate antitrust laws. The indirect purchaser complaint filed in Florida has been transferred and consolidated with the matters pending in the Northern District of California. BMS has moved or intends to move to dismiss each of the complaints.

Humana Litigations

On May 16, 2018, Humana, Inc. (“Humana”) filed a lawsuit against Celgene in the Pike County Circuit Court of the Commonwealth of Kentucky. Humana’s complaint alleges Celgene engaged in unlawful off-label marketing in connection with sales of *Thalomid* and *Revlimid* and asserts claims against Celgene for fraud, breach of contract, negligent misrepresentation, unjust enrichment and violations of New Jersey’s Racketeer Influenced and Corrupt Organizations Act. The complaint seeks, among other things, treble and punitive damages, injunctive relief and attorneys’ fees and costs. In April 2019, Celgene filed a motion to dismiss Humana’s complaint, which the Court denied in January 2020. No trial date has been set.

On March 1, 2019, Humana filed a separate lawsuit against Celgene in the U.S. District Court for the District of New Jersey. Humana’s complaint alleges that Celgene violated various antitrust, consumer protection, and unfair competition laws to delay or prevent generic competition for *Thalomid* and *Revlimid* brand drugs, including (a) allegedly refusing to sell samples of products to generic manufacturers for purposes of bioequivalence testing intended to be included in aNDAs for approval to market generic versions of these products; (b) allegedly bringing unjustified patent infringement lawsuits, procuring invalid patents, and/or entering into anticompetitive patent settlements; (c) allegedly securing an exclusive supply contract for supply of thalidomide active pharmaceutical ingredient. The complaint purports to assert claims on behalf of Humana and its subsidiaries in several capacities, including as a direct purchaser and as an indirect purchaser, and seeks, among other things, treble and punitive damages, injunctive relief and attorneys’ fees and costs. Celgene filed a motion to dismiss Humana’s complaint, and the Court has stayed discovery pending adjudication of that motion. No trial date has been set.

***Thalomid and Revlimid* Antitrust Litigation**

Beginning in November 2014, certain putative class action lawsuits were filed against Celgene in the U.S. District Court for the District of New Jersey alleging that Celgene violated various antitrust, consumer protection, and unfair competition laws by (a) allegedly securing an exclusive supply contract for the alleged purpose of preventing a generic manufacturer from securing its own supply of thalidomide active pharmaceutical ingredient, (b) allegedly refusing to sell samples of *Thalomid* and *Revlimid* brand drugs to various generic manufacturers for the alleged purpose of bioequivalence testing necessary for aNDAs to be submitted to the FDA for approval to market generic versions of these products, (c) allegedly bringing unjustified patent infringement lawsuits in order to allegedly delay approval for proposed generic versions of *Thalomid* and *Revlimid*, and/or (d) allegedly entering into settlements of patent infringement lawsuits with certain generic manufacturers that allegedly have had anticompetitive effects. The plaintiffs, on behalf of themselves and putative classes of third-party payers, are seeking injunctive relief and damages. The various lawsuits were consolidated into a master action for all purposes. In October 2017, the plaintiffs filed a motion for certification of two damages classes under the laws of thirteen states and the District of Columbia and a nationwide injunction class. Celgene filed an opposition to the plaintiffs' motion and a motion for judgment on the pleadings dismissing all state law claims where the plaintiffs no longer seek to represent a class. In October 2018, the Court denied the plaintiffs' motion for class certification and Celgene's motion for judgment on the pleadings. In December 2018, the plaintiffs filed a new motion for class certification, which Celgene opposed. In July 2019, the parties reached a settlement under which all the putative class plaintiff claims would be dismissed with prejudice. In December 2019, after certain third-party payors who were members of the settlement class refused to release their potential claims and participate in the settlement, Celgene exercised its right to terminate the settlement agreement. No trial date has been set.

GOVERNMENT INVESTIGATIONS

Like other pharmaceutical companies, BMS and certain of its subsidiaries are subject to extensive regulation by national, state and local authorities in the U.S. and other countries in which BMS operates. As a result, BMS, from time to time, is subject to various governmental and regulatory inquiries and investigations as well as threatened legal actions and proceedings. It is possible that criminal charges, substantial fines and/or civil penalties, could result from government or regulatory investigations.

ENVIRONMENTAL PROCEEDINGS

As previously reported, BMS is a party to several environmental proceedings and other matters, and is responsible under various state, federal and foreign laws, including CERCLA, for certain costs of investigating and/or remediating contamination resulting from past industrial activity at BMS's current or former sites or at waste disposal or reprocessing facilities operated by third parties.

CERCLA Matters

With respect to CERCLA matters for which BMS is responsible under various state, federal and foreign laws, BMS typically estimates potential costs based on information obtained from the U.S. Environmental Protection Agency, or counterpart state or foreign agency and/or studies prepared by independent consultants, including the total estimated costs for the site and the expected cost-sharing, if any, with other "potentially responsible parties," and BMS accrues liabilities when they are probable and reasonably estimable. BMS estimated its share of future costs for these sites to be \$68.6 million at December 31, 2019, which represents the sum of best estimates or, where no best estimate can reasonably be made, estimates of the minimal probable amount among a range of such costs (without taking into account any potential recoveries from other parties). The amount includes the estimated costs for any additional probable loss associated with the previously disclosed North Brunswick Township High School Remediation Site.

Note 20. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

Dollars in Millions, except per share data	First Quarter	Second Quarter	Third Quarter	Fourth Quarter ^(d)	Year ^(d)
2019					
Total Revenues	\$ 5,920	\$ 6,273	\$ 6,007	\$ 7,945	\$ 26,145
Gross Margin	4,096	4,301	4,217	5,453	18,067
Net Earnings/(Loss)	1,715	1,439	1,366	(1,060)	3,460
Net Earnings/(Loss) Attributable to:					
Noncontrolling Interest	5	7	13	(4)	21
BMS	1,710	1,432	1,353	(1,056)	3,439
Earnings/(Loss) per Common Share - Basic ^(a)	\$ 1.05	\$ 0.88	\$ 0.83	\$ (0.55)	\$ 2.02
Earnings/(Loss) per Common Share - Diluted ^(a)	1.04	0.87	0.83	(0.55)	2.01
Cash dividends declared per common share	\$ 0.41	\$ 0.41	\$ 0.41	\$ 0.45	\$ 1.68
Cash and cash equivalents	\$ 7,335	\$ 28,404	\$ 30,489	\$ 12,346	\$ 12,346
Marketable debt securities ^(b)	2,662	1,947	2,978	3,814	3,814
Total Assets	34,834	55,163	57,433	129,944	129,944
Long-term debt ^(c)	5,635	24,433	24,390	46,150	46,150
Equity	15,317	16,151	17,754	51,698	51,698

Dollars in Millions, except per share data	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
2018					
Total Revenues	\$ 5,193	\$ 5,704	\$ 5,691	\$ 5,973	\$ 22,561
Gross Margin	3,629	4,099	4,063	4,303	16,094
Net Earnings	1,495	382	1,912	1,158	4,947
Net Earnings/(Loss) Attributable to:					
Noncontrolling Interest	9	9	11	(2)	27
BMS	1,486	373	1,901	1,160	4,920
Earnings per Common Share - Basic ^(a)	\$ 0.91	\$ 0.23	\$ 1.16	\$ 0.71	\$ 3.01
Earnings per Common Share - Diluted ^(a)	0.91	0.23	1.16	0.71	3.01
Cash dividends declared per common share	\$ 0.40	\$ 0.40	\$ 0.40	\$ 0.41	\$ 1.61
Cash and cash equivalents	\$ 5,342	\$ 4,999	\$ 5,408	\$ 6,911	\$ 6,911
Marketable debt securities ^(b)	3,548	3,057	3,298	3,623	3,623
Total Assets	33,083	32,641	33,734	34,986	34,986
Long-term debt ^(c)	5,775	5,671	5,687	6,895	6,895
Equity	12,906	12,418	13,750	14,127	14,127

(a) Earnings per share for the quarters may not add to the amounts for the year, as each period is computed on a discrete basis.

(b) Marketable debt securities includes current and non-current assets.

(c) Long-term debt includes the current portion.

(d) Commencing on November 20, 2019, Celgene's operations are included in our consolidated financial statements. Refer to "—Note 4. Acquisitions, Divestitures, Licensing and Other Arrangements" for additional information.

The following specified items affected the comparability of results in 2019 and 2018:

2019

Dollars in Millions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
Inventory purchase price accounting adjustments	\$ —	\$ —	\$ —	\$ 660	\$ 660
Employee compensation charges	—	—	—	1	1
Site exit and other costs	12	139	22	24	197
Cost of products sold	12	139	22	685	858
Employee compensation charges	—	—	—	27	27
Site exit and other costs	1	—	—	8	9
Marketing, selling and administrative	1	—	—	35	36
License and asset acquisition charges	—	25	—	—	25
IPRD impairments	32	—	—	—	32
Employee compensation charges	—	—	—	33	33
Site exit and other costs	19	19	20	109	167
Research and development	51	44	20	142	257
Amortization of acquired intangible assets	—	—	—	1,062	1,062
Interest expense	—	83	166	73	322
Pension and postretirement	49	44	1,545	(3)	1,635
Royalties and licensing income	—	—	(9)	(15)	(24)
Divestiture (gains)/losses	—	8	(1,179)	3	(1,168)
Acquisition expenses	165	303	7	182	657
Contingent value rights	—	—	—	523	523
Investment income	—	(54)	(99)	(44)	(197)
Integration expenses	22	106	96	191	415
Provision for restructuring	12	10	10	269	301
Equity investment (gains)/losses	(175)	(71)	261	(294)	(279)
Litigation and other settlements	—	—	—	75	75
Other	—	—	—	2	2
Other (income)/expense, net	73	429	798	962	2,262
Increase to pretax income	137	612	840	2,886	4,475
Income taxes on items above	(43)	(105)	(275)	(264)	(687)
Income taxes attributed to <i>Otezla</i> * divestiture	—	—	—	808	808
Income taxes	(43)	(105)	(275)	544	121
Increase to net earnings	\$ 94	\$ 507	\$ 565	\$ 3,430	\$ 4,596

2018

Dollars in Millions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
Site exit and other costs	\$ 13	\$ 14	\$ 13	\$ 18	\$ 58
Cost of products sold	13	14	13	18	58
Marketing, selling and administrative	1	—	—	1	2
License and asset acquisition charges	60	1,075	—	—	1,135
Site exit and other costs	20	19	18	22	79
Research and development	80	1,094	18	22	1,214
Pension and postretirement	31	37	27	26	121
Royalties and licensing income	(50)	(25)	—	—	(75)
Divestiture gains	(43)	(25)	(108)	(1)	(177)
Provision for restructuring	20	37	45	29	131
Equity investment (gains)/losses	(15)	356	(97)	268	512
Litigation and other settlements	—	—	—	70	70
Intangible asset impairment	64	—	—	—	64
Other (income)/expense, net	7	380	(133)	392	646
Increase/(decrease) to pretax income	101	1,488	(102)	433	1,920
Income taxes on items above	(8)	(218)	1	(43)	(268)
Income taxes attributed to U.S. tax reform	(32)	3	(20)	(7)	(56)
Income taxes	(40)	(215)	(19)	(50)	(324)
Increase/(decrease) to net earnings	\$ 61	\$ 1,273	\$ (121)	\$ 383	\$ 1,596

REPORTS OF MANAGEMENT

Management's Responsibility for Financial Statements

Management is responsible for the preparation and integrity of the financial information presented in this Annual Report. The accompanying consolidated financial statements have been prepared in conformity with United States generally accepted accounting principles, applying certain estimates and judgments as required. In management's opinion, the consolidated financial statements present fairly the Company's financial position, results of operations and cash flows.

The Audit Committee of the Board of Directors meets regularly with the internal auditors, Deloitte & Touche LLP (D&T), the Company's independent registered accounting firm, and management to review accounting, internal control structure and financial reporting matters. The internal auditors and D&T have full and free access to the Audit Committee. As set forth in the Company's Standard of Business Conduct and Ethics, the Company is firmly committed to adhering to the highest standards of moral and ethical behavior in all of its business activities.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of management, including the chief executive officer and chief financial officer, management assessed the effectiveness of internal control over financial reporting as of December 31, 2019 based on the framework in "Internal Control—Integrated Framework" (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management has concluded that the Company's internal control over financial reporting was effective at December 31, 2019 to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of its financial statements for external purposes in accordance with United States generally accepted accounting principles. Due to 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.

Deloitte & Touche LLP, an independent registered public accounting firm, has audited the Company's financial statements included in this report on Form 10-K and issued its report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, which is included herein.



Giovanni Caforio
Chief Executive Officer



David V. Elkins
Chief Financial Officer

February 24, 2020

CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of December 31, 2019, management carried out an evaluation, under the supervision and with the participation of its chief executive officer and chief financial officer, of the effectiveness of the design and operation of its disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e), as of the end of the period covered by this 2019 Form 10-K. Based on this evaluation, management has concluded that as of December 31, 2019, such disclosure controls and procedures were effective.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the chief executive officer and chief financial officer, management assessed the effectiveness of internal control over financial reporting as of December 31, 2019 based on the framework in "Internal Control—Integrated Framework" (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, management has concluded that the Company's internal control over financial reporting was effective at December 31, 2019 to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of its financial statements for external purposes in accordance with United States generally accepted accounting principles. Due to 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.

We have excluded from the scope of our assessment of internal control over financial reporting the operations and related assets of Celgene Corporation which we acquired on November 20, 2019. At December 31, 2019 and for the period from acquisition through December 31, 2019, total assets and total revenues subject to Celgene's internal control over financial reporting represented 8% and 7% of BMS's consolidated total assets and total revenues as of and for the year ended December 31, 2019. Based on its assessment, BMS management believes that, as of December 31, 2019, the Company's internal control over financial reporting is effective based on those criteria.

Deloitte & Touche LLP, an independent registered public accounting firm, has audited the Company's financial statements included in this report on this 2019 Form 10-K and issued its report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, which is included herein.

Changes in Internal Control Over Financial Reporting

As of December 31, 2019, management is in the process of evaluating and integrating the internal controls of the acquired Celgene business into the Company's existing operations. Other than the controls enhanced or implemented to integrate the Celgene business, there has been no change in the Company's internal control over financial reporting during the year ended December 31, 2019, that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

OTHER INFORMATION

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Bristol-Myers Squibb Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Bristol-Myers Squibb Company and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of earnings, comprehensive income, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 24, 2020, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Gross-to-Net U.S. Rebate Accruals for U.S. Medicaid, Medicare Part D, and managed healthcare - Refer to "Note 2 - Revenue" to the financial statements

Critical Audit Matter Description

As more fully disclosed in Note 2 to the financial statements, the Company reduces gross product sales from list price at the time revenue is recognized for expected charge-backs, discounts, rebates, sales allowances and product returns, which are referred to as gross-to-net ("GTN") adjustments. These reductions are attributed to various commercial arrangements, managed healthcare organizations, and government programs that mandate various reductions from list price. Charge-backs and cash discounts are reflected as a reduction to receivables and settled through the issuance of credits to the customer. All other rebates, discounts and adjustments, are reflected as a liability and settled through cash payments to the customer.

Certain of the GTN liabilities related to U.S. Medicaid, Medicare Part D, and managed healthcare organizations rebate programs (the "GTN U.S. rebate accruals") involve the use of significant assumptions and judgments in their calculation. These significant assumptions and judgments include consideration of legal interpretations of applicable laws and regulations, historical claims experience, payer channel mix, current contract prices, unbilled claims, claims submission time lags, and inventory levels in the distribution channel.

Given the complexity involved in determining the significant assumptions used in calculating the GTN U.S. rebate accruals, auditing these estimates involved especially subjective judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to GTN U.S. rebate accruals included the following, among others:

- We evaluated the appropriateness and consistency of the Company’s methods and assumptions used to calculate GTN U.S. rebate accruals.
- We tested the effectiveness of internal controls over the review of the Company’s estimation model, including underlying assumptions and key inputs into the Company’s process to calculate GTN U.S. rebate accruals.
- We tested the mathematical accuracy of GTN U.S. rebate accruals.
- We tested significant assumptions and key inputs used to calculate GTN U.S. rebate accruals.
- We evaluated the Company’s ability to estimate GTN U.S. rebate accruals accurately by comparing actual amounts incurred for GTN U.S. rebate accruals to historical estimates.
- We tested the overall reasonableness of the GTN U.S. rebate accruals recorded at period end by developing an expectation for comparison to actual recorded balances.
- We involved audit professionals with industry and quantitative analytics experience to assist us in performing our auditing procedures.

Taxes - Unrecognized Tax Benefit Liabilities for U.S. Transfer Pricing - Refer to “Note 7- Income Taxes” to the financial statements

Critical Audit Matter Description

As more fully disclosed in Note 7 to the financial statements, the Company recognizes certain income tax benefits associated with transactions between its U.S. operating companies and related foreign affiliates. These income tax benefits are estimated based on transfer pricing agreements, third-party transfer pricing studies, and the Company’s judgment as to whether it is more-likely-than-not the benefits will be realized. Tax benefits that may not ultimately be realized by the Company, as determined by its judgment, are accrued for as unrecognized tax benefit liabilities. The amounts recognized as unrecognized tax benefit liabilities related to U.S. transfer pricing may be significantly affected in subsequent periods due to various factors, such as changes in tax law, identification of additional relevant facts, or a change in the Company’s judgment regarding measurement of the tax benefits upon ultimate settlement with the taxing authorities.

Given the complexity associated with assumptions used to calculate unrecognized tax benefit liabilities related to U.S. transfer pricing, coupled with the significant judgments made by the Company in their determination, auditing these estimates involved especially subjective judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to unrecognized tax benefit liabilities related to U.S. transfer pricing included the following, among others:

- We evaluated the appropriateness and consistency of the Company’s methods and assumptions used in the identification, recognition, measurement, and disclosure of unrecognized tax benefit liabilities.
- We tested the effectiveness of internal controls over the review of the underlying assumptions and key inputs into the Company’s process to calculate unrecognized tax benefit liabilities.
- We obtained an understanding of the Company’s related party transactions and transfer pricing policies.
- We tested the mathematical accuracy of the unrecognized tax benefit liabilities.
- We tested the completeness of unrecognized tax benefit liabilities.
- We tested the reasonableness of the underlying tax positions and amounts accrued for a selection of unrecognized tax benefit liabilities by reviewing the Company’s evaluation of the relevant facts and tax law associated with the tax position, and testing the significant assumptions and inputs used to calculate the unrecognized tax benefit liabilities by reference to third party data, information produced by the entity, our understanding of transfer pricing principles and tax laws, and inquires of management.
- We evaluated whether the Company had appropriately considered new information that could significantly change the recognition, measurement or disclosure of the unrecognized tax benefit liabilities.
- We involved income tax specialists and audit professionals with industry experience to assist us in performing our auditing procedures.

Valuation of Certain Intangible Assets in the Celgene Corporation Acquisition - Refer to “Note 1 - Accounting Policies and Recently Issued Accounting Standards” and “Note 4 - Acquisitions, Divestitures, Licensing and Other Arrangements” to the financial statements

Critical Audit Matter Description

The Company completed the acquisition of Celgene Corporation (“Celgene”) for approximately \$80.3 billion on November 20, 2019. The Company accounted for this acquisition as a business combination. Accordingly, the purchase price was allocated, on a preliminary

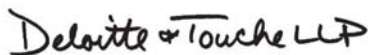
basis, to the assets acquired and liabilities assumed based on their respective fair values, including to currently-marketed product right intangible assets (“product rights”) and in-process research and development intangible assets (“IPR&D assets”). The Company estimated the fair value of the product rights and IPR&D assets using a discounted cash flow method. The fair value determination of product rights and IPR&D assets required the Company to make significant estimates and assumptions related to forecasted future cash flows and the selection of the discount rates.

We identified the valuation of certain product rights and IPR&D assets for the Celgene acquisition as a critical audit matter because of the significant estimates and assumptions used by the Company to determine the fair value of these assets. Auditing the estimates and assumptions related to the valuation of certain product rights and IPR&D assets required a high degree of auditor judgment and an increased extent of effort, including the involvement of our valuation specialists, when performing audit procedures to evaluate the reasonableness of management’s forecasts of future cash flows and the selection of the discount rates for those product rights and IPR&D assets.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the valuation of certain product rights and IPR&D assets for the Celgene acquisition, including forecasts of future cash flows and the selection of the discount rates for certain product rights and IPR&D assets included the following, among others:

- We evaluated the appropriateness and consistency of the Company’s methods and assumptions used to forecast future cash flows and select the discount rates.
- We tested the effectiveness of controls over the valuation of certain product rights and IPR&D assets, including the Company’s controls over forecasts of future cash flows and the selection of the discount rates.
- We performed sensitivity analyses of the significant assumptions used in the valuation model to evaluate the change in fair value resulting from changes in the significant assumptions.
- We assessed the reasonableness of the Company’s forecasts of future cash flows by comparing the forecasts to historical results of operations, certain peer companies, and/or internal and external market studies.
- With the assistance of our valuation specialists, we evaluated the reasonableness of the discount rates by:
 - Testing the source information underlying the determination of the discount rates and testing the mathematical accuracy of the calculation.
 - Developing a range of independent estimates and comparing those to the discount rates selected by management.
- We evaluated whether the forecasted future cash flows were consistent with evidence obtained in other areas of the audit.

The logo for Deloitte & Touche LLP, featuring the company name in a stylized, handwritten-style font.

Parsippany, New Jersey
February 24, 2020

We have served as the Company's auditor since 2006.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Bristol-Myers Squibb Company

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Bristol-Myers Squibb Company and subsidiaries (the “Company”) as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2019, of the Company and our report dated February 24, 2020, expressed an unqualified opinion on those consolidated financial statements.

As described in Management’s Report on Internal Control Over Financial Reporting, management excluded from its assessment the internal control over financial reporting of Celgene Corporation, which was acquired on November 20, 2019 and whose financial statements constitute 8% and 7% of total assets and total revenues, respectively, of the consolidated financial statement amounts as of and for the year ended December 31, 2019. Accordingly, our audit did not include the internal control over financial reporting of Celgene Corporation.

Basis for Opinion

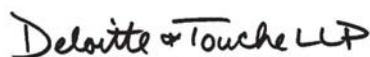
The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

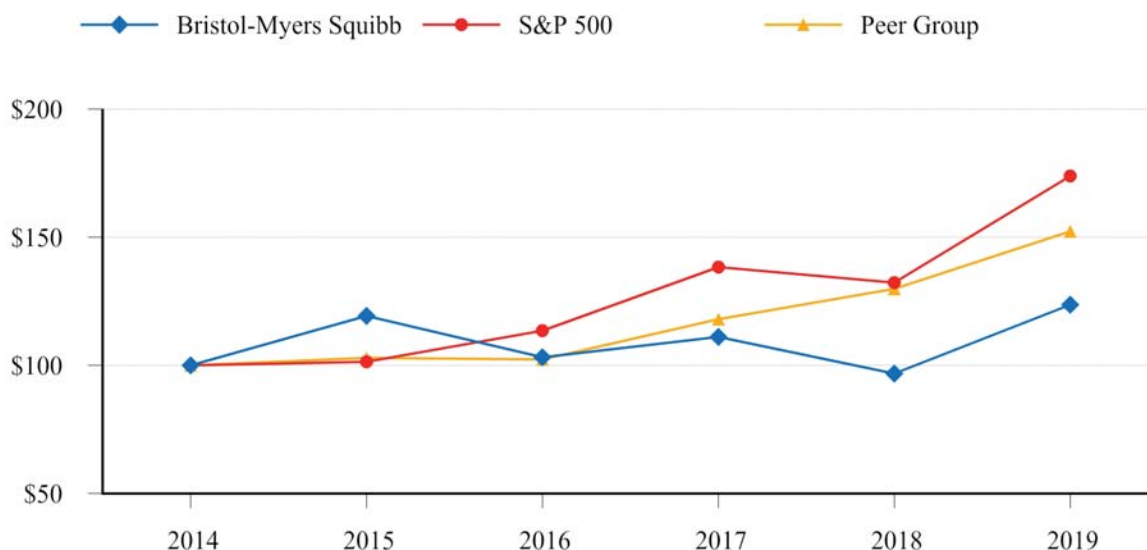
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree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



Parsippany, New Jersey
February 24, 2020

PERFORMANCE GRAPH

The following graph compares the cumulative total stockholders' returns of our common shares with the cumulative total stockholders' returns of the companies listed in the Standard & Poor's 500 Index and a composite peer group of major pharmaceutical companies comprised of AbbVie, Amgen, AstraZeneca, Biogen, Gilead, GlaxoSmithKline, Johnson & Johnson, Lilly, Merck, Novartis, Pfizer, Roche and Sanofi. The graph assumes \$100 investment on December 31, 2014 in each of our common shares, the S&P 500 Index and the stock of our peer group companies, including reinvestment of dividends, for the years ended December 31, 2015, 2016, 2017, 2018 and 2019. The stock price performance on the following graph is not necessarily indicative of future stock price performance.



	2014	2015	2016	2017	2018	2019
Bristol-Myers Squibb	\$ 100.00	\$ 119.26	\$ 103.17	\$ 111.12	\$ 96.79	\$ 123.64
S&P 500	100.00	101.38	113.51	138.29	132.23	173.86
Peer Group	100.00	102.92	102.35	117.95	129.78	152.19

FIVE YEAR FINANCIAL SUMMARY

Amounts in Millions, except per share data	2019	2018	2017	2016	2015
Income Statement Data:					
Total Revenues	\$ 26,145	\$ 22,561	\$ 20,776	\$ 19,427	\$ 16,560
Net Earnings	3,460	4,947	975	4,507	1,631
Net Earnings/(Loss) Attributable to:					
Noncontrolling Interest	21	27	(32)	50	66
BMS	3,439	4,920	1,007	4,457	1,565
Net Earnings per Common Share Attributable to BMS:					
Basic	\$ 2.02	\$ 3.01	\$ 0.61	\$ 2.67	\$ 0.94
Diluted	2.01	3.01	0.61	2.65	0.93
Weighted average common shares outstanding:					
Basic	1,705	1,633	1,645	1,671	1,667
Diluted	1,712	1,637	1,652	1,680	1,679
Cash dividends paid on BMS common and preferred stock	\$ 2,679	\$ 2,613	\$ 2,577	\$ 2,547	\$ 2,477
Cash dividends declared per common share	\$ 1.68	\$ 1.61	\$ 1.57	\$ 1.53	\$ 1.49
Financial Position Data at December 31:					
Cash and cash equivalents	\$ 12,346	\$ 6,911	\$ 5,421	\$ 4,237	\$ 2,385
Marketable debt securities ^{(a)(b)}	3,814	3,623	3,739	4,724	6,442
Total Assets	129,944	34,986	33,551	33,707	31,748
Long-term debt ^(a)	46,150	6,895	6,975	6,465	6,550
Equity	51,698	14,127	11,847	16,347	14,424

(a) Includes current and non-current portion.

(b) Prior period amounts were conformed to current period presentation.

SUMMARY OF ABBREVIATED TERMS

Bristol-Myers Squibb Company and its consolidated subsidiaries may be referred to as Bristol-Myers Squibb, BMS, the Company, we, our or us in this 2019 Form 10-K, unless the context otherwise indicates. Throughout this 2019 Form 10-K, we have used terms which are defined below:

2019 Form 10-K	Annual Report on Form 10-K for the fiscal year ended December 31, 2019	IO	Immuno-Oncology
AbbVie	AbbVie Inc.	IPRD	in-process research and development
ACS	acute coronary syndrome	JIA	Juvenile Idiopathic Arthritis
ALL	acute lymphoblastic leukemia	LOE	loss of exclusivity
Amgen	Amgen Inc.	LIBOR	London Interbank Offered Rate
Amylin	Amylin Pharmaceuticals, Inc.	Lilly	Eli Lilly and Company
aNDA	abbreviated New Drug Application	mCRPC	metastatic castration-resistant prostate cancer
ASEAN	Association of Southeast Asian Nations	MDL	multi-district litigation
AstraZeneca	AstraZeneca PLC	MDS	myelodysplastic syndromes
BCMA	B-cell maturation antigen	Mead Johnson	Mead Johnson Nutrition Company
Biogen	Biogen, Inc.	Merck	Merck & Co., Inc.
BLA	Biologics License Application	MSI-H	high microsatellite instability
CERCLA	U.S. Comprehensive Environmental Response, Compensation and Liability Act	NAV	net asset value
Celgene	Celgene Corporation	Nektar	Nektar Therapeutics
CML	chronic myeloid leukemia	NDA	New Drug Application
CPPIB	CPPIB Credit Europe S.A.R.L., a Luxembourg private limited liability company	NKT	natural killer T
CRC	colorectal cancer	NLRP3	NACHT, LRR and PYD domains-containing protein 3
CytomX	CytomX Therapeutics, Inc.	Novartis	Novartis Pharmaceutical Corporation
dMMR	DNA mismatch repair deficient	NSCLC	non-small cell lung cancer
DSA	Distribution Services Agreement	NVAF	non-valvular atrial fibrillation
EC	European Commission	Ono	Ono Pharmaceutical Co., Ltd.
EGFR	estimated glomerular filtration rate	OTC	Over-the-counter
EMA	European Medicines Agency	Otsuka	Otsuka Pharmaceutical Co., Ltd.
EPO	European Patent Office	PD-1	programmed death receptor-1
EPS	earnings per share	Pfizer	Pfizer, Inc.
ERISA	Employee Retirement Income Security Act of 1974	PsA	psoriatic arthritis
ESCC	esophageal squamous cell carcinoma	R&D	research and development
EU	European Union	RA	rheumatoid arthritis
FASB	Financial Accounting Standards Board	RCC	renal cell carcinoma
FCPA	Foreign Corrupt Practices Act	REMS	Risk Evaluation and Mitigation Strategy
FDA	U.S. Food and Drug Administration	Roche	Roche Holding AG
FL	follicular lymphoma	RRMM	relapsed/refractory multiple myeloma
F-Star	F-Star Alpha Ltd.	Sanofi	Sanofi S.A.
GAAP	U.S. generally accepted accounting principles	sBLA	supplemental Biologics License Application
GBM	glioblastoma multiforme	SCCHN	squamous cell carcinoma of the head and neck
Gilead	Gilead Sciences, Inc.	SEC	U.S. Securities and Exchange Commission
GILTI	global intangible low taxed income	STING	stimulator of interferon genes
GlaxoSmithKline	GlaxoSmithKline PLC	the 2012 Plan	The 2012 Stock Award and Incentive Plan
GTN	gross-to-net	the Act	the Tax Cuts and Jobs Act of 2017
GvHD	graft-versus-host disease	U.S.	United States
Halozyne	Halozyne Therapeutics, Inc.	UK	United Kingdom
HCC	Hepatocellular carcinoma	VAT	value added tax
HIV	human immunodeficiency virus	VTE	venous thromboembolic
ImClone	ImClone Systems Incorporated		

BRISTOL MYERS SQUIBB | Board of Directors

Giovanni Caforio, M.D.

Chairman of the Board and Chief Executive Officer,
Bristol Myers Squibb
(e)

Vicki L. Sato, Ph.D.

Lead Independent Director, Bristol Myers Squibb;
and Chairman of the Board, Denali Therapeutics.
Former President and Chief Scientific Officer of
Vertex Pharmaceuticals
(b, d)

Peter J. Arduini

President and Chief Executive Officer,
Integra LifeSciences Holdings Corporation
(a, c, e)

Robert Bertolini

Former President and Chief Financial Officer,
Bausch & Lomb Incorporated. Former Chief Financial
Officer, Schering-Plough Corp.
(a, b)

Michael W. Bonney

Executive Chair, Kaleido Biosciences, Inc.
(a, e)

Matthew W. Emmens

Retired Chief Executive Officer and Chairman of the
Board of Shire PLC. Former Chairman, President, CEO
and Director, Vertex Pharmaceuticals
(c, d, e)

Michael Grobstein

Retired Vice Chairman, Ernst & Young LLP
(a, c)

Julia A. Haller, M.D.

Ophthalmologist-in-Chief, Wills Eye Hospital
(d)

Alan J. Lacy

Former Non-Executive Chairman,
Dave & Buster's Entertainment, Inc.
(a, b)

Dinesh C. Paliwal

President and Chief Executive Officer,
Harman International
(b, c, e)

Theodore R. Samuels

Retired President of Capital Guardian
Trust Company
(a, b)

Gerald L. Storch

Chief Executive Officer, Storch Advisors.
Former CEO of Hudson's Bay Company
(a, c)

Karen H. Vousden, Ph.D.

Chief Scientist, Cancer Research UK and Senior Group
Leader, The Francis Crick Institute
(c, d, e)

Phyllis R. Yale

Advisory Partner, Bain & Company
(b)

Members of the Board of Directors and Committee memberships as of March 10, 2020

(a) Audit Committee

(b) Committee on Directors and Corporate Governance

(c) Compensation and Management Development Committee

(d) Science and Technology Committee

(e) Integration Committee

BRISTOL MYERS SQUIBB | Leadership Team

Giovanni Caforio, M.D.

Chairman of the Board and
Chief Executive Officer

Nadim Ahmed

Executive Vice President and
President, Hematology

Charles Bancroft

Executive Vice President and
Head of Integration
Corporate Affairs and Investor Relations

Chris Boerner, Ph.D.

Executive Vice President,
Chief Commercialization Officer

Adam Dubow

Senior Vice President,
Chief Compliance and Ethics Officer

Joseph E. Eid, M.D.

Senior Vice President and
Head of Global Medical Affairs

John Elicker

Executive Vice President, Investor Relations

David Elkins

Executive Vice President and Chief Financial Officer

Samit Hirawat, M.D.

Executive Vice President,
Chief Medical Officer, Global Drug Development

Severine Lacourt

Chief of Staff to the Chief Executive Officer

Sandra Leung

Executive Vice President, General Counsel

Kathryn Metcalfe

Executive Vice President, Corporate Affairs

Ann M. Powell

Executive Vice President,
Chief Human Resources Officer

Lou Schmukler

Executive Vice President and President,
Global Product Development & Supply

Rupert Vessey, M.A., B.M., B.Ch., F.R.C.P., D.Phil.

Executive Vice President,
Research and Early Development

Paul von Autenried

Executive Vice President,
Chief Information Officer

BRISTOL MYERS SQUIBB | Stockholder Information

Common Stock

Ticker symbol: BMY
New York Stock Exchange

Contingent Value Right

Ticker symbol: BMY-RT; CELG-RT
New York Stock Exchange

Stockholder Services

All inquiries concerning stockholder accounts and stock transfer matters – including address changes, the elimination of duplicate mailings and the Shareowner Services Plus PlanSM – should be directed to the Company's Transfer Agent and Registrar:

EQ Shareowner Services
1110 Centre Pointe Curve, Suite 101
Mendota Heights, MN 55120-4100

www.shareowneronline.com

855-598-5485 (within the U.S.)
651-450-4064 (outside the U.S.)

A telecommunications relay service should be used by the hearing impaired when calling the telephone numbers above.

Shareowner Services Plus PlanSM

The Shareowner Services Plus PlanSM is designed for long-term investors who wish to build share ownership in the Company's common stock over time. You can participate in the plan if you are a registered holder of the Company's common stock. If you do not own the Company's common stock, you can become a participant by making your initial purchase through the plan. The plan features dividend reinvestment, optional cash purchase, share safekeeping, and share sales and transfers. Bristol Myers Squibb Company has appointed EQ Shareowner Services as Administrator for the plan. The plan is not sponsored or administered by Bristol Myers Squibb Company.

Form 10-K

For a free copy of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, contact:

Corporate Secretary
Bristol Myers Squibb Company
430 E. 29th Street, 14FL
New York, NY 10016

The Form 10-K is also available at investor.bms.com

The most recent certifications by the Company's chief executive officer and chief financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are filed as exhibits to the Company's Form 10-K. The Company has also filed with the New York Stock Exchange the most recent Annual CEO Certification as required by Section 303A.12(a) of the New York Stock Exchange Listed Company Manual.

Additional Information

Information on the following subjects is available at www.bms.com:

- Bristol Myers Squibb Foundation
- Clinical Trials
- Compliance and Ethics
- Diversity and Workforce Statistics
- Patient Assistance Programs
- Policy and Advocacy Engagement and Political Contributions
- Sustainability/Environmental Programs

This Annual Report contains certain forward-looking information within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations and involve inherent risks and uncertainties that could cause actual outcomes and results to differ materially from current expectations. Please see page 26 in the Financial Review for a discussion and description of these risks and uncertainties. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

Product Names and Company Programs

Global products and company program names appearing throughout in italics are referred to herein by their registered and approved U.S. trademarks, unless specifically noted otherwise..

Abilify is a trademark of Otsuka Pharmaceutical Co., Ltd.

Atripla is a trademark of Gilead Sciences, Inc.

Avapro/Avalide (known in the EU as *Aprovel/Karvea*) and *Plavix* are trademarks of Sanofi

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ENHANZE is a trademark of Halozyme, Inc.

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Farxiga and *Onglyza* are trademarks of AstraZeneca AB

Gleevec is a trademark of Novartis AG

Keytruda is a trademark of Merck Sharp & Dohme Corp.

Otezla is a trademark of Amgen Inc.

Yescarta is a trademark of Kite Pharma, Inc.

Brand names of products that are in all italicized letters, without an asterisk, are registered trademarks of Bristol Myers Squibb and/or one of its subsidiaries.

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Reducing the Risk of Stroke

Yoshikazu Takahashi, of Nigata, Japan, was diagnosed with non valvular atrial fibrillation (NVAF) when he was 60 years old.

He had experienced a bout of lightheadedness that sent him to his doctor, who detected the disease after evaluating data from the 24-hour cardiac monitor he had Yoshikazu wear.

In NVAF, electrical activity in the heart is disordered, causing an abnormal and irregular heart rhythm that may result in blood clots that can travel from the heart to the brain and trigger a stroke.

Yoshikazu thought NVAF was a minor condition, until both his doctor and his son, an *Eliquis* sales representative for Bristol Myers Squibb Japan, told him otherwise.

"I never imagined that nonvalvular atrial fibrillation could lead to something more serious. I was relieved when my doctor explained more about the disease and how *Eliquis* could reduce my risk of having a stroke," Yoshikazu said.



Yoshikazu (center), with his son, Hiroaki Takahashi, and granddaughter, Mei Takahashi, had not realized that NVAF increased the risk of stroke.

Yoshikazu retired from his position at a paper trading company and is back to work as a sales assistant at a printing company, accompanying sales representatives when they meet with clients. Today, six years since his diagnosis, he is grateful that his doctor prescribed *Eliquis* for him.

"After I learned more about the possible risks of stroke associated with NVAF, the fact that I have not suffered a stroke holds special meaning to me," he said.

Eliquis remains the number one oral anticoagulant globally. It is used to reduce

the risk of stroke and blood clots in people who have nonvalvular atrial fibrillation; to treat blood clots in the legs (deep vein thrombosis) and lungs (pulmonary embolism), and to reduce the risk of them occurring again; and to reduce the risk of the formation of a blood clot in the legs and lungs in people who have had hip or knee replacement surgery. ■



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