

INTEL CORP  
Form 10-K  
February 01, 2019  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K  
(Mark One)

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

For the fiscal year ended December 29, 2018.

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number 000-06217

INTEL CORPORATION  
(Exact name of registrant as specified in its charter)  
Delaware 94-1672743  
State or other jurisdiction of (I.R.S. Employer  
incorporation or organization Identification No.)

2200 Mission College Boulevard, Santa Clara, California 95054-1549  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (408) 765-8080

Securities registered pursuant to Section 12(b) of the Act:  
Title of each class Name of each exchange on which registered  
Common stock, \$0.001 par value The Nasdaq Global Select Market\*

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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

Indicate by check mark whether the registrant has submitted electronically every interactive data file required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange

Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company  Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

Aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant as of June 29, 2018, based upon the closing price of the common stock as reported by the Nasdaq Global Select Market on such date, was \$229.2 billion. 4,497 million shares of common stock were outstanding as of January 26, 2019.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement related to its 2019 Annual Stockholders' Meeting to be filed subsequently are incorporated by reference into Part III of this Annual Report on Form 10-K. Except as expressly incorporated by reference, the registrant's proxy statement shall not be deemed to be part of this report.

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## ORGANIZATION OF OUR ANNUAL REPORT ON FORM 10-K

The order and presentation of content in our Annual Report on Form 10-K (Form 10-K) differs from the traditional U.S. Securities and Exchange Commission (SEC) Form 10-K format. We believe that our format improves readability and better presents how we organize and manage our business. See "Form 10-K Cross-Reference Index" within the Financial Statements and Supplemental Details for a cross-reference index to the traditional SEC Form 10-K format. The preparation of consolidated financial statements is in conformity with U.S. generally accepted accounting principles (GAAP). We have included key metrics that we use to measure our business, some of which are non-GAAP measures. See these "Non-GAAP Financial Measures" within Other Key Information.

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This Annual Report on Form 10-K contains forward-looking statements that involve a number of risks and uncertainties. Words such as “anticipates,” “expects,” “intends,” “goals,” “plans,” “believes,” “seeks,” “estimates,” “continues,” “will,” “would,” “should,” “could,” and variations of such words and similar expressions are intended to identify such forward-looking statements. In addition, any statements that refer to projections of our future financial performance, our anticipated growth and trends in our businesses, projected growth and trends in markets relevant to our businesses, future products and the expected availability and benefits of such products, uncertain events or assumptions, including statements relating to total addressable market (TAM) or market opportunity, and other characterizations of future events or circumstances are forward-looking statements. Such statements are based on management’s expectations as of the date of this filing and involve many risks and uncertainties that could cause our actual results to differ materially from those expressed or implied in our forward-looking statements. Such risks and uncertainties include those described throughout this report and particularly in “Risk Factors” within Other Key Information. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. Readers are urged to carefully review and consider the various disclosures made in this Form 10-K and in other documents we file from time to time with the SEC that disclose risks and uncertainties that may affect our business. The forward-looking statements in this Form 10-K do not reflect the potential impact of any divestitures, mergers, acquisitions, or other business combinations that had not been completed as of the date of this filing. In addition, the forward-looking statements in this Form 10-K are made as of the date of this filing, including expectations based on third-party information and projections that management believes to be reputable, and Intel does not undertake, and expressly disclaims any duty, to update such statements, whether as a result of new information, new developments, or otherwise, except to the extent that disclosure may be required by law.

**NOTE REGARDING THIRD-PARTY INFORMATION**

This Annual Report on Form 10-K includes market data and certain other statistical information and estimates that are based on reports and other publications from industry analysts, market research firms, and other independent sources, as well as management’s own good faith estimates and analyses. Intel believes these third-party reports to be reputable, but has not independently verified the underlying data sources, methodologies, or assumptions. The reports and other publications referenced are generally available to the public and were not commissioned by Intel. Information that is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances reflected in this information.

**INTEL UNIQUE TERMS**

We use specific terms throughout this document to describe our business and results. Below are key terms and how we define them:

<b>PLATFORM PRODUCTS</b>	A microprocessor (processor or central processing unit (CPU)) and chipset, a stand-alone System-on-Chip (SoC), or a multichip package, based on Intel® architecture. Platform products are primarily used in solutions sold through the Client Computing Group (CCG), Data Center Group (DCG), and Internet of Things Group (IOTG) segments.
<b>ADJACENT PRODUCTS</b>	All of our non-platform products for CCG, DCG, and IOTG, such as modem, Ethernet and silicon photonics, as well as Non-Volatile Memory Solutions Group (NSG), Programmable Solutions Group (PSG), and Mobileye products. Combined with our platform products, adjacent products form comprehensive platform solutions to meet customer needs.
<b>PC-CENTRIC BUSINESS</b>	Our CCG business, including both platform and adjacent products.
<b>DATA-CENTRIC BUSINESSES</b>	Our DCG, IOTG, NSG, PSG, and all other businesses, including Mobileye.

\* Other names and brands may be claimed as the property of others.

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Intel, the Intel logo, 3D XPoint, Arria, Celeron, Intel Atom, Intel Core, Intel Inside, the Intel Inside logo, Intel Nervana, Intel Optane, Intel Xeon Phi, Itanium, Movidius, Myriad, OpenVINO, Pentium, Quark, Stratix, Thunderbolt, Xeon, and XMM are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

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INTRODUCTION TO OUR BUSINESS

We are a world leader in the design and manufacturing of essential technologies that power the cloud and an increasingly smart, connected world. We offer computing, networking, data storage, and communications solutions to a broad set of customers spanning multiple industries. In 1968, Intel was incorporated in California (reincorporated in Delaware in 1989), in what became known as Silicon Valley, and our technology has been at the heart of computing breakthroughs ever since.

We're now in the midst of a corporate transformation as we grow beyond our traditional PC and server businesses into data-rich markets addressing the explosive demands to process, analyze, store, and transfer data. The transformation is well underway, with our data-centric businesses representing an increasing share of our overall revenue.

Our vision is to build a smart and connected world that runs on Intel® solutions. This vision is supported by our commitment to corporate responsibility, our relentless pursuit of Moore's Law, and the talent of our amazing employees.

"Don't be encumbered by history. Go off and do something wonderful."

– Bob Noyce, Intel Co-Founder

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## A YEAR IN REVIEW

Five years ago, we set out a strategy to transform from a PC-centric to a data-centric company. Our 2018 results serve as a strong proof point that our strategy is working and our transformation is well underway. We achieved record revenue and earnings per share (EPS), driven by strong business performance, continued operating leverage, and a lower tax rate. Revenue from our data-centric businesses collectively increased by double digits. Our PC-centric business grew above our expectations and continued to be a source of profit, cash flow, scale, and intellectual property (IP). While we have had delays in implementing our 10 nanometer (nm) manufacturing process technology, we have continued to innovate in our 14nm products, introducing leadership products that deliver more value to our customers. We've expanded beyond PC and server businesses with significant growth in adjacent products, and gained share in an expanded \$300 billion TAM<sup>1</sup>. Our employees are executing to our strategy by developing compelling technology and delivering innovative products to our customers, enabling strong financial growth.

"The investments in technology and talent we have made in our transformation to a data-centric company position Intel to serve a broader set of customers in an expanded market for silicon."

—Bob Swan, Intel Chief Executive Officer

REVENUE		OPERATING INCOME		DILUTED EPS	
PC-CENTRIC \$B	DATA-CENTRIC \$B	GAAP \$B	NON-GAAP \$B	GAAP	NON-GAAP
\$70.8B	\$23.3B	\$24.5B	\$4.48	\$4.58	
GAAP	GAAP	non-GAAP <sup>2</sup>	GAAP	non-GAAP <sup>2</sup>	
Revenue					
up					
\$8.1B					
or 13%					
from	Operating income up	Operating income up \$4.9B	Diluted EPS up \$2.49	Diluted EPS up \$1.11 or	Diluted EPS up \$1.11 or
2017;	\$5.3B or 29% from 2017	or 25% from 2017	or 126% from 2017	32% from 2017	32% from 2017
data-centric					
up 18%					
and					
PC-centric					
up 9%					
Strong					
growth					
with					
record	Top-line growth and continued operating margin		Demand for high-performance products, adjacency		
revenue	leverage while investing in key opportunities such as		growth, disciplined spending focus, and lower tax		
across	artificial intelligence (AI) and autonomous driving.		rate from Tax Reform <sup>3</sup> .		
the					
business.					
GOAL	GOAL	GOAL			
Achieve	Grow	Grow			
at least	non-GAAP	non-GAAP			
low	operating	diluted EPS			



double-digit growth of data-centric businesses and limit PC-centric business decline to low single digits. faster than non-GAAP operating income.

RESULT ACHIEVED RESULT ACHIEVED RESULT ACHIEVED

Exceeded our goal on both fronts with 18% data-centric businesses growth and 9% PC-centric business growth. Total revenue was approximately \$6.0 billion higher than our expectation at the beginning of 2018. On a non-GAAP basis, operating income grew faster than revenue two years in a row. From 2017 to 2018, non-GAAP operating income grew 25%, compared to 13% revenue growth. On a non-GAAP basis, diluted EPS grew faster than operating income two years in a row. From 2017 to 2018, non-GAAP diluted EPS grew 32%, compared to 25% non-GAAP operating income growth.

<sup>1</sup> Source: Intel calculated 2022 TAM derived from industry analyst reports.  
<sup>2</sup> See "Non-GAAP Financial Measures" within Other Key Information.  
<sup>3</sup> Tax Reform refers to the U.S. Tax Cuts and Jobs Act enacted in December 2017.



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DATA-CENTRIC  
BUSINESSES  
EXPAND  
PC-CENTRIC BUSINESS THRIVES  
WITH  
NEW  
OPPORTUNITIES

Our focus on product segmentation, innovation, and performance in PCs continued. To extend product leadership and data-centric value to customers, we launched our 9th generation Intel® Core™9 processors, which target the growing business market segment.

have  
grown  
significantly  
over  
the  
last  
two  
years.  
To  
extend  
the  
momentum  
of  
this  
growth,  
we  
continue  
to  
offer  
innovative  
new  
products  
that  
provide  
higher  
performance  
and  
better  
value  
for  
our  
customers.  
We  
expect  
that  
our  
leadership  
products

such  
as  
the  
second  
generation  
Intel® Xeon® Scalable  
processors  
and  
Intel® Stratix®10  
SX  
FPGA  
will  
further  
advance  
our  
opportunity  
in  
AI  
and  
help  
our  
customers  
process  
and  
analyze  
the  
flood  
of  
data  
implicit  
in  
big  
bets.

#### BIG BETS MAKE PROGRESS

Our big bets are memory, autonomous driving, and 5G, and we have made progress on all fronts to expand and compete in the data-centric world. We are shipping Intel® Optane™ DC persistent memory for data centers. We also announced our first 5G new radio (NR) multi-mode modem for 2019 and our plan to commercialize Mobility-as-a-Service (MaaS) with autonomous vehicles through a joint venture starting 2019.

#### WE ARE PROUD OF OUR HERITAGE

Fifty years ago, Robert Noyce and Gordon Moore founded Intel. In honor of our golden anniversary, we are embracing Noyce's inspiring challenge, "Don't be encumbered by history. Go off and do something wonderful." We celebrated our heritage and the wonderful things we are doing to create a bright future for Intel and the world. Two years ahead of schedule, we announced that we have achieved our goal of a U.S. workforce that reflects the diversity of the available skilled labor market.

#### BOB SWAN OUR NEW CEO

On January 30, 2019, our Board of Directors appointed Bob Swan as our Chief Executive Officer, the seventh CEO in Intel's 50-year history. Mr. Swan joined Intel as our Chief Financial Officer in October 2016.

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**OUR STRATEGY**

We are in the midst of one of the most significant transformations in our corporate history. Over the last five years, we've made key investments and decisions to enter data-rich markets and deploy our IP and manufacturing technologies to redefine and expand our target market. We have evolved from a PC-centric company with a server business, to a data-centric company with an expanding portfolio of technology solutions that address customer needs across platform, storage, connectivity, and software. This transformation is evidenced by our 2018 revenue, of which roughly half was earned from data-centric businesses, and the expansion of our TAM, which we last estimated at more than \$300 billion<sup>1</sup>.

Our customers are looking for solutions that can process, analyze, store, and transfer data—turning it into actionable insights, amazing experiences, and competitive advantages. The Intel® architecture platform provides the foundation for new solutions that take advantage of this growth of data.

**MAKE THE  
WORLD'S BEST  
SEMICONDUCTORS**

We make significant investments and innovations in our silicon manufacturing technologies and platforms. Our proprietary technologies make it possible to integrate products and platforms that address evolving customer needs and expand the markets we serve. Our innovation strategy includes investments in advanced manufacturing processes and packaging, architecture, interconnects, and embedded security features, as part of our efforts to be the leading end-to-end platform provider.

Realizing the economics of Moore's Law has been and will continue to be a strategic priority, making possible the innovation of new high-performance products and improving user experience at exponential rates while balancing performance, cost, and power to meet our customers' needs. Unlike many semiconductor companies, we primarily develop and manufacture our products in our own facilities using our proprietary process technologies. We have the scale and expertise necessary to enable deep engagement with our customers, which provides us with a competitive advantage. Our manufacturing capital enables us to optimize performance, shorten time-to-market for new product introduction, and control essential elements of our supply chain. Sharing architectural innovation and IP enables us to spread our investments over a large manufacturing base of products, which reduces our costs and increases our return on capital.

**LEAD THE AI AND AUTONOMOUS REVOLUTION**

We are positioned to be a driving force of the AI and autonomous revolution. By striving to build the world's best AI platform, our strategy is to meet the needs of our most innovative customers, to advance and accelerate the AI industry's open software stacks, to deliver the best AI products, and to seed and drive the AI ecosystem. Mobileye's EyeQ\* family of SoCs is already the automobile industry's leading solution for advanced driver assistance systems (ADAS). Mobileye is building on that leadership as the industry pursues higher levels of autonomy, developing Road Experience Management for real-time crowdsourced mapping, and the Responsibility Sensitive Safety model for autonomous vehicle safety. Customers use Intel® Xeon® processors for workloads such as image recognition, enhanced public security, and natural language processing, the foundation of the AI revolution. Intel® Nervana™ Neural Network Processors and Intel® Movidius™ Myriad™ Vision Processing Units (VPUs) provide a comprehensive suite of hardware and software technologies that deliver broad capabilities and support diverse approaches for AI, enabling our customers to infuse AI into everything they do.

<sup>1</sup> Source: Intel calculated 2022 TAM derived from industry analyst reports and internal estimates.

FUNDAMENTALS OF OUR BUSINESS Our Strategy 6

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### BE THE LEADING END-TO-END PLATFORM PROVIDER FOR THE NEW DATA WORLD

Growth in processing power and breakthroughs in connectivity, storage, memory, and algorithms have led to a new era of data-centric computing. We have an unparalleled product portfolio that spans the entire data-centric market and we are inventing new solutions in the highest growth areas by investing across six engineering pillars:

- advanced manufacturing processes and packaging;
- new architectures to speed up specialized tasks like AI and graphics;
- super-fast memory;
- interconnects;
- embedded security features; and
- common software to unify and simplify programming for developers across our compute roadmap.

We are making significant investments and pursuing innovations in these areas to drive leaps forward in technology and user experience, and meet our customers' data needs.

Enabling our customers to move faster, store more, and process everything is at the core of our strategy. Our customers' appetite for high-performance computing is greater than ever and, in response, we continue to make investments in optimizing our Intel® Xeon® processors. 5G connectivity will transform industries from all business sectors, initiating ripples of impact that spur market growth and the global economy. We are collaborating with ecosystem and vertical industry partners to define, prototype, test, and deliver 5G standards and solutions. We are also unveiling innovative memory and storage solutions, including Intel® QLC 3D NAND and Intel® Optane™ memory, and providing data center products that are optimized to deliver world-class performance and drive lower total cost of ownership for cloud workloads. Our advancements in programmable solutions, such as FPGAs, can efficiently manage the changing demands of next-generation data centers and accelerate the performance of emerging applications.

From end-to-end, our solutions help our customers stay ahead of their growing infrastructure demands by offering scale, innovation, and expertise from the edge to the cloud and back.

### RELENTLESS FOCUS ON OPERATIONAL EXCELLENCE AND EFFICIENCY

Underlying our transformation to a data-centric company is a relentless focus on operational excellence and efficiency. This focus includes the elimination of lower growth investments and activities, and the simplification and automation of routine processes and activities. These improvements enable us to achieve scale in our core operations, providing a stable and cost-effective platform to support additional investments in the design, development, and production of products that delight our customers. Operational excellence helps us fund the expansion of our TAM through big-bet investments such as memory, 5G technology, and autonomous driving.

### CONTINUE TO HIRE, DEVELOP AND RETAIN THE BEST, MOST DIVERSE AND INCLUSIVE TALENT

Andy Grove, former Intel CEO and Chairman, once said, "A corporation is a living organism; it has to continue to shed its skin. Methods have to change. Focus has to change. Values have to change. The sum total of those changes is transformation." At the core of our organization are highly skilled, diverse, and talented people capable of accelerating, as one team, in everything we do. Our rich and powerful culture sets a solid foundation based upon 50 years of invention; product leadership; purposeful leadership in corporate governance practices; and partnership with suppliers, customers, regulators, and local communities in the development and deployment of sustainable business practices. We are proud of our past and inspired by our employees who are rising to the challenge to transform our methods, focus, and values in a way that helps each person achieve their personal best in delighting our customers with compelling products, winning in dynamic and competitive markets, and making a positive impact on our communities.

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HOW WE ORGANIZE OUR BUSINESS

DATA-CENTRIC BUSINESSES<sup>1</sup>

KEY PRODUCTS AND  
MARKETS

Includes workload-optimized platforms and related products designed for cloud, enterprise, and communication infrastructure market segments.

KEY PRODUCTS AND  
MARKETS

Includes Intel® Optane™ technology and 3D NAND flash memory, primarily used in solid-state drives (SSDs).

OF INTEL'S TOTAL REVENUE OF INTEL'S TOTAL REVENUE

KEY PRODUCTS AND  
MARKETS

Includes high-performance compute solutions for targeted verticals and embedded applications in market segments such as retail, manufacturing, health care, energy, automotive, and government.

KEY PRODUCTS AND  
MARKETS

Includes programmable semiconductors, primarily field-programmable gate arrays (FPGAs), and related products for a broad range of markets, such as communications, data center, industrial, and military.

OF INTEL'S TOTAL REVENUE OF INTEL'S TOTAL REVENUE

HIGHLIGHTS

Our data-centric businesses collectively grew 18% led by the growth in DCG, due in part to customer transition to Intel® Xeon® Scalable processors and higher demand across cloud and communication service providers. To extend the growth, we have new products, such as the Intel® Programmable Acceleration Card (Intel® PAC) with Intel® Stratix® 10 SX FPGA, and are now shipping the second generation Intel Xeon Scalable processor and Intel® Optane™ DC persistent memory, which combines the speed of traditional memory with the capacity and native persistence of storage. In addition, Mobileye continued to secure new design wins at major U.S. and global automakers and announced plans to commercialize MaaS.

OPPORTUNITIES

We have expanded our data-centric TAM to \$200 billion<sup>2</sup> with acquisitions and product innovations. Our broadened portfolio enables new opportunities for us and creates better synergistic value for our customers. For example, our product offerings for AI workloads reach from the cloud to the edge, and we are developing CPU, graphics processing unit (GPU), FPGA, and AI accelerator products to span inference and training AI workloads, while also pursuing ongoing software optimizations for AI.

CHALLENGES

Our 2018 revenue growth exceeded our expectation and put pressure on our factory network. We prioritized production on server and higher performance PC market segments, which consequently constrained supply in other areas, including IOTG. In addition, due to challenging market conditions, as well as continued investments in new memory products and in manufacturing capacity, the profitability of our memory business improved more slowly than expected in 2018. Our data center business was impacted by weakness in China demand and cloud market segment deceleration in Q4 2018.

PC-CENTRIC

KEY PRODUCTS AND  
MARKETS

Includes platforms designed for end-user form factors, focusing on

HIGHLIGHTS

CCG had record revenue and



higher growth segments of 2-in-1, thin-and-light, commercial and gaming, and growing adjacencies such as WiFi and modem.

operating income with three years of growth in a row by executing to our strategy. We announced additions to our 8th generation Intel® Core™ mobile processors, the first Intel® Core™ i9 processor for laptops, and the first 9th generation Intel® Core™ processor, i9-9900K, targeting the growing gaming market segment.

#### OPPORTUNITIES

We are targeting an expanded \$60 billion revenue TAM<sup>2</sup>, which is \$25 billion higher than our traditional CPU TAM. This expanded

OF INTEL'S TOTAL REVENUE

opportunity includes markets such as memory, graphics, and connectivity, and is in addition to a \$40 billion modem market where we are gaining share.

#### CHALLENGES

We are operating in an increasingly competitive environment and are focused on executing an annual cadence of leadership products. Strong demand across our product lines has resulted in tight supply, particularly

in the entry-level  
PC market. We are  
making additional  
investments in our  
14nm factory  
network and  
working with  
customers to align  
demand with  
available supply.

<sup>1</sup> Data-centric businesses include DCG, IOTG, NSG, PSG, and all other businesses, including Mobileye.

<sup>2</sup> Source: Intel calculated 2022 TAM derived from industry analyst reports.

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OUR PRODUCTS

We are at the forefront of developing new technologies and new products as building blocks for the increasingly smart and connected world. These technologies and products are utilized as integrated solutions for a broad spectrum of markets.

PRODUCT  
LEADERSHIP  
CREATES  
ESSENTIAL  
VALUE FOR  
OUR  
CUSTOMERS

We focus on providing compelling user experiences by developing our next generation of products based on customer needs and expectations. We invest in product and process technologies to deliver higher performance and lower total cost of ownership by closely working with our customers and partners. By continuing to improve our products and expanding our product portfolio—including in adjacent products such as modem and memory, where we had significant growth this year—we were able to deliver more value to our customers.

WE HAVE A  
BROAD  
PRODUCT  
PORTFOLIO

From processing to transferring, storing, and analyzing data, our broad product portfolio offers innovative solutions to a wide array of customers. These products, such as our gaming CPUs, may be sold directly to end consumers, or they may be further integrated by our customers into end products such as notebooks and storage servers. Combining some of these products—for example, integrating FPGA and memory with Intel Xeon® processors in a data-center solution—enables incremental synergistic value and performance.

OUR  
PRODUCTS  
PROVIDE  
END-TO-END  
SOLUTIONS

As the company transforms beyond a PC-centric company to address the needs of the new data-centric world, we have expanded our product offerings to provide end-to-end solutions, scaling from edge computing to the network, the cloud, and the emerging field of AI and autonomous driving. In 2018 we introduced the Intel® Neural Compute Stick 2 and new Mobileye EyeQ\* SoC. Meanwhile, we continue to push the boundary of client computing with innovations, including new form factors (e.g., dual-screen 2-in-1s), new functionalities (e.g., cellular connectivities), and performance enhancements (e.g., Intel® Optane™ memory).

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## OUR CAPITAL

We deploy various forms of capital to execute our transformation strategy in a way that seeks to reflect our corporate values, delight our customers, and create value for our stockholders.

Our commitment to corporate responsibility creates value for Intel and our stockholders by helping us mitigate risks, reduce costs, build brand value, and identify new market opportunities. We set ambitious goals for our company and make strategic investments to advance progress in the areas of environmental sustainability, supply chain responsibility, diversity and inclusion, and social impact that benefit the environment and society.

We empower and invest in attracting and retaining talented employees who enable the development of solutions and enhance our intellectual and manufactured capital. Our effective utilization of natural resources and focus on corporate responsibility result in trusted relationships that support the growth of our business. Through these activities, we strive to develop the world's best semiconductors, deliver great customer experiences, efficiently manage our supply chain, improve the communities in which we operate, and, ultimately, generate financial capital that is reinvested in our business and returned to stockholders.

DRIVERS	STRATEGY	VALUE
Cash flow and capital allocation strategy	Leverage financial capital to invest in the business, acquire and integrate strategic investments, and provide returns to stockholders in the forms of dividends and share repurchases.	We strategically invest financial capital to create value for our stockholders. Over the last five years, we: <ul style="list-style-type: none"> <li>- Generated \$113 billion cash from operating activities</li> <li>- Generated \$59 billion in free cash flow<sup>1</sup></li> <li>- Returned \$55 billion to stockholders.</li> </ul>
Research and development (R&D) and IP rights	Invest significantly in R&D to ensure our process and product technologies compete successfully as we pursue our strategy to make the world's best semiconductors and realize new data-centric opportunities.	We develop IP for our platforms to enable next-generation products, create synergies across our businesses, provide a higher return as we expand into new markets, and establish and support our brands.
Capital assets and strategic supply chain investments	Invest timely and at a level sufficient to meet customer demand for current technologies and prepare for future technologies.	Our world-wide manufacturing scope and scale enable innovations to provide our customers and consumers with a broad range of leading-edge products in high volume.
Employees and culture	Develop the talent needed to keep the company at the forefront of innovation and create a diverse, inclusive, and safe workplace.	We attract and retain talented and engaged employees who can deliver their workplace best every day and who create the intellectual capital we rely on to develop and advance our technologies and manufacturing.
Supply chain responsibility and positive social impact	Build trusted relationships for both Intel and our stakeholders, including local communities, governments, suppliers, customers, and employees.	We collaborate on programs to empower underserved communities through education and technology, and on initiatives to advance accountability and capabilities across our global supply chain, including advancing respect for

human rights.

Resource efficiency      Continually strive to reduce our environmental footprint through efficient and responsible use of natural resources and materials used to create our products.

Our proactive efforts help us mitigate climate and water risk, achieve efficiencies, lower costs, and position us to respond to the needs and expectations of our stakeholders.

<sup>1</sup> See "Non-GAAP Financial Measures" within Other Key Information.

FUNDAMENTALS OF OUR BUSINESS      Our Capital<sup>10</sup>

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Table of Contents**FINANCIAL CAPITAL**

Our financial capital allocation strategy focuses on building stockholder value. We do this by first investing in ourselves and growing our capabilities. We then look to supplement and strengthen our capabilities through acquisitions and strategic investments. And finally, we provide the return realized by these investments to our stockholders.

**CASH FROM OPERATING ACTIVITIES \$B**

Capital Investment Free Cash Flow

**OUR FINANCIAL CAPITAL ALLOCATION DECISIONS ARE DRIVEN BY THREE PRIORITIES**

<b>INVEST IN THE BUSINESS</b>	<b>ACQUIRE AND INTEGRATE</b>	<b>RETURN CASH TO STOCKHOLDERS</b>		
<p>Our first priority is to invest in R&amp;D and capital spending to strengthen our competitive position. We shifted our R&amp;D focus as we transformed to a data-centric company, while efficiently maintaining our investment at approximately 20% of revenue. Our capital investment in logic (silicon wafer manufacturing of our platform products) and memory both increased in 2018 as we looked to improve supply of platform products and continued to ramp production capacity in our memory fab (Fab 68). We obtained customer prepayments of over \$1.6 billion in 2018 and \$1.1 billion in 2017, which helped to offset our investment in memory.</p>	<p>Our second financial capital allocation priority is to invest in companies around the world that will complement our strategic objectives and stimulate growth of data-centric opportunities. We look for acquisitions that further leverage and strengthen our capital and R&amp;D investments. In 2018, we completed various small acquisitions, while leveraging Altera and Movidius to partner with customers and expand the markets we serve. Mobileye achieved record revenue, various design wins, and announced the ability to retrofit existing vehicles to deliver full autonomy. Intel Capital investments also support our strategic objectives.</p>	<p>Our third financial capital allocation priority is to return cash to stockholders. We achieve this through our dividend and share repurchase programs. During 2018, we paid \$5.5 billion in dividends and increased our quarterly cash dividends by 10% from 2017. We also repurchased \$10.7 billion in shares, up from 2017, and have reduced the level of diluted shares outstanding over time.</p>	<p>Dividends Per Share</p>	<p>Diluted Shares Outstanding (In Millions)</p>
			<p>2018 \$1.20</p> <p>2017 \$1.0775 7%</p> <p>2016 \$1.04 CAGR 4,875</p>	<p>4,701</p> <p>4,835</p> <p>4,875</p>

**R&D AND CAPITAL INVESTMENTS \$B ACQUISITIONS CASH TO STOCKHOLDERS \$B**

R&D Logic Memory— # of Acquisitions Total Spent \$B Buyback Dividend

<sup>1</sup> See "Non-GAAP Financial Measures" within Other Key Information.

FUNDAMENTALS OF OUR BUSINESS Our Capital <sup>11</sup>

Table of ContentsINTELLECTUAL CAPITAL  
RESEARCH AND DEVELOPMENT

Every year we make a significant investment in R&D, as it is a critical factor in achieving our strategic objectives to make the world's best semiconductors, lead the AI and autonomous revolution, and provide leading end-to-end platform solutions. Successful R&D efforts can lead to new products and technologies, or improvements to existing ones, which we seek to protect through our IP rights. We may augment our R&D initiatives by investing in or acquiring companies or entering into R&D agreements with other companies, as well as by directly purchasing or licensing technology.

We have increased our investments in R&D in each of the last five years and intensified our focus on key priorities in product technology while exiting non-core businesses, such as our divestiture of Wind River Systems, Inc. (Wind River) during 2018.

## PRODUCT TECHNOLOGY

We are focusing our R&D activities on six areas of engineering to advance our product capabilities. Our goal is to improve user experiences and value at the pace of Moore's Law through advances in performance, power, cost, connectivity, security features, form factor, and other features with each new generation of products.

**Process technology.** While development of next-generation manufacturing processes remains a critical and fundamental area of research, we are also pursuing innovations in packaging technology to enable new approaches to chip design. In 2018, we announced a new 3D packaging technology called "Foveros" that allows for stacking of logic chips, enabling products where input/output (I/O), static random-access memory (SRAM), and power delivery circuits can be fabricated in a base die and high-performance logic "chiplets" can be stacked on top. Together with our Embedded Multi-die Interconnect Bridge (EMIB) technology, advanced packaging allows for new hybrid chip designs that can "mix and match" different technology IP blocks, which may be manufactured on different process nodes, into a single system-in-package, enabling new design flexibility and new device form factors.

"Foveros" 3D  
packaging  
technology

**Architecture.** We are designing products for four major computing architectures—scalar (CPU products), vector (GPU products), matrix (AI accelerator products), and spatial (FPGA products)—as we move toward a model of providing multiple "xPU" compute platforms for a more diverse era of computing. In 2018, we announced "Sunny Cove," our next-generation CPU microarchitecture, with architectural extensions designed for special-purpose computing tasks such as AI and cryptography, among other features. We are also continuing development on our first discrete GPU.

**Memory.** With our Intel® 3D NAND and Intel® Optane™ technologies, we are developing products to disrupt the memory and storage hierarchy. We are shipping our Intel® Optane™ DC Persistent Memory, which combines memory-like performance with the larger capacity and persistence of storage, bringing more data closer to the CPU to help improve processing of big data sets like those used in AI and large databases. Our QLC 3D NAND technology allows users to move more data from hard disks to SSDs, giving them faster access to their data.

**Interconnect.** We have a broad portfolio of interconnect solutions, ranging from silicon to the data center to wireless. Our silicon photonics technology integrates lasers into silicon to create high-speed optical connections that can help remove networking bottlenecks in the data center. We are driving the 5G transition by offering products that communications service providers use to transform their networks for 5G, as well as through development of 5G modems.

**Security technologies.** We have made significant investments in security technologies, and built-in security features are integrated into our design process and roadmap. In the first half of 2018, we created the Intel Product Assurance and Security Group to serve as a center for security research across our products and businesses, not only to address the security issues of today, but also to monitor the evolving threat landscape and seek to continuously improve our product security in the years ahead.

**Software.** Software plays a critical role in unlocking the performance potential of our hardware products. Our vision is to unify our software abstractions across all of our xPU platforms. We are developing a project called OneAPI to simplify programming for developers across our CPU, GPU, FPGA, AI and other accelerator products, providing a

unified portfolio of developer tools for mapping software to the hardware that can best accelerate the code.

#### IP RIGHTS

We own and develop significant IP and related IP rights around the world that relate to our products, services, R&D, and other activities and assets. Our IP portfolio includes patents, copyrights, trade secrets, trademarks, maskwork, and other rights. We actively seek to protect our global IP rights and to deter unauthorized use of our IP and other assets. For a detailed discussion of our IP rights, see "Intellectual Property Rights and Licensing" within Other Key Information.

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### MANUFACTURED CAPITAL

We are an integrated device manufacturer (IDM). Unlike many other semiconductor companies, we primarily design and manufacture our products in our own manufacturing facilities. We see our in-house manufacturing as one of our most critical forms of capital and an important advantage.

### MANUFACTURING PROCESS TECHNOLOGY

We continue to develop new generations of manufacturing process technology as we seek to realize the benefits from Moore's Law, a law of economics predicted by Intel's co-founder Gordon Moore more than 50 years ago. Realizing Moore's Law results in economic benefits as we are able to either reduce a chip's cost as we shrink its size or increase functionality and performance of a chip while maintaining the same cost with higher density. This makes possible the innovation of new products with higher performance while balancing power efficiency, cost, and size to meet customers' needs.

As of the end of 2018, our platform products were manufactured on 300mm wafers, with the majority manufactured using our 14nm process node, and we are currently ramping our next-generation 10nm process node. We have lengthened our utilization of our 14nm process to meet an annual cadence of product introductions while developing 10nm process technology. Over the course of our 14nm process generation, we have achieved significant product performance improvement. We expect the same trend of utilizing a process node for multiple waves of products to continue as we ramp 10nm.

With our 10nm process technology, we are striving for an aggressive density improvement target, beyond the density scaling we delivered with 14nm. We have experienced challenges associated with 10nm development and implementation, and announced in 2018 that volume production on our 10nm products would be delayed from the second half of 2018 into 2019. We have made good progress on improving 10nm yields in 2018, and we continue to expect volume client systems on retail shelves for the 2019 holiday season, with data center products to follow in 2020.

### FACTORY NETWORK AND SUPPLY CHAIN

The map marks our manufacturing facilities and their primary functions, as well as the countries where we have a significant R&D or sales and marketing presence.

Approximately half of our wafer manufacturing is conducted within the U.S. We incur factory start-up costs as we ramp our facilities for new process technologies. We continued to ramp the 10nm process node in our Oregon and Israel locations and to expand our memory fab, Fab 68. Memory investments represented approximately 20% of total capital spending for 2018.

Our manufacturing facilities are primarily used for silicon wafer manufacturing of our platform and memory products. These facilities are built following a "copy exactly" methodology, whereby new process technologies are transferred identically from a central development fab to each manufacturing facility. This enables fast ramp of the operation as well as better quality control. These wafer fabs operate in a network of manufacturing facilities integrated as one factory to provide the most flexible supply capacity, allowing us to better analyze our production costs and adapt to changes in capacity needs.

We use a multi-source strategy for our memory business to enable a robust and flexible supply chain. Throughout 2018, we increased the memory capacity in Fab 68, where we ramped 3D NAND production. In addition, we have a supplemental supply agreement with Micron Technology, Inc. (Micron), as well as capacity from our joint venture, IM Flash Technologies, LLC (IMFT) factory in Lehi, Utah. In January 2019, Micron called our interest in IMFT. The IMFT agreement provides for supply for up to one year after the close of the transaction.

We use third-party foundries to manufacture wafers for certain components and leverage subcontractors to augment capacity to perform assembly and test in addition to our in-house manufacturing, primarily for chipsets and adjacent products.



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**HUMAN CAPITAL**

Given the highly technical nature of our business, our success depends on our ability to attract and retain talented and skilled employees to create the technology of the future and delight our customers. Our global workforce of 107,400 is highly educated, with approximately 85% of our people working in technical roles. We invest in creating a diverse, inclusive, and safe work environment where our employees can deliver their workplace best every day. This environment fosters a rich and powerful culture that allows us to make a profound impact on the world.

All employees are responsible for upholding the Intel Values, Intel Code of Conduct, and Intel Global Human Rights Principles, which form the foundation of our policies and practices. We also place value on providing a wide range of opportunities to support the ongoing career development of employees. For over a decade, we have tracked and publicly reported on key human capital metrics, including workforce demographics, diversity and inclusion data, turnover, and training data.

"In 2018, we met our U.S. diversity and inclusion goal—two years ahead of schedule. We are proud of our progress but not satisfied. We view diversity and inclusion as a business imperative that drives innovation and future growth. Every voice matters."

—Barbara Whye, Intel’s Chief Diversity and Inclusion Officer and Vice President of Human Resources

**DIVERSITY AND INCLUSION**

Building an inclusive workforce, industry, and ecosystem is critical to helping us drive our business forward. We committed \$300 million to advance diversity and inclusion in our workforce and in the technology industry, and met our goal to achieve full representation of women and underrepresented minorities in our U.S. workforce in 2018—two years ahead of schedule. We have a long-standing commitment to inclusive workplace policies. For example, to help ensure employee concerns are openly and transparently resolved, Intel does not seek arbitration of sexual harassment and other employment claims.

**GROWTH AND DEVELOPMENT**

We invest significant resources to develop the talent needed to keep the company at the forefront of innovation and make Intel an employer of choice. We deliver training annually and provide rotational assignment opportunities. During 2017 and 2018, we trained our managers in inclusive management practices. Over the past five years, our undesired voluntary turnover rate has been below 5%.

**COMMUNICATION AND ENGAGEMENT**

Our success depends on employees understanding how their work contributes to the company’s overall strategy. We use a variety of channels to facilitate open and direct communication, including open forums with executives; quarterly Organizational Health Polls; and engagement through more than 30 different employee resource groups, including the Women at Intel Network, the Network of Intel African American Employees, the Intel Latino Network, and others.

**COMPENSATION AND BENEFITS**

We strive to provide pay, benefits, and services that help meet the varying needs of our employees. Our generous total rewards package includes market-competitive pay, broad-based stock grants and bonuses, a popular Employee Stock Purchase Plan, healthcare and retirement benefits, paid time off, flexible work schedules, sabbaticals, fertility assistance, and on-site services. For more than a decade, we’ve performed an annual compensation analysis in the U.S. to ensure pay equity by gender and race/ethnicity. In 2018, we began globalizing our analytics and recently announced that we’ve achieved gender pay equity globally.

**HEALTH, SAFETY, AND WELLNESS**

Our ultimate goal is to achieve zero serious injuries through continued investment in and focus on our core safety programs and injury-reduction initiatives. We provide access to a variety of innovative, flexible, and convenient employee health and wellness programs, including on-site health centers.



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**SOCIAL AND RELATIONSHIP CAPITAL**

We are committed to operating with transparency, and through open and direct communication, we work to develop trusted relationships with all stakeholders, including employees, customers, suppliers, governments, and communities. We also empower our employees to give back to the communities where we operate and engage them in corporate responsibility and sustainability initiatives. Our commitment to stakeholder collaboration and investments in social impact initiatives, including support of the United Nations Sustainable Development Goals, has resulted in our reputation as a leading corporate citizen, which has created value for Intel in terms of social license to operate and a positive operating environment. Each year, we receive third-party recognitions for our corporate responsibility leadership and ethical business practices. In 2018, recognitions included the Fortune 2018 Change the World List, Ethisphere’s World’s Most Ethical Companies, and Forbes/Just Capital’s America’s Most “Just” Companies.

**ECONOMIC**

**IMPACT**

The health of our company and local economies depend on continued investments in innovation. We provide high-skill, high-paying jobs at Intel sites around the world and also impact economies through our R&D ecosystem spending, sourcing activities, consumer spending by our employees, and tax revenue. Many of these are manufacturing and R&D jobs located in our own domestic and international factories. In addition, we make sizable

capital  
investments and  
provide  
leadership in  
public-private  
partnerships to  
spur economic  
growth and  
innovation.

#### SOCIAL IMPACT

We are at the  
forefront of new  
technologies—such  
as AI,  
autonomous  
driving, and 5G  
wireless  
broadband—that  
are increasingly  
being used to  
empower  
individuals,  
companies, and  
governments  
around the  
world to solve  
major societal  
challenges.  
Simultaneously,  
we are  
empowering  
people through  
education and  
advancing  
social impact  
initiatives,  
helping us build  
trust with key  
external  
stakeholders  
and support the  
interests of our  
employees.  
Through the  
Intel® She Will  
Connect  
program, we  
have  
collaborated  
with global and

local partners to empower millions of women and girls through technology skills training. Our employees actively share their expertise and skills through technology-related volunteer initiatives, and over the past 10 years have contributed more than 10 million hours of service in the communities where we operate. In celebration of our 50th anniversary, we set a goal to have 50,000 employees donate 1 million volunteer hours during 2018.

We exceeded the goal with more than 68,000 employees contributing approximately 1.5 million hours.

#### SUPPLY CHAIN RESPONSIBILITY

Actively managing our supply chain creates business value for Intel and our

customers by helping us reduce risks, improve product quality, achieve environmental and social goals, and raise the overall performance of our suppliers. Over the past five years, we have completed more than 500 supplier audits using the Responsible Business Alliance Code of Conduct standard and have expanded training and capacity-building programs with our suppliers. We actively collaborate with others and lead industry initiatives on key issues such as advancing responsible minerals sourcing, addressing risks of forced and bonded labor, and improving transparency around climate and water impacts in the global electronics supply chain. We also continue to work toward our



goal of reaching  
\$1 billion in  
annual spending  
with  
diverse-owned  
suppliers by  
2020, and are  
investing in  
programs to  
create new  
career pathways  
into the  
technology  
industry.

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NATURAL CAPITAL

Driving to the lowest environmental footprint possible helps us achieve efficiency, lower costs, and respond to the needs of our customers and community stakeholders. We invest in conservation projects and set company-wide environmental targets, seeking to drive reductions in greenhouse gas emissions, energy use, water use, and waste generation. We focus on building energy efficiency into our products to help our customers lower their own emissions and energy costs. We also collaborate with policymakers and other stakeholders to identify opportunities to apply technology to environmental challenges such as climate change and water conservation.

CLIMATE AND ENERGY

We focus on reducing our own direct climate “footprint” and over the past two decades have reduced our direct emissions and electricity generated emissions. We also continue to be one of the largest voluntary corporate purchasers of green power. Since 2012, we have invested more than \$200 million in energy conservation projects in our global operations, resulting in cumulative savings of more than 4 billion kilowatt hours and cost savings of approximately \$500 million through the end of 2018. We also focus on increasing our “handprint”—the ways in which Intel technologies can help others reduce their footprints, and collaborate on shaping public policy responses to climate change, both at the international level and in the countries and

regions where we operate.

#### GREENER BUILDINGS

Our engineers have long incorporated green design standards and concepts into the new construction and renovation of our facilities. We continue to be on track to meet our goal to design all new buildings to a minimum Leadership in Energy and Environmental Design (LEED) Gold certification, and to date have achieved LEED certification for more than 17 million square feet, or approximately 26% of our total operational space. The Internet of Things is also expanding opportunities in the area of green buildings, including smart building energy management systems. Working with ecosystem partners, we are advancing solutions in this area, as well as incorporating these technologies into our own green building strategies. For example, one of our newest buildings, an office building in Bangalore, India that received LEED Platinum certification, is equipped with more

than 9,000 sensors and has 50% lower energy demand compared to most traditional office buildings in the area.

#### WASTE MANAGEMENT AND RECYCLING

In each of the past five years, we have recycled more than 84% of the non-hazardous waste generated in our global operations and continue to work toward our 2020 goals of recycling 90% of our non-hazardous waste and sending zero hazardous waste to landfills. Our aim is to continue to invest in reducing the amount of waste we generate while increasing the amount recycled.

#### WATER STEWARDSHIP

Water is essential to the semiconductor manufacturing process. We use ultrapure water to remove impurities from our silicon wafers, and we use industrial and reclaimed water to run our manufacturing facility systems. Over the last two decades, our sustainable water management efforts and partnerships have enabled us to conserve billions of gallons of water and

we return approximately 80% of our water back to our communities. In 2018, we continued to make progress toward our goal to restore 100% of our global water use by 2025 through funding collaborative community-based projects that will restore water in amounts equivalent to what our business consumes.

#### SUPPLIER ENVIRONMENTAL IMPACT

We also partner with our suppliers to manage their environmental impact, which in turn reduces our own environmental impact, lowers supply chain risk, and can decrease costs. In 2018, we again attained a Leadership “A” rating on Supplier Engagement from CDP (which evaluates global companies on their environmental disclosure) for our work to encourage our suppliers to increase the level of transparency on their climate and water footprints.

Table of Contents**STOCKHOLDER RETURN**

Through attention to constant improvement, we strive for our capital to work together in a manner consistent with our focus on long-term value creation. Long-term total stockholder return provides one measure of value creation, though we also consider other indicators of success for our deployment of capital, such as diversity advancement for our human capital. The stock performance graph and table that follow compare the cumulative total stockholder return on Intel's common stock with the cumulative total return of the Dow Jones U.S. Technology Index\*, the Standard & Poor's 100 Stock Index (S&P 100 Index\*), the Standard & Poor's 500 Stock Index (S&P 500 Index\*), the Standard & Poor's 500 IT Stock Index (S&P 500 IT Index\*), and the PHLX Semiconductor Sector Index (SOX Index\*) for the five years ended December 29, 2018. The cumulative returns shown on the graph are based on Intel's fiscal year.

Comparison of Five-Year Cumulative Return for Intel,  
the Dow Jones U.S. Technology Index, S&P 100 Index, S&P 500 Index, S&P 500 IT Index, and SOX Index

Years Ended	Dec 28, 2013	Dec 27, 2014	Dec 26, 2015	Dec 31, 2016	Dec 30, 2017	Dec 29, 2018
Intel Corporation	\$ 100	\$ 151	\$ 145	\$ 156	\$ 204	\$ 211
Dow Jones U.S. Technology Index	\$ 100	\$ 123	\$ 126	\$ 143	\$ 196	\$ 193
S&P 100 Index	\$ 100	\$ 114	\$ 117	\$ 129	\$ 157	\$ 150
S&P 500 Index	\$ 100	\$ 116	\$ 117	\$ 130	\$ 158	\$ 150
S&P 500 IT Index	\$ 100	\$ 123	\$ 128	\$ 145	\$ 201	\$ 199
SOX Index	\$ 100	\$ 133	\$ 131	\$ 179	\$ 252	\$ 235

The graph and table assume that \$100 was invested on the last day of trading for the fiscal year ended December 28, 2013 in Intel's common stock, the Dow Jones U.S. Technology Index, S&P 100 Index, S&P 500 Index, S&P 500 IT Index, and SOX Index, and that all dividends were reinvested. The Dow Jones U.S. Technology Index was presented as a comparison in the 2017 Form 10-K stock performance graph as a peer index. We have added three indices that we consider more representative than the Dow Jones U.S. Technology Index: the S&P 100 Index, which includes a more diversified group of companies across major industrial sectors; the S&P 500 IT Index, which represents large capitalization IT industry performance; and the SOX Index, which more precisely represents overall semiconductor industry performance.

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## WHO MANAGES OUR BUSINESS

## EXECUTIVE OFFICERS OF THE REGISTRANT

	AGE	OFFICE(S)
Andy D. Bryant	68	Chairman of the Board
Dr. Venkata S.M. Renduchintala	53	Group President, Technology, Systems Architecture and Client Group; Chief Engineering Officer
Steven R. Rodgers	53	Executive Vice President; General Counsel
Navin Shenoy	45	Executive Vice President; General Manager, Data Center Group
Robert H. Swan	58	Chief Executive Officer
Todd M. Underwood	49	Interim Chief Financial Officer; Vice President of Finance and Director, Corporate Planning and Reporting

Andy D. Bryant has been Chairman of our Board of Directors since May 2012. Mr. Bryant served as Vice Chairman of the Board of Directors of Intel from July 2011 to May 2012. From 2007 to 2012, Mr. Bryant served as Chief Administrative Officer. Mr. Bryant joined Intel in 1981 and served in a number of executive roles at the company. He was Executive Vice President, Technology, Manufacturing, and Enterprise Services from 2009 to 2012. Mr. Bryant previously served as Executive Vice President, Finance and Enterprise Services from 2007 to 2009; Executive Vice President, Chief Financial and Enterprise Services Officer from 2001 to 2007; Senior Vice President, Chief Financial and Enterprise Services Officer from 1999 to 2001; Senior Vice President, Chief Financial Officer from January 1999 to December 1999; and Vice President, Chief Financial Officer from 1994 to 1999. Mr. Bryant also serves on the board of directors of Columbia Sportswear Company and McKesson Corporation.

Dr. Venkata S.M. (“Murthy”) Renduchintala joined Intel in November 2015 and serves as Group President of our Technology, Systems Architecture and Client Group (TCSG) and Chief Engineering Officer. In this role, Dr. Renduchintala oversees Intel's labs, technology development, manufacturing, and systems architecture engineering teams, as well as our client computing and connectivity business. His TCSG organization is responsible for aligning technology, engineering, product design, and process development across all our businesses and for providing business and strategic direction for our client and connectivity offerings. Dr. Renduchintala joined Intel as Executive Vice President and President, Client and Internet of Things Businesses and System Architecture Group, which expanded into the TCSG organization in 2018, and was named Group President and Chief Engineering Officer in April 2017. From 2004 to 2015, Dr. Renduchintala held various senior positions at Qualcomm Incorporated, most recently as Co-President of Qualcomm CDMA Technologies from June 2012 to November 2015 and Executive Vice President of Qualcomm Technologies Inc. from October 2012 to November 2015. Before joining Qualcomm, Dr. Renduchintala served as Vice President and General Manager of the Cellular Systems Division of Skyworks Solutions Inc./Conexant Systems Inc. and he spent a decade with Philips Electronics, where he held various positions, including Vice President of Engineering for its consumer communications business. Dr. Renduchintala also serves on the board of directors of Accenture plc.

Steven R. Rodgers has been our Executive Vice President and General Counsel since January 2017 and oversees our legal, government, human resources, and China groups. He previously led our legal and government groups as Senior Vice President and General Counsel from January 2015 to January 2017 and as Corporate Vice President and General Counsel from June 2014 to January 2015. Mr. Rodgers joined Intel in 2000 and has held a number of roles in our legal department, including as Corporate Vice President and Deputy General Counsel from January 2014 until his appointment as Intel's fifth General Counsel in June 2014. Prior to joining Intel, Mr. Rodgers was a litigation partner at the firm of Brown & Bain, P.A.

Navin Shenoy has been Executive Vice President and General Manager of the Data Center Group since May 2017. In this role, he oversees our Data Center Group, Internet of Things Group, and Programmable Solutions Group and leads strategy and product development for many of our data-centric offerings, including server, network, storage, AI, Internet of Things, and FPGA products, across a range of use cases that include cloud computing, virtualization of network infrastructure, and AI adoption. From May 2016 to May 2017, Mr. Shenoy was Senior Vice President and General Manager of the Client Computing Group. From April 2012 to April 2016, he served as General Manager of

the Mobility Client Platform Division, as Vice President from April 2012 until December 2014 and Corporate Vice President from January 2015 to May 2016. From October 2007 to April 2012, Mr. Shenoy served as Vice President and General Manager of our Asia-Pacific business. Mr. Shenoy joined Intel in 1995.

Robert ("Bob") H. Swan was appointed our Chief Executive Officer and a member of our Board of Directors on January 30, 2019. Mr. Swan had served as our interim Chief Executive Officer since June 2018 and has been our Executive Vice President, Chief Financial Officer since joining Intel in October 2016. As CFO, he oversees Intel's global finance organization—including finance, accounting and reporting, tax, treasury, internal audit, and investor relations—IT, Intel Capital, and our corporate strategy office. From September 2015 to September 2016, Mr. Swan served as an Operating Partner at General Atlantic LLC, a private equity firm. He served as Senior Vice President, Finance and Chief Financial Officer of eBay Inc. from March 2006 to July 2015. Previously, Mr. Swan served as Executive Vice President, Chief Financial Officer of Electronic Data Systems Corporation, Executive Vice President, Chief Financial Officer of TRW Inc., as well as Chief Financial Officer, Chief Operating Officer, and Chief Executive Officer of Webvan Group, Inc. Mr. Swan began his career in 1985 at General Electric, serving for 15 years in numerous senior finance roles. Mr. Swan also serves on the board of directors of eBay.

Todd M. Underwood was appointed our interim Chief Financial Officer as of January 31, 2019. Since August 2016, Mr. Underwood has been our Vice President of Finance and Director, Corporate Planning and Reporting, with responsibility for leading our financial planning processes, management reporting, and quarterly earnings process. From June 2015 to August 2016, he served as Vice President of Finance and Co-Executive-in-Residence with responsibility for integration activities of Intel's acquisition of Altera. Mr. Underwood served as Vice President of Finance for the Mobile and Communications Group from January 2012 to June 2015. Prior to that, he served as Director of Finance for Intel Capital from June 2008 to January 2012. Mr. Underwood joined Intel in 1992.



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## MANAGEMENT'S DISCUSSION AND ANALYSIS (MD&amp;A)

Five years ago, we set out a strategy to transform from a PC-centric to a data-centric company. Our 2018 results serve as a strong proof point that our strategy is working and our transformation is well underway. We achieved record revenue and earnings per share (EPS), driven by strong business performance, continued operating leverage, and a lower tax rate. Revenue from our data-centric businesses collectively increased by double digits. Our PC-centric business grew above our expectations and continued to be a source of profit, cash flow, scale, and intellectual property (IP). While we have had delays in implementing our 10 nanometer (nm) manufacturing process technology, we have continued to innovate in our 14nm products, introducing leadership products that deliver more value to our customers. We've expanded beyond PC and server businesses with significant growth in adjacent products, and gained share in an expanded \$300 billion TAM<sup>1</sup>. Our employees are executing to our strategy by developing compelling technology and delivering innovative products to our customers, enabling strong financial growth. For key highlights of the results of our operations, see "A Year in Review" within Fundamentals of Our Business.

Years Ended (In Millions, Except Per Share Amounts)	December 29, 2018		December 30, 2017		December 31, 2016	
	Amount	% of Net Revenue	Amount	% of Net Revenue	Amount	% of Net Revenue
Net revenue	\$70,848	100.0 %	\$62,761	100.0 %	\$59,387	100.0 %
Cost of sales	27,111	38.3 %	23,663	37.7 %	23,154	39.0 %
Gross margin	43,737	61.7 %	39,098	62.3 %	36,233	61.0 %
Research and development	13,543	19.1 %	13,035	20.8 %	12,685	21.4 %
Marketing, general and administrative	6,750	9.5 %	7,452	11.9 %	8,377	14.1 %
Restructuring and other charges	(72 )	(0.1 )%	384	0.6 %	1,744	2.9 %
Amortization of acquisition-related intangibles	200	0.3 %	177	0.3 %	294	0.5 %
Operating income	23,316	32.9 %	18,050	28.8 %	13,133	22.1 %
Gains (losses) on equity investments, net	(125 )	(0.2 )%	2,651	4.2 %	506	0.9 %
Interest and other, net	126	0.2 %	(349 )	(0.6 )%	(703 )	(1.2 )%
Income before taxes	23,317	32.9 %	20,352	32.4 %	12,936	21.8 %
Provision for taxes	2,264	3.2 %	10,751	17.1 %	2,620	4.4 %
Net income	\$21,053	29.7 %	\$9,601	15.3 %	\$10,316	17.4 %
Earnings per share - Diluted	\$4.48		\$1.99		\$2.12	

<sup>1</sup> Source: Intel calculated 2022 TAM derived from industry analyst reports.



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## REVENUE

We have achieved our third year in a row of record revenue, demonstrating that our strategy and transformation from a PC to a data-centric company is paying off. Our total revenue grew from \$55.9 billion in 2014 to \$70.8 billion in 2018, representing 6% compound annual growth rate (CAGR). Data-centric businesses collectively grew faster than Intel as a whole at 13% CAGR over the last five years and are approaching 50% of our revenue.

## PC TO DATA-CENTRIC TRANSFORMATION OVER THE LAST 5 YEARS

PC-centric \$B    Data-centric \$B — Data-centric as a % of total Intel revenue

## SEGMENT REVENUE WALK \$B

## 2018 – 2017

In 2018, revenue was \$70.8 billion, up \$8.1 billion, or 13%, from 2017. The increase in revenue was primarily driven by strong performance across our data-centric businesses, which collectively grew 18% year over year and made up nearly half of our total revenue in 2018. Our recently acquired Mobileye business had revenue of \$698 million. Our PC-centric business grew 9%, above our expectations, due to PC TAM<sup>1</sup> growth and demand for our leadership products. The increase in 2018 revenue was partially offset by the loss of revenue from businesses that were divested, specifically \$534 million from the divestiture of the Intel Security Group (ISecG) and approximately \$165 million from the divestiture of Wind River.

## 2017 – 2016

2017 revenue of \$62.8 billion was up \$3.4 billion, or 6%, from 2016. After adjusting for the Q2 2017 divestiture of ISecG, revenue grew 9% from 2016. The increase in revenue was primarily driven by strong performance across our data-centric businesses, which collectively grew 16% year over year after adjusting for ISecG. We saw revenue growth across our DCG, IOTG, NSG, and PSG businesses, and 2017 revenue included \$210 million from our Mobileye business. The increase in 2017 revenue was partially offset by \$1.6 billion from the divestiture of ISecG and by approximately \$500 million from a change to the Intel Inside<sup>®</sup> program.

<sup>1</sup> Source: Intel calculated PC TAM derived from industry analyst reports.

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We derived most of our overall gross margin dollars from the sale of platform products in the CCG and DCG operating segments. Our overall gross margin dollars in 2018 increased by \$4.6 billion, or 12%, compared to 2017, and in 2017 increased by \$2.9 billion, or 8%, compared to 2016. In 2018, our adjacent products continued to grow, primarily due to memory and modem products, which have a lower gross margin percentage than our overall average. Adjacent products represented a larger proportion of our overall business in 2018, which positively impacted our gross margin dollars but substantially offset the increase in gross margin percentage from platform products.

**GROSS MARGIN \$B**

(Percentages in chart indicate gross margin as a percentage of total revenue)

(In	
Millions)	
\$43,737	2018 Gross Margin
5,810	Higher gross margin from platform revenue
(1,085 )	Higher platform unit cost, primarily from increased mix of performance products
(86 )	Other, primarily due to impact from divestitures, offset by higher gross margin from adjacent businesses
\$39,098	2017 Gross Margin
2,380	Higher gross margin from platform revenue
1,010	Lower platform unit cost, primarily on 14nm cost improvement
420	Lower Altera and other acquisition-related charges
315	Lower period charges associated with product warranty and IP agreements incurred in 2016
(535 )	Higher factory start-up costs, primarily driven by the ramp of our 10nm process technology
(390 )	Impact of the ISecG divestiture, offset by higher gross margin from adjacent businesses
(275 )	Period charges primarily associated with engineering samples and higher initial production costs from our 10nm products
(60 )	Other
\$36,233	2016 Gross Margin

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## OPERATING EXPENSES

Total R&D and marketing, general and administrative (MG&A) expenses for 2018 were \$20.3 billion, down 1% from 2017. These expenses represented 28.6% of revenue for 2018 and 32.6% of revenue for 2017. In 2018, we met our goal to have annual R&D and MG&A be 30% of revenue, two years ahead of our 2020 target.

We continue to invest in R&D to accelerate our growth and profitability while driving operational efficiencies to reduce our MG&A spending.

## RESEARCH AND DEVELOPMENT \$B

MARKETING, GENERAL AND  
ADMINISTRATIVE \$B

(Percentages indicate expenses as a percentage of total revenue)

## RESEARCH AND DEVELOPMENT

2018 – 2017

R&D spending increased by \$508 million, or 4%, driven by the following:

- +Investments in data-centric businesses
- + Investments in 10nm process technology
- +Profit-dependent compensation due to an increase in net income
- Lack of expenses due to the divestitures of ISecG in Q2 2017 and Wind River in Q2 2018

2017 – 2016

R&D spending increased by \$350 million, or 3%, driven by the following:

- +Investments in data-centric businesses, including the addition of Mobileye
- + Process development costs for our 7nm process technology
- +Profit-dependent compensation due to an increase in net income, excluding Tax Reform impacts
- Lack of expenses due to the 2017 divestiture of ISecG
- Cost savings from gained efficiencies

## MARKETING, GENERAL AND ADMINISTRATIVE

2018 – 2017

MG&A expenses decreased by \$702 million, or 9%, driven by the following:

- Reduction in marketing programs in 2018
- Lack of acquisition costs due to our 2017 acquisition of Mobileye
- Lack of expenses due to the divestitures of ISecG in Q2 2017 and Wind River in Q2 2018
- Change to the Intel Inside program in 2017
- +Olympics sponsorship in 2018
- +Profit-dependent compensation due to an increase in net income

2017 – 2016

MG&A expenses decreased by \$925 million, or 11%, driven by the following:

- Lack of expenses due to the 2017 divestiture of ISecG
- Change to the Intel Inside program in 2017
- +Profit-dependent compensation due to an increase in net income, excluding Tax Reform impacts

## OVERVIEW

CCG is our largest business unit, delivering 52% of our revenue. The PC market remains a critical facet of our business, providing an important source of IP, scale, and cash flow. CCG is dedicated to delivering client computing end-user solutions, focusing on higher growth segments of 2-in-1, thin-and-light, commercial, and gaming, as well as growing adjacencies such as WiFi and modem. CCG is the human touchpoint in a data-centric world. We deploy platforms that connect people to data and analytics, allowing each person to focus, create, and connect in ways that unlock their individual potential.

## HIGHLIGHTS AND SEGMENT IMPERATIVES

Since 2014, the PC TAM has decreased by approximately 16%<sup>1</sup>, while CCG profitability has improved by over 37%, with focus on higher growth segments and innovative form factors.

Delivering an annual cadence of leadership products is foundational to our business. In 2019 we will begin transitioning to 10nm products, which are expected to be on shelves for the 2019 holiday season.

Leveraging our engineering capabilities and working with our customers and partners, we drive innovation across key vectors of performance, battery life, connectivity (e.g., WiFi, 5G), graphics, form factors, and AI.

As a critical facet of Intel's business, CCG is transforming the PC into the platform that powers every person's greatest contribution and fundamentally supports Intel's data-centric vision of the future.

## 5-YEAR TRENDS

Revenue \$B— Year over Year Growth Op Income \$B— Year over Year Growth

<sup>1</sup> Source: Intel calculated TAM derived from industry analyst reports

"The PC is the human touchpoint of our data-centric strategy. We are committed to making the PC the platform that powers everyone's greatest contribution."

—Gregory Bryant, CCG General Manager

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MARKET AND BUSINESS OVERVIEW

Market trends and strategy

Overall market conditions have improved and we saw a modest growth in the PC TAM<sup>1</sup> this year for the first time since 2011. Our revenue in 2018 increased due to strong demand in commercial and gaming market segments, and higher demand for our high-performance processors, which more than offset declines in desktop volume. We are operating in an increasingly competitive market, particularly in desktop. We continue to invest in product and process technology and in partnerships with our customers to deliver platform innovation and an annual cadence of leadership products. As we move to being a data-centric company, the PC is the connection between people, data, and analytics. It is the bridge between people and the cloud, allowing individuals to focus, create, and connect in new ways.

Products and competitiveness

With a focus on an annual cadence of leadership products, we seek to deliver security-enhanced solutions that continue to open the doors for new technologies, new use cases, and new categories. We expanded our 8th generation Intel® Core™ mobile processor U-series and Y-series families, which are optimized for mobility. These new processors have integrated Gigabit WiFi and enable faster connectivity speeds, better performance, more intuitive voice experiences, and longer battery life for 2-in-1s and thin-and-light laptops.

We introduced the first Intel® Core™ i9 processor for laptops, an Intel Core platform extension that brings together the benefits of 8th generation Intel Core processors with Intel® Optane™ memory, and high-performance desktop CPUs and chipsets that deliver modern standby and ambient computing capabilities. We also announced the first 9th generation Intel® Core™ desktop processors, including the i9-9900K gaming processor, which significantly improves performance and platform features to meet a range of consumer needs. Additionally, we are investing in AI usages to make the client smarter, more adaptable, and more responsive.

Our platform products continue to be enhanced by new adjacent technologies. We introduced our 6th generation LTE\* modem, the Intel® XMM™ 7660 modem, built on Intel's 14nm process technology. We also announced our first 5G NR multi-mode product, the Intel XMM 8160 modem, in our Intel XMM 8000 series product family. In addition, we introduced an Intel® NUC family of products based on 8th generation Intel® Core™ processors. These mainstream products can power home theater systems, drive content creation solutions, and serve as personal voice assistants. We also launched new Thunderbolt™ products, increasing the presence of fast and simple connectivity in premium PCs and universal docking solutions.

<sup>1</sup> Source: Intel calculated PC shipment estimate derived from industry analyst reports.

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## FINANCIAL PERFORMANCE

CCG REVENUE \$B CCG OPERATING INCOME \$B

Platform Adjacent

## REVENUE SUMMARY

• First year over year PC TAM<sup>1</sup> growth since 2011 drove an increase in notebook platform volume in 2018. We are operating in an increasingly competitive environment, especially in desktop.

• Increased demand for performance products, and segmentation drove strong product mix and higher ASP.

• Strong demand for commercial, 2-in-1, and gaming market segments, along with higher modem share.

	2018 – 2017		2017 – 2016	
(Dollars in millions)	%	\$ Impact	%	\$ Impact
Desktop platform volume	down(6)%	\$(608 )	down(5)%	\$(686 )
Desktop platform ASP	up 11%	1,181	flat —%	(38 )
Notebook platform volume	up 4%	839	up 5%	885
Notebook platform ASP	up 3%	677	up 2%	326
Adjacent products and other		912		608
Total change in revenue		\$3,001		\$1,095

## OPERATING INCOME SUMMARY

Operating income increased 10% from 2017 to 2018, primarily due to higher gross margin from platform products. CCG achieved better operating efficiency with lower spending while continuing to invest in growth areas.

(In Millions)	
\$14,222	2018 Operating Income
2,080	Higher gross margin from CCG platform revenue
235	Lower operating expenses
(690 )	Higher platform unit cost due to increased mix to performance products
(225 )	Higher period charges, primarily due to reserved non-qualified platform product as we ramp 10nm
(97 )	Other
\$12,919	2017 Operating Income
1,135	Lower platform unit cost, primarily on 14nm cost improvement
635	Higher gross margin from platform revenue
630	Lower operating expenses and share of technology development and MG&A costs
(430 )	Period charges primarily associated with engineering samples and higher initial production costs from 10nm products
303	Other
\$10,646	2016 Operating Income

<sup>1</sup> Source: Intel calculated PC TAM derived from industry analyst reports and internal estimates.

## OVERVIEW

DCG develops workload-optimized platforms for compute, storage, and network functions. Customers include cloud service providers, enterprise and government, and communications service providers. In 2018, DCG continued to grow faster than Intel as a whole, generating over 30% of our total revenue. Growth was fueled by strong demand in key workloads like AI and network function virtualization in the cloud service provider and communications service provider market segments.

## HIGHLIGHTS AND SEGMENT IMPERATIVES

DCG had record revenue and operating income in 2018. Customer transition to Intel® Xeon® Scalable processors and higher demand across cloud and communication service providers contributed to the growth.

Adjacent products collectively grew revenue at double digits. Silicon photonics led the adjacencies with significant revenue growth year over year.

We see significant opportunities in cloud, networking, AI, and data analytics. As we broadened our product offerings and continued to innovate, the data center market TAM<sup>1</sup> expanded to over \$70 billion in 2018 and is expected to grow to over \$90 billion by 2022.

We shipped the second generation Intel® Xeon® Scalable processors and Intel® Optane™ DC persistent memory for the data center.

## 5-YEAR TRENDS

"Our workload-optimized, broad portfolio strategy uniquely positions us to enable the global appetite to move, store and process data."

—Navin Shenoy, DCG General Manager

Revenue \$B— Year over Year Growth Op Income \$B— Year over Year Growth

<sup>1</sup> Source: Intel calculated 2018 and 2022 TAM derived from industry analyst reports.

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**MARKET AND BUSINESS OVERVIEW**

Market trends and strategy

Data is a significant force in society today, and data is generated by intelligent and connected devices and infrastructures, such as phones and automated factories. Data is transmitted through network infrastructure, processed, and analyzed to become real-time information. This real-time information enables actionable insights and is the lifeblood for the future of technology innovation in areas such as AI.

Our thesis is that the massive growth of data worldwide will increase demand to process, analyze, store, and move data. We are one of the few companies that touches every part of the data revolution, and we've invested both organically and acquisitively to capitalize on these demands. We expect the growth momentum in DCG and the other data-centric businesses to continue in the long term.

DCG focuses on three market segments: cloud service providers, enterprise and government, and communication service providers. In 2018, cloud revenue grew as service providers continued to invest in infrastructure to meet the explosive demand for digital services, AI, and data analytics. Enterprise and government revenue was stable, driven by macro environment strength and increased deployment of hybrid cloud solutions and data-intensive workloads. Compared to 2017, where we saw workload migration as the main force of cloud growth, we now see new services as the primary drivers to public cloud demand while enterprise increased on-premises investments, including hybrid and private cloud deployments. In the communication service provider segment, we gained market segment share as customers chose to virtualize and transform their networks and prepare for the 5G transition using Intel® architecture.

Products and competitiveness

We offer a broad portfolio of platforms and technologies designed to provide workload-optimized performance across compute, storage, and network. These offerings span the full spectrum from the data center core to the network edge. In addition, DCG focuses on lowering the total cost of ownership and on other specific workload optimizations for the enterprise, cloud service provider, and communications service provider market segments, with hardware-enhanced performance, security features, and reliability. DCG's platform value can be extended through Intel adjacent products such as FPGAs and SSDs.

In 2018, we began shipping for revenue the second generation Intel Xeon Scalable processors, formerly code-named Cascade Lake, and they will launch in 2019. The new product delivers performance improvement over the prior generation on popular workloads, includes hardware-based mitigations for certain side-channel vulnerabilities, and introduces new capabilities with support for Intel Optane DC persistent memory. The combination of Intel Xeon processors and Intel Optane memory significantly boosted overall system performance and reduced total cost of ownership compared to the prior generation.

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## FINANCIAL PERFORMANCE

DCG REVENUE \$B DCG OPERATING INCOME \$B

Platform Adjacent

## REVENUE SUMMARY

Platform volume growth primarily from cloud and communication service provider market segments, with higher platform ASPs from the adoption of 14nm Intel® Xeon® Scalable processors.

Adjacent growth driven by the continued expansion of silicon photonics and Intel Optane memory technology in 2018.

When comparing 2018 to 2017, revenue from cloud service providers was up 40%, enterprise and government was up 2%, and communication service providers was up 25% (up 28%, down 3%, and up 15%, respectively, when comparing 2017 to 2016). In Q4 2018, we saw all DCG market segments were impacted by weakness in China demand and some cloud customers absorbing existing capacity.

(Dollars in millions)	2018 – 2017		2017 – 2016	
	%	\$	%	\$
	Growth	Impact	Growth	Impact
Platform volume <sup>1</sup>	up 13%	\$ 2,334	up 5%	\$ 801
Platform ASP	up 7%	1,382	up 4%	743
Adjacent Products	up 13%	211	up 21%	284

Total change in revenue	\$ 3,927	\$ 1,828
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## OPERATING INCOME SUMMARY

Operating income increased 37% year over year, reaching an operating margin of 50% in 2018.

(In

Millions)

\$11,476	2018 Operating Income
3,445	Higher gross margin from platform revenue
(350)	Higher platform unit cost
(14)	Other
\$8,395	2017 Operating Income
1,450	Higher gross margin from DCG platform revenue
215	Lower period charges associated with product warranty and IP agreements incurred in 2016
(585)	Higher factory start-up costs, primarily driven by the ramp of our 10nm process technology
(315)	Higher DCG spending and share of technology development and MG&A costs
110	Other
\$7,520	2016 Operating Income

<sup>1</sup> DCG platform products are sold across the cloud service provider, communication service provider, and enterprise and government market segments.

## OVERVIEW

IOTG develops high-performance compute for targeted verticals and embedded markets. Our customers include retailers, manufacturers, health care providers, energy companies, automakers, and governments. We facilitate our customers creating, storing, and processing data generated by connected devices to accelerate business transformations.

## HIGHLIGHTS AND SEGMENT IMPERATIVES

IOTG achieved record revenue and operating income in 2018 on broad business strength and growing demand for edge computing and computer vision-based applications. Since 2014, IOTG has had average revenue growth of 14% and operating income growth of 15% per year. As we broaden our product offerings to meet market demand for Internet of Things solutions, our TAM is expected to reach approximately \$30 billion by 2022<sup>1</sup>.

We see significant opportunity for growth driven by an architectural shift toward edge computing, which extends applications, data, and compute from centralized points to be closer to the source inputs, enabling compute-hungry Internet of Things applications.

In 2018, we launched hardware solutions such as the Intel® Vision Accelerator Design Products and software solutions like the Intel® Distribution of OpenVINO™ toolkit to accelerate market adoption of computer vision and AI applications.

"Industries are undergoing data-driven digital transformations fueled by the Internet of Things. We work with our partners' ecosystems to build end-to-end solutions that provide solid business results today and lay the foundation for a more autonomous tomorrow."

—Tom Lantzsch, IOTG General Manager

## 5-YEAR TRENDS

Revenue \$B— Year over Year Growth Op Income \$B— Year over Year Growth

<sup>1</sup> Source: Intel calculated TAM derived from industry analyst reports.

Table of Contents**MARKET AND BUSINESS OVERVIEW**

## Market trends and strategy

The world is becoming smarter, more connected, and more data driven, and the Internet of Things sits at the center of this global digital transformation. Through a robust network of devices, software, networks, and sensors, the Internet of Things is transforming the way businesses create products, deliver services, and conduct operations—from schools and hospitals, to retailers and smart factories. Internet of Things-based solutions represent one of the fastest growing segments within the semiconductor industry, with 10% CAGR forecast from 2018 to 2022<sup>1</sup>. However, the Internet of Things is a highly fragmented market with a diverse collection of competitors, products, and vertical segments. As such, IOTG specifically focuses on market sectors such as retail, industrial, and smart infrastructure/cities that align well with Intel’s ability to provide high-performance computing solutions.

Retailers are under tremendous pressure to compete in the age of accelerated digital disruption brought on by connected consumers and online shopping. We are helping retailers turn their data into powerful new insights. The results are highly curated experiences, improved inventory and supply chain efficiencies, and precision marketing.

The industrial Internet of Things involves making operations smarter, more connected, and, ultimately, autonomous. We enhance collaboration between humans, machines, and enterprise systems from the supply chain to the factory floor. Example use cases include predictive maintenance, machine vision, robotics, quality control, and defect detection.

Infrastructure providers and cities are seeking the best ways to use Internet of Things technology to enhance quality of services, improve public safety, reduce congestion, and achieve new levels of efficiency. We help cities and service providers turn data into actionable insights to enable smarter, safer and more efficient solutions.

By 2021, we expect approximately 80% of data traffic will be video<sup>2</sup>. Processing high-quality video requires the ability to rapidly analyze vast streams of data near the source and respond in real time, moving only relevant insights to the cloud. To process video data efficiently, our customers need the right solution for the job. We offer a broad range of hardware, software tools, and ecosystem programs to help scale vision technology across Internet of Things verticals and match specific needs with the right performance, cost, and power efficiency at every point in an Internet of Things architecture. Use cases include machine vision, industrial automation, and intelligent traffic management and pedestrian safety.

## Products and competitiveness

IOTG utilizes adjacent products across Intel while making the investments needed to adapt products to the specific requirements for our vertical segments. We offer end-to-end solutions with our wide spectrum of products, including Intel Atom® and Intel® Xeon® processor-based computing, wireless connectivity, FPGAs, Movidius VPUs, and developer tools such as the OpenVINO™ software toolkit. IOTG product development focuses on addressing the key challenges businesses face when implementing Internet of Things solutions, including interoperability, connectivity, safety, security, industrial use conditions, and long life support.

IOTG enables a global ecosystem of industry partners, developers, and innovators to create solutions based on our products that accelerate return on investment and time-to-value for end customers. These Intel® Internet of Things Market Ready Solutions are vetted and tested in the market, scalable, repeatable, commercially available, and fully supported through our ecosystem partners. These solutions can help streamline operations, automate manual tasks, provide insights from data, and more.

<sup>1</sup> Source: Intel calculated Internet of Things TAM CAGR derived from industry analyst reports.

<sup>2</sup>Source: Cisco Visual Networking Index: Forecast and Trends, 2017-2022, updated November 26, 2018.



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FINANCIAL PERFORMANCE

IOTG REVENUE \$B IOTG OPERATING INCOME \$B

Platform Adjacent

REVENUE SUMMARY

2018 – 2017

Net revenue increased \$286 million, or 9%, driven by \$632 million higher IOTG platform unit sales, offset by \$212 million mix of platform products sold and \$134 million lower adjacent revenue due to the divestiture of Wind River in June 2018. After adjusting for Wind River, IOTG revenue grew \$447 million, or 16%, year over year. Revenue grew due to strength across the retail, industrial, video, and other market segments.

2017 – 2016

Net revenue increased \$531 million, driven by \$329 million higher IOTG platform unit sales and \$176 million growth in IOTG adjacent products, including \$74 million from milestone-based revenue. Revenue grew across the retail, industrial, and smart video market segments.

OPERATING INCOME SUMMARY

2018 – 2017

Operating income increased \$330 million due to higher revenue and lower spending as we reprioritized investments within the automotive business and Wind River.

2017 – 2016

Operating income increased \$65 million due to higher revenue offset by higher investment in growth areas such as automotive, and by increased share of technology development and MG&A costs.

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## OVERVIEW

NSG's core offerings include Intel® Optane™ and Intel® 3D NAND technologies, driving innovation in SSDs and next-generation memory and storage products. Our customers include enterprise and cloud-based data centers, users of business and consumer desktops and laptops, and a variety of Internet of Things application providers. We are ramping 64-layer (64L) triple-level cell (TLC) and quad-level cell (QLC) NAND technologies, and Intel Optane technology in innovative new form factors and densities to address the challenges our customers face in a rapidly evolving technological landscape.

## HIGHLIGHTS AND SEGMENT IMPERATIVES

Achieved more than 20% revenue growth in 2018 and drove improvements in operating margins by approximately \$250 million to approximately break even for 2018.

Introduced the industry's first PCIe\*-based QLC SSD and grew our Intel® Optane™ and NAND product lines with a focus on new densities and innovative form factors in 2018, resulting in 64L QLC products making up more than half of our sales volume.

Announced the release of Intel® Optane™ DC Persistent memory, available on next-generation Intel® Xeon® processors for datacenters—which is redefining the memory/storage hierarchy and bringing persistent, large-scale, memory closer to the processor.

During 2018, Intel and Micron announced they will independently develop future generations of 3D NAND and 3D XPoint technology and in January 2019, Micron called our interest in IMFT. The IMFT agreement provides for supply for up to one year after the close of the transaction.

## 5-YEAR TRENDS

Revenue \$B— Year over Year Growth Op Income \$B

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“Our Optane™ technology products are critical to helping our customers analyze valuable data in ways that allow real time business impact and our Intel QLC 3D NAND products enable them to store more data for cost effective analysis.”

—Rob Crooke, NSG General Manager

Table of Contents**MARKET AND BUSINESS OVERVIEW**

## Market trends and strategy

As technology penetration continues to grow worldwide, the amount of data that is produced has grown exponentially. Audio, video, and sensory data is produced and collected by a vast array of devices that require a significant increase in storage and memory technology. This has resulted in the storage and memory TAM growing to approximately \$180 billion in 2018, a 25% increase from 2017<sup>1</sup>. Our focus continues to be within the high-performance compute, financial services, cloud service provider, and Internet usage markets. NSG delivered over 20% annual revenue growth and improved profitability to break even for 2018.

With data growth expanding, our customers face the challenge of ensuring that critical, or "hot," data is close to the CPU for rapid access. Our innovations in technology address the need for various storage tiers, based on different usages, while keeping a focus on performance and cost. As customers look to improve the performance of their storage and memory devices, NSG is seeing and leading a transition to the PCIe\* interface with Non-Volatile Memory Express\* for SSDs, as well as efficiency and game-changing form factors like the "ruler" based on EDSFF.

## Products and competitiveness

The acceleration in data growth across our customer base requires significant innovation in storage and memory technology. Our storage and memory roadmap has led the way in reimagining usages and architecting innovative solutions that have disrupted the industry with 64L 3D NAND TLC and QLC solutions, as well as Intel® Optane™ technology. We have launched over 15 new products in 2018 to keep up with the evolving business needs of our customers. These new products have driven our 64L products to be more than half of 2018 NSG volume and a meaningful ramp in the Optane business.

A key highlight in 2018 was the announcement of Intel® Optane™ DC Persistent Memory, available on next-generation Intel® Xeon® processor platforms for data center usages. This technology redefines the memory storage hierarchy and offers the performance of memory with the large capacities and persistence characteristics of storage. We are also leading the way in the NAND industry with the announcement of the first PCIe\* QLC 3D NAND SSD for the Data Center and Client markets. This new technology will enable innovative new form factors and higher capacity drives. With the addition of these new NAND and Optane product lines, we have strengthened our commitment to driving customer value through platform-connected features and solutions.

**INTEL® OPTANE™ TECHNOLOGY INTEL® 3D NAND TECHNOLOGY**

<sup>1</sup> Source: Gartner, Inc., Forecast: DRAM Market Statistics, Worldwide, 2014-2021, 3Q18 Update, Gartner, Inc., Forecast: Hard-Disk Drives, Worldwide, 2014-2022, 2Q18 Update, Gartner, Inc., Forecast: NAND Flash Supply and Demand, Worldwide, 1Q16-4Q18, 2Q18 Update.

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FINANCIAL PERFORMANCE

NSG REVENUE \$B NSG OPERATING INCOME \$B

REVENUE SUMMARY

2018 – 2017

Net revenue increased \$787 million, driven by \$2.6 billion increase in unit sales due to strong demand in data center and client SSD and the ramp of Intel Optane technology products, partially offset by \$1.8 billion lower ASP due to NAND market pricing weakness and mix of products sold.

2017 – 2016

Net revenue increased \$944 million, driven by \$1.6 billion from higher unit sales due to strong demand in data center, partially offset by \$655 million lower ASP due to market conditions and the ramp of our new TLC 3D NAND product line, which has a lower cost and ASP compared to our primary multi-level cell 3D NAND.

OPERATING INCOME SUMMARY

2018 – 2017

Operating income improved \$255 million as our sales mix shifted to our latest 64L NAND and we continued to see the cost ramp at Fab 68. The improved unit costs and higher unit sales more than offset the decline in ASP. In addition, we had a total of \$160 million earned government grants benefiting 2018.

2017 – 2016

Operating income increased \$284 million, driven primarily by \$725 million unit cost reductions due to the cost improvements associated with Fab 68 and lower costs from the ramp of the Intel® 3D NAND product line compared to prior generation NAND products. The lower unit cost impact was offset by \$380 million lower gross margin from NSG revenue.

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OVERVIEW

PSG offers programmable semiconductors, primarily FPGAs and related products for a broad range of market segments, including communications, data center, industrial, and military. PSG collaborates with the other Intel businesses to deliver FPGA acceleration in tandem with Intel microprocessors. This "better together" integration broadens the use of FPGAs and combines the benefits of both technologies to allow more flexibility for systems to operate with increased efficiency and higher performance.

HIGHLIGHTS AND SEGMENT IMPERATIVES

PSG achieved a record design win year in 2018, driven by Intel® Arria® 10 and Intel® Stratix® 10 device families.

In 2018 we announced the Intel® Programmable Acceleration Card (Intel® PAC) with Intel® Stratix®10 SX FPGA, which operates seamlessly with Intel Xeon processors and an acceleration software stack, extending our portfolio of FPGA acceleration platforms.

In 2018, we acquired eASIC, a leading provider of structured application-specific integrated circuits (ASICs). These products expand PSG's chip portfolio to better meet customers' needs to further optimize cost and power. Customers have more choices and can achieve faster time-to-market and lower development costs—including a low-cost conversion process from FPGA to structured ASICs. In 2019, PSG will continue to focus on becoming the multi-function acceleration solution of choice for continuously evolving technologies from the edge to the cloud.

"The increased adoption of FPGA and eASIC solutions across data center, networking, and IoT is driving value to our data-centric businesses."

—Dan McNamara, PSG General Manager

3-YEAR TRENDS

Revenue \$B— Year over Year Growth Op Income \$B

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**MARKET AND BUSINESS OVERVIEW**

Market trends and strategy

PSG delivers solutions in the programmable logic device (PLD) market, primarily FPGAs, to accelerate applications that help secure, power, and connect billions of devices and the infrastructure of the smart, connected, data-centric world. PSG enables a broad range of solutions targeting the data center, wireless, networking, military, medical, and industrial markets. The configurability and efficiency of FPGAs provide advantages to enable transformative applications such as 5G wireless, network function virtualization offload, and edge acceleration for video analytics and Industry 4.0. PSG has expanded its product portfolio by providing Intel® PAC, complete with an acceleration software stack, enabling new customers to plug cards directly into an Intel® Xeon® processor-based server for application accelerations in markets such as finance, genomics, video transcoding, and database acceleration.

Products and competitiveness

With the rise of pervasive connectivity and autonomous transactions, vast networks of devices and systems are linked from the edge through infrastructure to the cloud. The Intel® FPGA portfolio enables this transformation with discrete FPGAs and software-defined, hardware-based, multi-function acceleration cards that allow faster development times, high performance, and power efficiency with lower overall total cost of ownership. In the cloud, where workloads shift dynamically and algorithms change, Intel FPGAs are the ideal solution for adapting to new demands through reconfigurability.

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FINANCIAL PERFORMANCE

PSG REVENUE \$B PSG OPERATING INCOME \$B

REVENUE SUMMARY

2018 – 2017

Revenue increased \$221 million, driven by growth in the data center market segment and our advanced products (28nm, 20nm, and 14nm process technologies), which grew approximately 60% from 2017.

2017 – 2016

Revenue increased \$233 million, driven by growth in industrial, military, and automotive market segments, as well as in our advanced products and last-time buys of our legacy products. Also, a one-time \$99 million deferred revenue write-down due to the acquisition of Altera negatively impacted 2016 PSG revenue.

OPERATING INCOME SUMMARY

2018 – 2017

Operating income was flat year over year, at \$466 million. Revenue increased from the growth in the data center and advanced products, but was offset by higher costs from an unfavorable product mix and increased investments.

2017 – 2016

Operating income increased \$562 million. Higher revenue and operational synergies contributed \$111 million of the year over year increase. The remainder was due to one-time acquisition-related charges, including a \$99 million deferred revenue write-down with a \$64 million operating income impact and an inventory valuation adjustment of approximately \$387 million.

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Table of Contents**RESTRUCTURING AND OTHER CHARGES**

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
2016 Restructuring Program	\$ (72 )	\$ 135	\$ 1,681
ISecG separation costs and other charges	—	249	63
Total restructuring and other charges	\$ (72 )	\$ 384	\$ 1,744

We commenced the 2016 Restructuring Program in the second quarter of 2016 and the program was completed in 2017. Other charges consist primarily of expenses associated with the divestiture of ISecG that was completed in Q2 2017. For further information, see "Note 8: Restructuring and Other Charges" within the Consolidated Financial Statements.

**GAINS (LOSSES) ON EQUITY INVESTMENTS AND INTEREST AND OTHER, NET**

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Gains (losses) on equity investments, net	\$(125 )	\$2,651	\$ 506
Interest and other, net	\$ 126	\$(349 )	\$(703 )

**GAINS (LOSSES) ON EQUITY INVESTMENTS, NET**

We recognized ongoing mark-to-market net losses on our marketable equity securities of \$129 million in 2018, primarily related to changes in value of our interests in ASML Holding N.V. (ASML) and Cloudera, Inc. In addition to the mark-to-market losses, we also recognized impairment charges, including a \$290 million impairment charge to our equity method investment in IMFT. These losses were partially offset by \$202 million of upward observable price adjustments.

We recognized \$3.5 billion of net realized gains on sales in 2017, primarily related to sales of a portion of our interest in ASML. The higher net realized gains were partially offset by \$833 million of impairment charges and our share of equity method investee losses in 2017. We recognized higher reported gains in 2017 compared to 2016, primarily related to sales of a portion of our interest in ASML.

**INTEREST AND OTHER, NET**

We recognized a net gain in interest and other in 2018 compared to a net loss in 2017, primarily due to lower losses on debt conversions, higher assets under construction resulting in more capitalized interest, and larger divestiture gains in 2018 compared to 2017.

We recognized a lower net loss in interest and other in 2017 compared to 2016, primarily due to higher interest income in 2017.

**PROVISION FOR TAXES**

Years Ended (Dollars in Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Income before taxes	\$23,317	\$20,352	\$12,936
Provision for taxes	\$2,264	\$10,751	\$2,620
Effective tax rate	9.7 %	52.8 %	20.3 %

The majority of the decrease in our effective tax rate in 2018 compared to 2017 resulted from initial tax expense from the U.S. Tax Cuts and Jobs Act (Tax Reform) and the tax impacts from the ISecG divestiture that we had in 2017, but not in 2018. The reduction of the U.S. statutory rate, combined with the net impact of the enactment or repeal of specific tax law provisions through the Tax Reform, drove the remaining decrease in our effective tax rate in 2018. For further information on Tax Reform and its impacts, see "Note 9: Income Taxes" within the Consolidated Financial Statements.

Substantially all of the increase in our effective tax rate in 2017 compared to 2016 was driven by the one-time provisional impacts from the Tax Reform enacted on December 22, 2017, the 2017 ISecG divestiture, and a higher proportion of our income in higher tax rate jurisdictions.





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## LIQUIDITY AND CAPITAL RESOURCES

We consider the following when assessing our liquidity and capital resources:

(Dollars in Millions)	Dec 29, 2018	Dec 30, 2017
Cash and cash equivalents, short-term investments, and trading assets	\$11,650	\$14,002
Other long-term investments	\$3,388	\$3,712
Loans receivable and other	\$1,550	\$1,097
Reverse repurchase agreements with original maturities greater than three months	\$250	\$250
Total debt	\$26,359	\$26,813
Temporary equity	\$419	\$866
Debt as a percentage of permanent stockholders' equity	35.4	% 38.8 %

Cash generated by operations is our primary source of liquidity. We maintain a diverse investment portfolio that we continually analyze based on issuer, industry, and country. When assessing our sources of liquidity, we include investments as shown in the preceding table. Substantially all of our investments in debt instruments and financing receivables are in investment-grade securities.

Other potential sources of liquidity include our commercial paper program and our automatic shelf registration statement on file with the SEC, pursuant to which we may offer an unspecified amount of debt, equity, and other securities. Under our commercial paper program, we have an ongoing authorization from our Board of Directors to borrow up to \$10.0 billion. As of December 29, 2018, \$480 million of commercial paper remained outstanding. During 2018, we remarketed a total of \$423 million aggregate principal amount of bonds issued by the Industrial Development Authority of the City of Chandler, Arizona and the State of Oregon Business Development Commission. We also repaid \$600 million of our 2.50% senior notes that matured in November 2018 and paid \$2.4 billion in cash to satisfy conversion requests for a portion of our \$2.0 billion 3.25% junior subordinated convertible debentures due 2039.

The enactment of Tax Reform in December 2017 imposed a tax on all previously untaxed earnings of non-U.S. subsidiaries of U.S. corporations. Future distributions of non-U.S. assets to the U.S. are no longer subject to U.S. taxation in most cases. As a result, in Q4 2017 we recognized a one-time provisional transition tax expense of \$6.1 billion, which was adjusted to \$5.9 billion in 2018. We expect to pay the tax in annual installments from 2019 through 2026. We believe that our current U.S. sources of cash and liquidity are sufficient to meet our tax liability. During Q3 2017, we acquired 97.3% of Mobileye's outstanding ordinary shares for \$14.5 billion net cash. We funded the acquisition of shares with cash held by our non-U.S. subsidiaries. During Q2 2018, we acquired the remaining outstanding ordinary shares for \$380 million.

We believe we have sufficient financial resources to meet our business requirements in the next 12 months, including capital expenditures for worldwide manufacturing and assembly and test; working capital requirements; and potential acquisitions, strategic investments, dividends, and common stock repurchases.

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## SOURCES AND USES OF CASH

(In Millions)

In summary, our cash flows for each period were as follows:

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Net cash provided by operating activities	\$29,432	\$22,110	\$21,808
Net cash used for investing activities	(11,239 )	(15,762 )	(25,817 )
Net cash provided by (used for) financing activities	(18,607 )	(8,475 )	(5,739 )
Net increase (decrease) in cash and cash equivalents	\$(414 )	\$(2,127 )	\$(9,748 )

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Table of Contents**OPERATING ACTIVITIES**

Cash provided by operating activities is net income adjusted for certain non-cash items and changes in assets and liabilities.

For 2018 compared to 2017, the \$7.3 billion increase in cash provided by operating activities was primarily due to higher net income, offset by changes in working capital. Changes in working capital were driven by taxes and accounts receivables, offset by relatively flat inventory levels. Income taxes paid, net of refunds, in 2018 compared to 2017 were flat as the benefit of a lower U.S. corporate tax rate was offset by the payment related to the 2017 U.S. Tax Reform transition tax. We received \$1.4 billion of customer deposits and prepaid supply agreements in 2018, net of customer utilization, compared to \$1.1 billion in 2017.

For 2017 compared to 2016, the \$302 million increase in cash provided by operating activities was due to changes to working capital partially offset by adjustments for non-cash items and lower net income. Tax Reform did not have an impact on our 2017 cash provided by operating activities. The increase in cash provided by operating activities was driven by increased income before taxes and \$1.1 billion receipts of customer deposits and prepaid supply agreements. These increases were partially offset by increased inventory and accounts receivable. Income taxes paid, net of refunds, in 2017 compared to 2016 were \$2.9 billion higher due to higher income before taxes, taxable gains on sales of ASML, and taxes on the ISecG divestiture.

**INVESTING ACTIVITIES**

Investing cash flows consist primarily of capital expenditures; investment purchases, sales, maturities, and disposals; and proceeds from divestitures and cash used for acquisitions. Our capital expenditures were \$15.2 billion in 2018 (\$11.8 billion in 2017 and \$9.6 billion in 2016).

The decrease in cash used for investing activities in 2018 compared to 2017 was primarily due to lower cash paid on acquisitions and increased cash from net trading asset activity. This was partially offset by increased capital expenditures, net available-for-sale debt investments activity, decreased proceeds from divestitures, and decreased sales of equity investments (substantially all from ASML sales).

The decrease in cash used for investing activities in 2017 compared to 2016 was primarily due to higher net activity of available-for-sale debt investments in 2017, proceeds from our divestiture of ISecG in 2017, and higher maturities and sales of trading assets in 2017. This activity was partially offset by higher capital expenditures in 2017.

**FINANCING ACTIVITIES**

Financing cash flows consist primarily of repurchases of common stock, payment of dividends to stockholders, issuance and repayment of short-term and long-term debt, and proceeds from the sale of shares of common stock through employee equity incentive plans.

The increase in cash used for financing activities in 2018 compared to 2017 was primarily due to decreased long-term debt issuance and increased repurchases of common stock. During 2018, we repurchased \$10.7 billion of common stock under our authorized common stock repurchase program, compared to \$3.6 billion in 2017. In 2018, the Board approved a \$15.0 billion increase in our authorized stock repurchase program. As of December 29, 2018, \$17.3 billion remained available for repurchasing common stock under the repurchase authorization limit. We base our level of common stock repurchases on internal cash management decisions, and this level may fluctuate. Our total dividend payments were \$5.5 billion in 2018 compared to \$5.1 billion in 2017. We have paid a cash dividend in each of the past 105 quarters. In Q1 2019, the Board declared a quarterly cash dividend of \$0.315 per share of common stock, payable on March 1, 2019 to stockholders of record on February 7, 2019.

The increase in cash used for financing activities in 2017 compared to 2016 was primarily due to net long-term debt activity, which was a use of cash in 2017 compared to a source of cash in 2016. Additionally, cash used for common stock repurchases was higher in 2017 compared to 2016.

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## CONTRACTUAL OBLIGATIONS

Significant contractual obligations as of December 29, 2018 were as follows:

(In Millions)	Payments Due by Period				
	Total	Less Than 1 Year	1–3 Years	3–5 Years	More Than 5 Years
Operating lease obligations	\$835	\$229	\$314	\$171	\$121
Capital purchase obligations <sup>1</sup>	9,029	7,888	795	345	1
Other purchase obligations and commitments <sup>2</sup>	3,249	1,272	1,781	178	18
Tax obligations <sup>3</sup>	4,732	143	426	1,234	2,929
Long-term debt obligations <sup>4</sup>	40,187	1,518	7,583	6,173	24,913
Other long-term liabilities <sup>5</sup>	1,626	722	708	95	101
Total <sup>6</sup>	\$59,658	\$11,772	\$11,607	\$8,196	\$28,083

Capital purchase obligations represent commitments for the construction or purchase of property, plant and equipment. They were not recorded as liabilities on our consolidated balance sheets as of December 29, 2018, as we had not yet received the related goods nor taken title to the property.

Other purchase obligations and commitments include payments due under various types of licenses and agreements to purchase goods or services, as well as payments due under non-contingent funding obligations.

Tax obligations represent the future cash payments related to Tax Reform enacted in 2017 for the one-time transition tax on our previously untaxed foreign earnings. For further information, see "Note 9: Income Taxes" within the Consolidated Financial Statements.

Amounts represent principal payments for all debt obligations and interest payments for fixed-rate debt obligations.

Interest payments on floating-rate debt obligations, as well as the impact of fixed-rate to floating-rate debt swaps, are excluded. Debt obligations are classified based on their stated maturity date, regardless of their classification on the consolidated balance sheets. Any future settlement of convertible debt would impact our cash payments.

Amounts represent future cash payments to satisfy other long-term liabilities recorded on our consolidated balance sheets, including the short-term portion of these long-term liabilities. Derivative instruments are excluded from the preceding table, as they do not represent the amounts that may ultimately be paid.

Total excludes contractual obligations already recorded on our consolidated balance sheets as current liabilities, except for the short-term portions of long-term debt obligations and other long-term liabilities.

The expected timing of payments of the obligations in the preceding table is estimated based on current information. Timing of payments and actual amounts paid may be different, depending on the time of receipt of goods or services, or changes to agreed-upon amounts for some obligations.

Contractual obligations for purchases of goods or services included in "Other purchase obligations and commitments" in the preceding table include agreements that are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table were limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee. For the purchase of raw materials, we have entered into certain agreements that specify minimum prices and quantities based on a percentage of the total available market or based on a percentage of our future purchasing requirements. Due to the uncertainty of the future market and our future purchasing requirements, as well as the non-binding nature of these agreements, obligations under these agreements have been excluded from the preceding table. Our purchase orders for other products are based on our current manufacturing needs and are fulfilled by our vendors within short time horizons. In addition, some of our purchase orders represent authorizations to purchase rather than binding agreements.

Contractual obligations that are contingent upon the achievement of certain milestones have been excluded from the preceding table. Most of our milestone-based contracts are tooling related for the purchase of capital equipment. These arrangements are not considered contractual obligations until the milestone is met by the counterparty. As of

December 29, 2018, assuming that all future milestones are met, the additional required payments would be approximately \$688 million.

For the majority of restricted stock units (RSUs) granted, the number of shares of common stock issued on the date the RSUs vest is net of the minimum statutory withholding requirements that we pay in cash to the appropriate taxing authorities on behalf of our employees. The obligation to pay the relevant taxing authority is excluded from the preceding table, as the amount is contingent upon continued employment. In addition, the amount of the obligation is unknown, as it is based in part on the market price of our common stock when the awards vest.

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During 2014, we entered into a series of agreements with Tsinghua Unigroup Ltd. (Tsinghua Unigroup), an operating subsidiary of Tsinghua Holdings Co. Ltd., to, among other things, jointly develop Intel architecture and communications-based solutions for phones. Subject to regulatory approvals and other closing conditions, we have agreed to invest up to \$9.0 billion Chinese yuan (approximately \$1.5 billion as of the date of the agreement) for a minority stake of Beijing Unisoc Technology Ltd. (Unisoc), formally Beijing UniSpreadtrum Technology Ltd. During 2015, we invested \$966 million to complete the first phase of the equity investment, and the second phase of the investment will require additional funding of approximately \$500 million; however, as our obligation is contingent upon regulatory approvals and other closing conditions, it has been excluded from the preceding table.

**QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are affected by changes in currency exchange and interest rates, as well as equity and commodity prices. Our risk management programs reduce, but may not entirely eliminate, the impacts of these risks. All of the following potential changes are based on sensitivity analyses performed on our financial positions as of December 29, 2018 and December 30, 2017. Actual results may differ materially.

**CURRENCY EXCHANGE RATES**

We are exposed to currency exchange risks of non-U.S.-dollar-denominated investments in debt instruments and loans receivable, and may economically hedge this risk with foreign currency contracts, such as currency forward contracts or currency interest rate swaps. Gains or losses on these non-U.S.-currency investments are generally offset by corresponding losses or gains on the related hedging instruments. We are exposed to currency exchange risks from our non-U.S.-dollar-denominated debt indebtedness and may use foreign currency contracts designated as cash flow hedges to manage this risk.

Substantially all of our revenue is transacted in U.S. dollars. However, a significant portion of our operating expenditures and capital purchases are incurred in other currencies, primarily the euro, the Japanese yen, the Israeli shekel, and the Chinese yuan. We have established currency risk management programs to protect against currency exchange rate risks associated with non-U.S. dollar forecasted future cash flows and existing non-U.S. dollar monetary assets and liabilities. We may also hedge currency risk arising from funding of foreign currency-denominated future investments. We may utilize foreign currency contracts, such as currency forwards or option contracts in these hedging programs. We considered the historical trends in currency exchange rates and determined that it was reasonably possible that a weighted average adverse change of 20% in currency exchange rates could be experienced in the near term. Such an adverse change, after taking into account balance sheet hedges only and offsetting recorded monetary asset and liability positions outstanding as of December 29, 2018 and December 30, 2017, would result in an adverse impact on income before taxes of less than \$46 million and less than \$95 million, respectively.

**INTEREST RATES**

We are exposed to interest rate risk related to our fixed-rate investment portfolio and outstanding debt. The primary objective of our investment policy is to preserve principal and the financial flexibility to fund our business while maximizing yields, which generally track the U.S. dollar three-month LIBOR. We generally enter into interest rate contracts to convert the returns on our fixed-rate debt investment with remaining maturities longer than six months into U.S. dollar three-month LIBOR-based returns. We also enter into swaps to convert fixed-rate coupon payments into floating-rate coupon payments for our existing indebtedness. Gains or losses on these instruments are generally offset by corresponding losses or gains on the related hedging instruments.

A hypothetical increase in benchmark interest rates of up to 1.0%, after taking into account investment hedges, would have resulted in a decrease in the fair value of our investment portfolio of approximately \$110 million as of December 29, 2018 (a hypothetical decrease of 1.0% would have resulted in an increase of approximately \$100 million as of December 30, 2017).

Taking into account floating-rate debt, and fixed-rate debt that is swapped to floating-rate debt, a hypothetical increase in interest rates of up to 1.0% would result in an increase in annual interest expense on our indebtedness of approximately \$215 million from debt outstanding as of December 29, 2018 (an increase of approximately \$140 million from debt outstanding as of December 30, 2017). We have changed our presentation from the prior year to

show the impact of interest rate changes on interest expense rather than on fair value of debt in order to present information that could hypothetically impact our net income and cash flows.

#### EQUITY PRICES

Our investments include marketable equity securities and equity derivative instruments. We typically do not attempt to reduce or eliminate our equity market exposure through hedging activities at the inception of our investments. In the event we do decide to enter into hedge arrangements, before doing so we evaluate legal, market, and economic factors, as well as the expected timing of disposal, to determine whether hedging is appropriate. Our equity market risk management program may include equity derivatives with or without hedge accounting designation that utilize warrants, equity options, or other equity derivatives.

We also utilize total return swaps to offset changes in liabilities related to the equity market risks of certain deferred compensation arrangements. Gains or losses from changes in fair value of these total return swaps are generally offset by the losses or gains on the related liabilities.

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As of December 29, 2018, the fair value of our marketable equity investments and our equity derivative instruments, including hedging positions, was \$1.4 billion (\$4.2 billion as of December 30, 2017). A substantial majority of our marketable equity investments portfolio as of December 29, 2018 was concentrated in our investment in ASML of \$1.1 billion (\$3.6 billion as of December 30, 2017). To determine reasonably possible decreases in the market value of our marketable equity investments, we have analyzed the historical market price sensitivity of our marketable equity investment portfolio. Assuming a decline of 40% in market prices, and after reflecting the impact of hedges and offsetting positions, the aggregate value of our marketable equity investments could decrease by approximately \$0.6 billion, based on the value as of December 29, 2018 (a decrease in value of approximately \$1.1 billion, based on the value as of December 30, 2017 using an assumed decline of 25%). Beginning in 2018, as explained in "Note 3: Recent Accounting Standards" within the Consolidated Financial Statements, changes in the fair value of our marketable equity securities will be measured and recorded at fair value with changes in fair value recorded through the income statement.

Many of the same factors that could result in an adverse movement of equity market prices affect our non-marketable equity investments, although we cannot always quantify the impacts directly. Financial markets are volatile, which could negatively affect the prospects of the companies we invest in, their ability to raise additional capital, and the likelihood of our ability to realize value in our investments through liquidity events such as initial public offerings, mergers, and private sales. These types of investments involve a great deal of risk, and there can be no assurance that any specific company will grow or become successful; consequently, we could lose all or part of our investment. Our non-marketable equity securities had a carrying amount of \$3.0 billion as of December 29, 2018 (\$2.6 billion as of December 30, 2017) and included our investment in Unisoc of \$658 million (\$658 million for Unisoc as of December 30, 2017). The carrying amount of our equity method investments was \$1.6 billion as of December 29, 2018 (\$1.8 billion as of December 30, 2017). Substantially all of our equity method investments balance as of December 29, 2018 was concentrated in our IMFT investment of \$1.6 billion (\$1.5 billion for IMFT as of December 30, 2017).

**COMMODITY PRICE RISK**

Although we operate facilities that consume commodities, we are not directly affected by commodity price risk to a material degree. We have established forecasted transaction risk management programs to protect against fluctuations in commodity prices. We may use commodity derivatives contracts, such as commodity swaps, in these hedging programs. In addition, we have sourcing plans in place that mitigate the risk of a potential supplier concentration for our key commodities.



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SELECTED FINANCIAL DATA

Years Ended (Dollars in Millions, Except Per Share Amounts)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016	Dec 26, 2015	Dec 27, 2014
Net revenue	\$70,848	\$62,761	\$59,387	\$55,355	\$55,870
Gross margin <sup>1</sup>	\$43,737	\$39,098	\$36,233	\$34,679	\$35,609
Gross margin percentage <sup>1</sup>	61.7	% 62.3	% 61.0	% 62.6	% 63.7
Research and development <sup>1</sup>	\$13,543	\$13,035	\$12,685	\$12,128	\$11,537
Marketing, general and administrative <sup>1</sup>	\$6,750	\$7,452	\$8,377	\$7,930	\$8,136
R&D and MG&A as a percentage of revenue <sup>1</sup>	28.6	% 32.6	% 35.5	% 36.2	% 35.2
Operating income <sup>1</sup>	\$23,316	\$18,050	\$13,133	\$14,002	\$15,347
Net income <sup>2</sup>	\$21,053	\$9,601	\$10,316	\$11,420	\$11,704
Effective tax rate <sup>2</sup>	9.7	% 52.8	% 20.3	% 19.6	% 25.9
Earnings per share <sup>2</sup>					
Basic	\$4.57	\$2.04	\$2.18	\$2.41	\$2.39
Diluted	\$4.48	\$1.99	\$2.12	\$2.33	\$2.31
Weighted average diluted shares of common stock outstanding	4,701	4,835	4,875	4,894	5,056
Dividends per share of common stock, declared and paid	\$1.20	\$1.0775	\$1.04	\$0.96	\$0.90
Net cash provided by operating activities	\$29,432	\$22,110	\$21,808	\$19,018	\$20,418
Additions to property, plant and equipment	\$15,181	\$11,778	\$9,625	\$7,326	\$10,105
Repurchase of common stock	\$10,730	\$3,615	\$2,587	\$3,001	\$10,792
Payment of dividends to stockholders	\$5,541	\$5,072	\$4,925	\$4,556	\$4,409
(Dollars in Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016	Dec 26, 2015	Dec 27, 2014
Property, plant and equipment, net	\$48,976	\$41,109	\$36,171	\$31,858	\$33,238
Total assets	\$127,963	\$123,249	\$113,327	\$101,459	\$90,012
Debt	\$26,359	\$26,813	\$25,283	\$22,670	\$13,655
Stockholders' equity	\$74,563	\$69,019	\$66,226	\$61,085	\$55,865
Employees (in thousands)	107.4	102.7	106.0	107.3	106.7

<sup>1</sup> In Q1 2018, we adopted "Retirement Benefits - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" on a retrospective basis. As a result of the adoption of this standard, cost of sales, operating expenses, and interest and other, net for periods 2017 and 2016 in the preceding table have been restated.

<sup>2</sup> In Q4 2017, we recognized a \$5.4 billion higher income tax expense as a result of one-time impacts from Tax Reform. In 2018, our effective tax rate benefited from the reduction of the U.S. statutory federal tax rate.

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### SALES AND MARKETING

#### CUSTOMERS

We sell our products primarily to original equipment manufacturers (OEMs) and original design manufacturers (ODMs). ODMs provide design and manufacturing services to branded and unbranded private-label resellers. In addition, our customers include other manufacturers and service providers, such as industrial and communication equipment manufacturers and cloud service providers, who buy our products through distributor, reseller, retail, and OEM channels throughout the world. For more information about our customers, including customers who accounted for greater than 10% of our net consolidated revenue, see "Note 4: Operating Segments" within the Consolidated Financial Statements.

Our worldwide reseller sales channel consists of thousands of indirect customers—systems builders that purchase Intel processors and other products from our distributors. We have incentive programs that allow distributors to sell our microprocessors and other products in small quantities to customers of systems builders. Our microprocessors and other products are also available in direct retail outlets.

#### SALES ARRANGEMENTS

Our products are sold through sales offices throughout the world. Sales of our products are frequently made via purchase order acknowledgments that contain standard terms and conditions covering matters such as pricing, payment terms, and warranties, as well as indemnities for issues specific to our products, such as patent and copyright indemnities. From time to time, we may enter into additional agreements with customers covering, for example, changes from our standard terms and conditions, new product development and marketing, and private-label branding. Our sales are routinely made using electronic and web-based processes that allow the customer to review inventory availability and track the progress of specific goods ordered. Pricing on particular products may vary based on volumes ordered and other factors. We also offer discounts, rebates, and other incentives to customers to increase acceptance of our products and technology.

In accordance with contract terms, revenue for product sales is recognized at the time of product shipment from our facilities or delivery to the customer location, as determined by the agreed-upon shipping terms. Our standard terms and conditions of sale typically provide that payment is due at a later date, 30 days after shipment or delivery. We assess credit risk through quantitative and qualitative analysis. From this analysis, we establish shipping and credit limits, and determine whether we will seek to use one or more credit support protection devices, such as obtaining a parent guarantee, standby letter of credit, or credit insurance. Credit losses may still be incurred due to bankruptcy, fraud, or other failure of the customer to pay.

Our sales to distributors are typically made under agreements allowing for price protection on unsold merchandise and a right of return on stipulated quantities of unsold merchandise. Under the price protection program, we give distributors credits for the difference between the original price paid and the current price that we offer. Our products typically have no contractual limit on the amount of price protection, nor is there a limit on the time horizon under which price protection is granted. The right of return granted generally consists of a stock rotation program in which distributors are able to exchange certain products based on the number of qualified purchases made by the distributor.

#### DISTRIBUTION

Distributors typically handle a wide variety of products, including those that compete with our products, and fill orders for many customers. Customers may place orders directly with us or through distributors. We have several distribution warehouses that are located in proximity to key customers.

#### SEASONAL TRENDS

Historically, our net revenue has typically been higher in the second half of the year than in the first half of the year, accelerating in the third quarter and peaking in the fourth quarter.

#### MARKETING

Our global marketing objectives are to build a strong, well-known, differentiated, and meaningful Intel corporate brand that drives preference with businesses and consumers, and to offer a limited number of meaningful and valuable brands in our portfolio to aid businesses and consumers in making informed choices about technology purchases. The Intel Core processor family and the Intel® Quark™, Intel Atom™, Intel® Celeron®, Intel® Pentium®, Intel® Xeon®,

Intel® Xeon Phi™, and Intel® Itanium® trademarks make up our processor brands.

We promote brand awareness and preference, and generate demand through our own direct marketing, as well as through co-marketing programs. Our direct marketing activities primarily include advertising through digital and social media and television, as well as consumer and trade events, industry and consumer communications, and press relations. We market to consumer and business audiences, and focus on building awareness and generating demand for our performance leadership products. Our key messaging focuses on increased performance, improved energy efficiency, and other capabilities such as connectivity and communications.

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Certain customers participate in cooperative advertising and marketing programs such as the Intel Inside program. These cooperative advertising and marketing programs broaden the reach of our brands beyond the scope of our own direct marketing. Certain customers are licensed to place Intel® logos on computing devices containing our microprocessors and processor technologies, and to use our brands in their marketing activities. The program partially reimburses customers for marketing activities for products featuring Intel® brands, subject to customers meeting defined criteria. These marketing activities primarily include advertising through digital and social media and television, as well as press relations. We have also entered into joint marketing arrangements with certain customers.

**COMPETITION**

The computing industry is continuously evolving. New and existing technology providers regularly introduce new and enhanced technologies and products. The marketplace can change quickly in response to such technologies and products, as well as to changes in customer and end-user requirements, expectations, and preferences. As technologies evolve and new market segments emerge, the boundaries between the market segments that we compete in may also change. We face significant competition in the development and market acceptance of our products in this environment.

In addition, in connection with our strategic transformation to a data-centric company, we have pursued a broader market opportunity by entering new areas and introducing adjacent products. We face new sources of competition in these market segments, including from incumbent competitors with well-established technologies and customer bases, more industry experience, significant financial resources, and greater brand recognition.

**COMPETITORS**

Our broad product portfolio offers end-to-end solutions to help our customers process, analyze, store, and transfer data, including platform products that range from high-performance platforms for cloud computing workloads to low-power platforms for edge computing devices. We face intense competition across each part of this portfolio from other companies that offer platform products, such as Advanced Micro Devices, Inc. (AMD); accelerator products such as GPUs, including NVIDIA Corporation (NVIDIA), as well as accelerator products such as ASICs, application-specific standard products, and FPGAs; memory and storage products; or connectivity products such as cellular modems. Some of these competitors have developed or utilize competing computing architectures for specific market segments or applications, such as low-power applications or emerging AI workloads. We also compete with internally developed semiconductors from OEMs, cloud service providers, and others, including customers. These companies may choose to vertically integrate their own proprietary semiconductor designs with their software assets, to offer greater product differentiation or increase product margins, or to customize such designs for their specific computing workloads. We may also face new sources of competition as a result of changes in industry participants through, for example, acquisitions or business collaborations, as well as new entrants, which could have a significant impact on our competitive position.

CCG. We are a leading provider of platforms for notebooks, 2-in-1 systems, and desktops, including high-end enthusiast PCs. We face existing and emerging competition in these product areas. Tablets, phones, and other mobile devices offered by numerous vendors are significant competitors to traditional PCs for many usages, and considerable blurring of system form factors currently exists in the marketplace. We face strong competition from AMD as well as from vendors who use applications processors that are based on the ARM\* architecture, feature low-power or long battery-life operation, and are built in SoC formats that integrate numerous functions on one chip. We are competing with a number of large companies in the development of 5G cellular modems.

DCG. We are a leading provider of data center platforms, and face competition from incumbent competitors such as AMD, providers of accelerator products such as NVIDIA, and companies using ARM architecture, as well as from new entrants developing products customized for specific data center workloads and from internally developed solutions by cloud service providers and others. We see cloud computing, storage, and networking as areas of significant opportunity in our DCG business, as we seek to help our customers process, analyze, store, and transfer increasing amounts of data in connection with AI, autonomous driving, and other applications. We face strong competition in these areas.

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IOTG. We have a long-standing position as a supplier of components and software for embedded products. This marketplace continues to expand significantly, with increasing types and numbers of smart and connected devices for retail, industrial, and consumer uses, including smart video. As this market segment evolves, we face numerous large and small incumbent processor competitors, as well as new entrants that use ARM architecture and other operating systems and software. In addition, the Internet of Things requires a broad range of connectivity solutions and we face competition from companies providing traditional wireless solutions such as cellular, WiFi, and Bluetooth®, as well as several new entrants who are taking advantage of new focused communications protocols.

NSG. We compete against other providers of NAND flash memory products. We focus our efforts primarily on incorporating NAND flash memory into solution products, such as SSDs supporting enterprise and consumer applications. Our innovative Intel Optane technology offers a unique combination of performance, density, power, non-volatility, and cost advantages that redefines the memory storage hierarchy between conventional DRAM memory and NAND. We believe that our memory offerings, including our Intel Optane technology, complement our product offerings in our other segments.

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PSG. We are a leading provider of programmable semiconductors and related products, including FPGAs and SoC FPGAs. We face competition from other programmable logic companies, as well as companies that make other types of semiconductor products, such as ASICs, application-specific standard products, GPUs, digital signal processors, and CPUs. Targeted growth areas for our programmable solutions include communications, data center, industrial, and military applications. The FPGA life cycle is long relative to other Intel products—from the time that a design win is secured, it generally takes three or more years before a customer starts volume production and we receive the associated revenue from such design win.

**COMPETITIVE FACTORS**

Our products primarily compete based on performance, energy efficiency, integration, ease-of-use, innovative design, features, price, quality, reliability, security features, software ecosystem and developer support, time-to-market, brand recognition, customer support and customization, and availability. The importance of these factors varies by the type of end system for the products. For example, performance might be among the most important factors for our products for data center servers, while energy efficiency and price, as well as density and non-volatility, might be among the most important factors for our memory products.

Our key competitive advantages include:

Well-positioned for growth in a new era of data-centric computing. The proliferation of data from the cloud, to the network, and out to the edge; the impending transition to 5G; and the growth of AI and analytics have driven a profound shift in computing, creating massive amounts of largely untapped data and a significant opportunity. We believe we are one of the few companies with a product portfolio that spans this new data-centric world. With products to help our customers process, analyze, store, and transfer large amounts of data, we have the opportunity to be the leading end-to-end platform provider for our customers.

Combination of our network of manufacturing and assembly and test facilities with our global architecture design teams. We have made significant capital and R&D investments in our integrated manufacturing network, which enables us to have more direct control over our design, development, and manufacturing processes; quality control; product cost; production timing; performance; power consumption; and manufacturing yield. We also have the scale and expertise necessary to enable deep engagement with our customers on their product needs. The increased cost of constructing new fabrication facilities to support smaller transistor geometries and larger wafers has led to a reduced number of companies that can build and equip leading-edge manufacturing facilities. Most of our competitors rely on third-party foundries, such as Taiwan Semiconductor Manufacturing Company, Ltd. or Samsung Electronics Co., Ltd., and subcontractors for manufacturing and assembly and test needs.

We also face competitive challenges associated with the development and implementation of our next-generation process technology. We announced earlier in 2018 that volume production on our 10nm process technology was being delayed from the second half of 2018 into 2019. We have made progress on improving 10nm yields during 2018, and we expect 10nm-based volume client systems on retail shelves for the 2019 holiday season. However, the delays in our transition to next-generation process technology may allow competitors to take advantage of potential improvements in performance, energy efficiency, cost and/or other features that may be offered by new process technologies developed by third-party foundries. While we believe we derive significant competitive advantages from being an integrated device manufacturer as discussed above, we are also subject to the inherent risks of next-generation process development.

**INTELLECTUAL PROPERTY RIGHTS AND LICENSING**

Intel owns and develops significant IP and related IP rights around the world that relate to our products, services, R&D, and other activities and assets. Our IP portfolio includes patents, copyrights, trade secrets, trademarks, trade dress rights, and maskwork rights. We actively seek to protect our global IP rights and to deter unauthorized use of our IP and other assets. Such efforts can be difficult, however, particularly in countries that provide less protection to IP rights and in the absence of harmonized international IP standards. For a discussion of the risks related to IP and our IP rights, please see “We are subject to IP risks and risks associated with litigation and regulatory proceedings” in “Risk Factors” within Other Key Information. While our IP rights are important to our success, our business as a whole is not significantly dependent on any single patent, copyright, or other IP right.

We have obtained patents in the U.S. and other countries. Because of the fast pace of innovation and product development, and the comparative pace of governments' patenting processes, our products are often obsolete before the patents related to them expire; in some cases, our products may be obsolete before the patents related to them are granted. As we expand our product offerings into new industries, we also seek to extend our patent development efforts to patent such products. In addition to developing patents based on our own R&D efforts, we may purchase or license patents from third parties. Established competitors in existing and new industries, as well as companies that purchase and enforce patents and other IP, may already have patents covering similar products. There is no assurance that we will be able to obtain patents covering our own products, or that we will be able to obtain licenses from other companies on favorable terms or at all.

The software that we distribute, including software embedded in our component-level and platform products, is entitled to copyright and other IP protection. To distinguish our products from our competitors' products, we have obtained trademarks and trade names for our products, and we maintain cooperative advertising programs with customers to promote our brands and to identify products containing genuine Intel components. We also protect details about our processes, products, and strategies as trade secrets, keeping confidential the information that we believe provides us with a competitive advantage.

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**CRITICAL ACCOUNTING ESTIMATES**

The methods, assumptions, and estimates that we use in applying our accounting policies may require us to apply judgments regarding matters that are inherently uncertain. We consider an accounting policy to be a critical estimate if: (1) we must make assumptions that were uncertain when the judgment was made, and (2) changes in the estimate assumptions, or selection of a different estimate methodology could have a significant impact on our financial position and the results that we report in our consolidated financial statements. While we believe that our estimates, assumptions, and judgments are reasonable, they are based on information available when the estimate was made. Refer to "Note 2: Accounting Policies" within the Consolidated Financial Statements for further information on our critical accounting estimates and policies, which are as follows:

- Inventories - the transition of manufacturing costs to inventory, excluding factory excess capacity costs. Inventory reflected at the lower of cost or net realizable value considering future demand and market conditions;
- Property, plant and equipment - the useful life determination and the related timing of when depreciation begins;
- Long-lived assets - the valuation methods and assumptions used in assessing the impairment of property, plant and equipment, identified intangibles, and goodwill, including the determination of asset groupings and the identification and allocation of goodwill to reporting units;
- Non-marketable equity investments - the valuation estimates and assessment of impairment and observable price adjustments;
- Business combinations - the assumptions used to allocate the purchase price paid for assets acquired and liabilities assumed in connection with our acquisitions;
- Income taxes - the identification and measurement of deferred tax assets and liabilities, and estimates associated with Tax Reform; and
- Loss contingencies - the estimation of when a loss is probable and reasonably estimable.

**RISK FACTORS**

The following risks could materially and adversely affect our business, financial condition, cash flows, and results of operations, and the trading price of our common stock could decline. These risk factors do not identify all risks that we face; our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. Due to risks and uncertainties, known and unknown, our past financial results may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. Refer also to the other information set forth in this Annual Report on Form 10-K, including in MD&A and our financial statements and the related notes.

**CHANGES IN PRODUCT DEMAND CAN ADVERSELY AFFECT OUR FINANCIAL RESULTS.**

Demand for our products is variable and hard to predict. Our products are used in different market segments, and demand for our products may vary within or among the market segments served by our PC-centric and data-centric businesses. It is difficult to forecast these changes and their impact. For example, demand for our platform products may increase in one or more market segments while decreasing in others. Changes in the demand for our products, particularly our CCG and DCG platform products, may reduce our revenue, lower our gross margin, or require us to write down the value of our assets.

Important factors that could lead to variation in the demand for our products include:

- business conditions, including downturns in the market segments in which we operate, or in the global or regional economies;
- consumer confidence or income levels, and the levels of customer capital spending, which may be impacted by changes in market conditions, including changes in government borrowing, taxation, or spending policies; the credit market; or expected inflation, employment, and energy or other commodity prices;
- our ability to timely introduce competitive products;
- competitive and pricing pressures, including new product introductions and other actions taken by competitors;
- the level of our customers' inventories;
-



customer order patterns, including order cancellations, which may be affected by maturing product cycles, disruptions affecting customers, and other factors;

- market acceptance and industry support of our new and maturing products, including the introduction and availability of products used together with our products; and
- customer product needs and emerging technology trends, including changes in the levels and nature of customer and end-user computing workloads.

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Due to the complexity of our manufacturing operations, we may be unable to timely respond to fluctuations in demand and we may incur significant charges and costs. Because we own and operate high-tech fabrication facilities, our operations have high costs that are fixed or difficult to reduce in the short term, including our costs related to utilization of existing facilities, facility construction and equipment, R&D, and the employment and training of a highly skilled workforce. If product demand decreases or we fail to forecast demand accurately, we could be required to write off inventory or record excess capacity charges, which would lower our gross margin. If the demand decrease is prolonged, our manufacturing or assembly and test capacity could be underutilized, and we may be required to write down our long-lived assets, which would increase our expenses. We may also be required to shorten the useful lives of under-used facilities and equipment and accelerate depreciation. Conversely, if product demand increases, we may be unable to add capacity fast enough to meet market demand, which could result in a loss of revenue opportunities or market share, legal claims, and/or damage to customer relationships.

We face significant competition. The industry in which we operate is highly competitive and subject to rapid technological and market developments, changes in industry standards, changes in customer needs, and frequent product introductions and improvements. If we do not anticipate and respond to these developments, our competitive position may weaken, and our products or technologies might be uncompetitive or become obsolete. Our products primarily compete based on performance, energy efficiency, integration, ease-of-use, innovative design, features, price, quality, reliability, security features, software ecosystem and developer support, time-to-market, brand recognition, customer support and customization, and availability. The importance of these factors may vary by product—for example, if we do not continue to introduce data center platform products with performance leadership, our competitive position and market segment share in our DCG business may be adversely affected. We will not realize our strategic goal to become the leading end-to-end provider for the new data-centric era of computing if our products do not meet our customers' needs in an increasingly competitive landscape.

We face intense competition across our product portfolio from companies offering platform products; accelerator products such as GPUs, ASICs, application-specific standard products, and FPGAs; memory and storage products; connectivity products such as cellular modems; and other semiconductor products. Some of these competitors have developed or utilize competing computing architectures for specific market segments or applications, and these architectures can produce beneficial network effects for competitors if an ecosystem of customers and application developers for such architectures grows at scale. We also compete with internally developed semiconductors from OEMs, cloud service providers, and others, including customers, and with new entrants. Introduction of competitive new products, aggressive pricing, and other actions taken by competitors could harm demand for our products and our business. Additionally, a number of business combinations and strategic partnerships in the semiconductor industry have occurred over the last several years, and more could occur in the future. Consolidation could lead to fewer customers, partners, or suppliers, any of which could negatively affect our financial results.

To compete successfully, we must maintain a successful R&D effort, develop new products and production processes, and improve our existing products and processes ahead of competitors. For example, we invest substantially in our network of manufacturing and assembly and test facilities, including the construction of new fabrication facilities to support smaller transistor geometries, and in the development of the advanced manufacturing technologies to produce such transistors. We do not expect all of our R&D investments to be successful. We may be unable to develop and market new products successfully, and the products and technologies we invest in and develop may not be well received by customers. Our R&D investments may not contribute to our future operating results for several years, if at all, and such contributions may not meet our expectations or even cover the costs of such investments. Additionally, the products and technologies offered by others may affect demand for, or pricing of, our products.

If we are not able to compete effectively, our financial results will be adversely affected, including reduced revenue and gross margin, and we may be required to accelerate the write-down of the value of certain assets.

Our investments in new businesses, products, and technologies are inherently risky and may not succeed. In recent years, in connection with our strategic transformation to a data-centric company, we have entered new areas and introduced adjacent products in programmable solutions, AI, and autonomous driving. We have also expanded our adjacent product offerings in client computing, the data center, the Internet of Things, and memory, with offerings

such as modems, silicon photonics solutions, and Intel Optane technology products. As a result, we face new sources of competition, including, in certain of these market segments, from incumbent competitors with established technologies and customer bases and greater brand recognition. These developing products and market segments may require significant investment, may not grow as significantly as projected, or at all, or may utilize technologies that are different from the ones that we develop and manufacture, and we may not realize an adequate return on our investments. For example, AI and machine learning are increasingly driving innovations in technology, but if they fail to deliver the benefits anticipated, or if our customers use competing technologies for these workloads, we may not realize a return on our investments in these areas. To be successful, we need to cultivate new industry relationships with customers and partners in these market segments. In addition, we must continually improve the cost, performance, integration, and energy efficiency of our products, as well as expand our software capabilities to provide customers with comprehensive computing solutions. Despite our ongoing efforts, there is no guarantee that we will achieve or maintain market demand or acceptance for our products and services in these various market segments. Changes in the mix of products sold may impact our financial results. Our pricing and margins vary across our products and market segments due in part to marketability of our products and differences in their features or manufacturing costs. For example, our platform product offerings range from lower-priced and entry-level platforms, such as those based on Intel Atom processors, to higher-end platforms based on Intel Xeon processors. Our adjacent products also typically have significantly lower margins than our higher-priced platform products. If demand shifts from our higher-priced to lower-priced platform products in any of our market segments, or if our adjacent products represent an increasingly greater share of our mix of products sold, our gross margin percentage may decrease.

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**WE OPERATE GLOBALLY AND ARE SUBJECT TO SIGNIFICANT RISKS IN MANY JURISDICTIONS.**

Global or regional conditions may harm our financial results. We have manufacturing, assembly and test, R&D, sales, and other operations in many countries, and some of our business activities may be concentrated in one or more geographic areas. Moreover, sales outside the U.S. accounted for approximately 84% of our revenue for the fiscal year ended December 29, 2018. As a result, our operations and our financial results, including our ability to manufacture, assemble and test, design, develop, or sell products, and the demand for our products, may be adversely affected by a number of global and regional factors outside of our control.

Adverse changes in global or regional economic conditions, including recession or slowing growth, changes or uncertainty in fiscal or monetary policy, higher interest rates, tighter credit, inflation, lower capital expenditures by businesses including on IT infrastructure, increases in unemployment, and lower consumer confidence and spending, could significantly harm demand for our products and make it more challenging to forecast our operating results and make business decisions, including regarding prioritization of investments in our business. An economic downturn or increased uncertainty may also lead to increased credit and collectibility risks, higher borrowing costs or limits on our access to capital markets, reduced liquidity, adverse impacts on our suppliers, failures of counterparties and other financial institutions, and declines in the value of our financial instruments.

International trade disputes may result in increased tariffs, trade barriers, and other protectionist measures that could increase our manufacturing costs, make our products less competitive, reduce consumer demand, or impede or slow the movement of our goods across borders. Increasing protectionism and economic nationalism may lead to further changes in trade policy, domestic sourcing initiatives, or other formal and informal measures that could make it more difficult to sell our products in some markets.

We may be adversely affected by other global and regional factors, including:

- geopolitical and security issues, such as armed conflict and civil or military unrest, political instability, human rights concerns, and terrorist activity;
- natural disasters, public health issues, and other catastrophic events;
- inefficient infrastructure and other disruptions, such as supply chain interruptions and large-scale outages or unreliable provision of services from utilities, transportation, data hosting, or telecommunications providers;
- formal or informal imposition of new or revised export, import, or doing-business regulations, including trade sanctions and tariffs, which could be changed without notice;
- government restrictions on, or nationalization of our operations in any country, or restrictions on our ability to repatriate earnings from a particular country;
- differing employment practices and labor issues;
- ineffective legal protection of our IP rights in certain countries;
- local business and cultural factors that differ from our current standards and practices;
- continuing uncertainty regarding social, political, immigration, and tax and trade policies in the U.S. and abroad, including as a result of the United Kingdom's vote to withdraw from the European Union; and
- fluctuations in the market values of our domestic and international investments, which can be negatively affected by illiquidity, credit deterioration or losses, interest rate changes, financial results, political risk, sovereign risk, or other factors.

We are subject to laws and regulations worldwide that may differ among jurisdictions, affecting our operations in areas including, but not limited to: IP ownership and infringement; tax; import and export requirements; anti-corruption; foreign exchange controls and cash repatriation restrictions; data privacy requirements; competition; advertising; employment; product regulations; environment, health, and safety requirements; and consumer laws. Compliance with such requirements may be onerous and expensive, and may otherwise impact our business operations negatively. For example, unfavorable developments with evolving laws and regulations worldwide related to 5G or autonomous driving technology may limit global adoption, impede our strategy, and negatively impact our long-term expectations for our investments in these areas. Although we have policies, controls, and procedures designed to help ensure compliance with applicable laws, there can be no assurance that our employees, contractors, suppliers, and/or agents will not violate such laws or our policies. Violations of these laws and regulations could result

in fines; criminal sanctions against us, our officers, or our employees; prohibitions on the conduct of our business; and damage to our reputation.

We may be affected by fluctuations in currency exchange rates. We are potentially exposed to adverse as well as beneficial movements in currency exchange rates. Although most of our sales occur in U.S. dollars, expenses may be paid in local currencies. An increase in the value of the dollar could increase the real cost to our customers of our products in those markets outside the U.S. where we sell in dollars, and a weakened dollar could increase the cost of expenses such as payroll, utilities, tax, and marketing expenses, as well as overseas capital expenditures. We also conduct certain investing and financing activities in local currencies. Our hedging programs may not be effective to offset any, or more than a portion, of the adverse impact of currency exchange rate movements; therefore, changes in exchange rates could harm our results of operations and financial condition.

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Catastrophic events could have a material adverse effect on our operations and financial results. Our operations and business, and those of our customers and suppliers, could be disrupted by natural disasters; industrial accidents; public health issues; cybersecurity incidents; interruptions of service from utilities, transportation, telecommunications, or IT systems providers; or other catastrophic events. Our headquarters and many of our operations and facilities are in locations that are prone to earthquakes and other natural disasters. Global climate change may result in certain natural disasters occurring more frequently or with greater intensity, such as drought, wildfires, storms, sea-level rise, and flooding, and could disrupt the availability of water necessary for the operation of our fabrication facilities located in semi-arid regions. Catastrophic events could make it difficult or impossible to manufacture or deliver products to our customers, receive production materials from our suppliers, or perform critical functions, which could adversely affect our revenue and require significant recovery time and expenditures to resume operations. While we maintain business recovery plans that are intended to enable us to recover from natural disasters or other events that can be disruptive to our business, some of our systems are not fully redundant and we cannot be sure that our plans will fully protect us from all such disruptions. Furthermore, even if our operations are unaffected or recover quickly, if our customers cannot timely resume their own operations due to a catastrophic event, they may reduce or cancel their orders, which may adversely affect our results of operations.

We maintain a program of insurance coverage for a variety of property, casualty, and other risks. The types and amounts of insurance we obtain vary depending on availability, cost, and decisions with respect to risk retention. Some of our policies have large deductibles and broad exclusions. In addition, one or more of our insurance providers may be unable or unwilling to pay a claim. Losses not covered by insurance may be large, which could harm our results of operations and financial condition.

Damage to our reputation could damage our business. Our reputation is a critical factor in our relationships with customers, employees, governments, suppliers, and other stakeholders. If we fail to address, or appear to fail to address, issues that give rise to reputational risk, including those described throughout this "Risk Factors" section, we could significantly harm our reputation and our brands. Our reputation may also be damaged by how we respond to corporate crises. Corporate crises can arise from catastrophic events as well as from incidents involving unethical behavior or misconduct; product quality, security, or safety issues; allegations of legal noncompliance; internal control failures; corporate governance issues; data breaches; workplace safety incidents; environmental incidents; the use of our products for illegal or objectionable applications; marketing practices; media statements; the conduct of our suppliers or representatives; and other issues or incidents that, whether actual or perceived, result in adverse publicity. If we fail to respond quickly and effectively to address such crises, the ensuing negative public reaction could significantly harm our reputation and our brands and could lead to increases in litigation claims and asserted damages or subject us to regulatory actions or restrictions.

Damage to our reputation could reduce demand for our products and adversely affect our business and operating environment. It could reduce investor confidence in us, adversely affecting our stock price. It may also limit our ability to be seen as an employer of choice when competing for highly skilled employees. Moreover, repairing our reputation and brands may be difficult, time-consuming, and expensive.

**WE ARE VULNERABLE TO PRODUCT AND MANUFACTURING-RELATED RISKS.**

We are subject to risks associated with the development and implementation of new manufacturing process technology. Production of integrated circuits is a complex process. Realizing the economics of Moore's Law is a strategic priority, and we are continually engaged in the development of next-generation process technologies at increasingly advanced nodes. We may not be successful or efficient in developing or implementing new process nodes and production processes. Our efforts to innovate involve significant expense and carry inherent risks, including difficulties in designing and developing such next-generation process technologies, failures to realize the expected benefits of next-generation process technologies, and investments in manufacturing assets and facilities that are made years in advance of the process node introduction.

Risks inherent in the development of next-generation process technologies include production timing delays, lower-than-anticipated manufacturing yields, and product defects and errata. For example, we announced earlier in 2018 that volume production on our 10nm process technology was being delayed from the second half of 2018 into

2019. We have made progress on improving 10nm yields during 2018, and we expect 10nm-based volume client systems on retail shelves for the 2019 holiday season. However, the delays in our transition to next-generation process technology may allow competitors to take advantage of potential improvements in performance, energy efficiency, cost and/or other features that may be offered by new process technologies developed by third-party foundries. Furthermore, without the benefit of next-generation process nodes, including additional competitive features on our products may result in larger die size products, manufacturing supply constraints and increased product costs. Disruptions in the production process can also result from errors, defects in materials, delays in obtaining or revising operating permits and licenses, interruptions in our supply of materials or resources, and disruptions at our fabrication and assembly and test facilities due to accidents, maintenance issues, or unsafe working conditions—all of which could affect the timing of production ramps and yields. Production issues can lead to increased costs and may affect our ability to meet product demand, which could adversely impact our business and the results of operations. In addition, if we face delays in the timing of our product introductions, we could become less competitive and lose revenue opportunities, and our gross margin could be adversely affected because we incur significant costs up front in the product development stage and earn revenue to offset these costs over time.

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We face supply chain risks. Thousands of suppliers provide materials and equipment that we use in production and other aspects of our business. Where possible, we seek to have several sources of supply. However, for certain materials and equipment, including photolithography tools, we may rely on a single or a limited number of suppliers, or upon suppliers in a single location. In addition, supplier consolidation or business failures could impact the nature, quality, availability, and pricing of the products and services available to us. The inability of suppliers to deliver necessary production materials or equipment could disrupt our production processes and make it more difficult for us to implement our business strategy. Production could be disrupted by the unavailability of resources, such as water, silicon, electricity, gases, and other materials. The unavailability or reduced availability of materials or resources may require us to reduce production or incur additional costs, which could harm our business and results of operations. Our manufacturing operations and ability to meet product demand may also be impacted by IP or other litigation between our suppliers, where an injunction against Intel or a supplier could interrupt the availability of goods or services supplied to Intel by others.

We also rely on third-party providers to manufacture and assemble and test certain components or products. These have included components and products related to networking, communications, programmable semiconductor solutions, and memory, and may include these and other components and products in the future. If any of these third parties are unable to perform these services on a timely or cost-effective basis, in sufficient volumes, or at all, we may encounter supply delays or disruptions or incur additional costs that could adversely affect our business and financial results. For example, while we have an agreement providing for the supply of 3D XPoint memory from IMFT for a period following the close of Micron's purchase of our interest in IMFT, we will need to fund and develop internal manufacturing options to continue 3D XPoint memory supply in the longer term.

In addition, increased regulation or stakeholder expectations regarding responsible sourcing practices could cause our compliance costs to increase or result in publicity that negatively affects our reputation. Moreover, given that we use many materials in the manufacturing of our products and rely on many suppliers to provide these materials, but do not directly control the procurement or employment practices of such suppliers, we could be subject to similar financial or reputational risks as a result of our suppliers' conduct.

We are subject to the risks of product defects, errata, or other product issues. Product defects and errata (deviations from published specifications) may result from problems in our product design or our manufacturing and assembly and test processes. Components and products we purchase or license from third-party suppliers, or attain through acquisitions, may also contain defects. We could face risks if products that we design, manufacture, or sell, or that include our technology, cause personal injury or property damage, even where the cause is unrelated to product defects or errata. These risks may increase as our products are introduced into new devices, market segments, technologies, or applications, including transportation and autonomous driving, healthcare, communications, and financial services, and other industrial, infrastructure, and consumer uses. Costs from defects, errata, or other product issues could include:

- writing off some or all of the value of inventory;
- recalling products that have been shipped;
- providing product replacements or modifications;
- reimbursing customers for certain costs they incur;
- defending against litigation and/or paying resulting damages; and
- paying fines imposed by regulatory agencies.

These costs could be large and may increase expenses and lower gross margin, and result in delay or loss of revenue. Any product defects, errata, or other issues could also damage our reputation, negatively affect product demand, delay product releases, or result in legal liability. The announcement of product defects or errata could cause customers to purchase products from competitors. Any of these occurrences could harm our business and financial results. In addition, although we maintain liability insurance, our coverage has certain exclusions and/or may not adequately cover liabilities incurred. Our insurance providers may be unable or unwilling to pay a claim, and losses not covered by insurance could be large, which could harm our financial condition.



We are subject to risks associated with environmental, health, and safety regulations. The manufacturing and assembly and test of our products require the use of hazardous materials that are subject to a broad array of environmental, health, and safety laws and regulations. Our failure to comply with these laws or regulations could result in:

- regulatory penalties, fines, and legal liabilities;
- suspension of production;
- alteration of our manufacturing and assembly and test processes;
- damage to our reputation; and
- restrictions on our operations or sales.

Our failure to manage the use, transportation, emissions, discharge, storage, recycling, or disposal of hazardous materials could lead to increased costs or future liabilities. Our ability to expand or modify our manufacturing capability in the future may be impeded by environmental regulations, such as air quality and wastewater requirements. Environmental laws and regulations could also require us to acquire additional pollution abatement or remediation equipment, modify product designs, or incur other expenses. Regulations in response to climate change could result in increased manufacturing costs associated with air pollution requirements, and increased compliance and energy costs. Many new materials that we are evaluating for use in our operations may be subject to regulation under environmental laws and regulations. These restrictions could harm our business and results of operations by increasing our expenses or requiring us to alter manufacturing and assembly and test processes.

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Table of Contents**WE ARE SUBJECT TO CYBERSECURITY AND PRIVACY RISKS.**

We face risks related to cybersecurity threats and incidents. We regularly face attempts by others to gain unauthorized access through the Internet, or to introduce malicious software, to our IT systems. Additionally, individuals or organizations, including malicious hackers, state-sponsored organizations, insider threats including employees and third-party service providers, or intruders into our physical facilities, may attempt to gain unauthorized access and corrupt the processes of hardware and software products that we manufacture and services we provide. Due to the widespread use of our products, we are a frequent target of computer hackers and organizations that intend to sabotage, take control of, or otherwise corrupt our manufacturing or other processes, products, and services. We are also a target of malicious attackers who attempt to gain access to our network or data centers or those of our customers or end users; steal proprietary information related to our business, products, employees, and customers; or interrupt our systems and services or those of our customers or others. Such attempts are increasing in number and in technical sophistication, and if successful, could expose us and the affected parties to risk of loss or misuse of proprietary or confidential information or disruptions of our business operations. Our IT infrastructure also includes products and services provided by third parties, and these providers may experience breaches of their systems and products that impact the security of our systems and our proprietary or confidential information.

From time to time, we encounter intrusions or unauthorized access to our network, products, services, or infrastructure. To date, none have resulted in any material adverse impact to our business or operations. Such incidents, whether or not successful, could result in our incurring significant costs related to, for example, rebuilding internal systems, writing down inventory value, implementing additional threat protection measures, providing modifications to our products and services, defending against litigation, responding to regulatory inquiries or actions, paying damages, providing customers with incentives to maintain the business relationship, or taking other remedial steps with respect to third parties, as well as reputational harm. In addition, these threats are constantly evolving, thereby increasing the difficulty of successfully defending against them or implementing adequate preventative measures. While we seek to detect and investigate all unauthorized attempts and attacks against our network, products, and services, and to prevent their recurrence where practicable through changes to our internal processes and tools and/or changes or updates to our products and services, we remain potentially vulnerable to additional known or unknown threats. In some instances, we, our customers, and the users of our products and services may be unaware of an incident or its magnitude and effects.

We face risks related to security vulnerabilities in our products. We or third parties regularly identify security vulnerabilities with respect to our processors and other products, as well as the operating systems and workloads running on them. As we have become a more data-centric company, our processors and other products are being used in more and different critical application areas that create new or increased cybersecurity and privacy risks, including applications that gather and process large amounts of data, such as the cloud or Internet of Things, and critical infrastructure and automotive applications. The security vulnerabilities identified in our processors include a category known as side-channel exploits, such as the variants referred to as “Spectre” and “Meltdown.” Additional categories and variants have been and may continue to be identified. Publicity about these and other security vulnerabilities and attempted or successful exploits, whether accurate or inaccurate, may result in increased attempts by third parties to identify additional vulnerabilities. Although vulnerabilities have often been discovered and mitigated in advance of being exploited, it is possible that vulnerabilities may not be mitigated before they become known. We, our customers, and the users of our products may not promptly learn of or be able to fully assess the magnitude or effects of a vulnerability, including the extent, if any, to which a vulnerability has been exploited. Subsequent events or new information could develop that changes our assessment of the impact of a security vulnerability, including additional information learned as we develop and deploy mitigations or updates, become aware of additional variants, evaluate the competitiveness of existing and new products, address future warranty or other claims or customer satisfaction considerations, as well as developments in the course of any litigation or regulatory inquiries or actions over these matters.

Mitigation techniques designed to address security vulnerabilities, including software and firmware updates or other preventative measures, may not be available on a timely basis—or at all—or may not operate as intended or effectively

resolve vulnerabilities for all applications. In addition, we may be required to rely on third parties, including hardware, software, and services vendors, as well as our customers and end users, to develop and deploy mitigation techniques, and the availability, effectiveness, and performance impact of mitigation techniques may depend solely or in part on the actions of these third parties in determining whether and how to develop and deploy mitigations. We and such third parties may make prioritization decisions about which vulnerabilities to address, which could delay or limit development or deployment of a mitigation and harm our reputation. Security vulnerabilities and/or mitigation techniques may result in adverse performance effects, reboots, system instability or unavailability, loss of functionality, data loss or corruption, unpredictable system behavior, decisions by customers and end users to limit or change the applications in which they use our products or product features, or the misappropriation of data by third parties.

Security vulnerabilities and any limitations of, or adverse effects resulting from, mitigation techniques can adversely affect our results of operations, financial condition, customer relationships, prospects, and reputation in a number of ways, any of which may be material. For example, whether or not they involve attempted or successful exploits, they may result in our incurring significant costs related to developing and deploying updates and mitigations, writing down inventory value, defending against product claims and litigation, responding to regulatory inquiries or actions, paying damages, addressing customer satisfaction considerations, providing product replacements or modifications, or taking other remedial steps with respect to third parties. Adverse publicity about security vulnerabilities or mitigations could damage our reputation with customers or users and reduce demand for our products and services. These effects may be greater to the extent that competing products are not susceptible to the same vulnerabilities or if vulnerabilities can be more effectively mitigated in competing products. Moreover, third parties may release information regarding potential vulnerabilities of our products before mitigations are available, which, in turn, could lead to attempted or successful exploits, adversely affect our ability to introduce mitigations, or otherwise harm our business and reputation. For example, information on the “Spectre” and “Meltdown” side-channel variants was prematurely reported publicly before mitigation techniques to address all vulnerabilities were made widely available, and certain of the mitigation techniques did not operate as intended.

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We may be subject to theft, loss, or misuse of personal data about our employees, customers, or other third parties, which could increase our expenses, damage our reputation, or result in legal or regulatory proceedings. The theft, loss, or misuse of personal data collected, used, stored, or transferred by us to run our business could result in significantly increased business and security costs or costs related to defending legal claims. Global privacy legislation, enforcement, and policy activity in this area are rapidly expanding and creating a complex regulatory compliance environment. Costs to comply with and implement these privacy-related and data protection measures could be significant, and noncompliance could expose us to significant monetary penalties, damage to our reputation, suspension of online services or sites in certain countries, and even criminal sanctions. Even our inadvertent failure to comply with federal, state, or international privacy-related or data protection laws and regulations could result in audits, regulatory inquiries, or proceedings against us by governmental entities or other third parties.

**WE ARE SUBJECT TO IP RISKS AND RISKS ASSOCIATED WITH LITIGATION AND REGULATORY PROCEEDINGS.**

We may be unable to enforce or protect our IP rights. We regard our patents, copyrights, trade secrets, and other IP rights as important to the success of our business. We rely on IP law—as well as confidentiality and licensing agreements with our customers, employees, technology development partners, and others—to protect our IP rights. Our ability to enforce these rights is subject to general litigation risks, as well as uncertainty as to the enforceability of our IP rights in various countries. Enforcement may be costly and time-consuming and may divert management attention. When we seek to enforce our rights, we may be subject to claims that our IP rights are invalid, not enforceable, or licensed to an opposing party. Our assertion of IP rights may result in another party seeking to assert claims against us, which could harm our business. Governments may adopt regulations—and governments or courts may render decisions—requiring compulsory licensing of IP rights, or governments may require products to meet standards that favor local companies. Our inability to enforce our IP rights under any of these circumstances may harm our competitive position and business. In addition, the theft or unauthorized use or publication of our trade secrets and other confidential business information could harm our competitive position and reduce acceptance of our products; as a result, the value of our investment in R&D, product development, and marketing could be reduced.

Our licenses with other companies and participation in industry initiatives may allow competitors to use our patent rights. Technology companies often bilaterally license patents between each other to settle disputes or as part of business agreements. Our competitors may have licenses to our patents, and under current case law, some of the licenses may exhaust our patent rights as to licensed product sales under some circumstances. Our participation in industry standards organizations or with other industry initiatives may require us to license our patents to companies that adopt industry-standard specifications. Depending on the rules of the organization, government regulations, or court decisions, we might have to grant licenses to our patents for little or no cost, and as a result, we may be unable to enforce certain patents against others, our costs of enforcing our licenses or protecting our patents may increase, and the value of our IP rights may be impaired.

Third parties may assert claims based on IP rights against us or our products, which could harm our business. We may face claims based on IP rights from individuals and companies, including claims from those who have aggregated patents acquired from multiple sources to form a new, larger portfolio to assert claims against us and other companies. Additionally, large patent portfolio owners may divest portions of their portfolios to more than one individual or company, increasing the number of parties who own IP rights previously all held by a single party. We are typically engaged in a number of disputes involving IP rights. Claims that our products or processes infringe the IP rights of others, regardless of their merits, could cause us to incur large costs to respond to, defend, and resolve the claims, and they may divert the efforts and attention of our management and technical personnel from our business and operations. In addition, we may face claims based on the alleged theft or unauthorized use or disclosure of third-party trade secrets or confidential information or end-user data that we obtain in conducting our business. Any such incidents and claims could severely disrupt our business, and we could suffer losses, including the cost of product recalls and returns, and reputational harm. Furthermore, we have agreed to indemnify customers for certain IP rights claims against them. IP rights claims against our customers could also limit demand for our products or disrupt our customers' businesses, which could in turn adversely affect our results of operations.

As a result of IP rights claims, we could:

- pay monetary damages, including payments to satisfy indemnification obligations, or royalties;
- stop manufacturing, using, selling, offering to sell, or importing products or technology subject to claims;
- need to develop other products or technology not subject to claims, which could be time-consuming or costly; and/or
- enter into settlement and license agreements, which agreements may not be available on commercially reasonable terms.

These IP rights claims could harm our competitive position, result in expenses, or require us to impair our assets. If we alter or stop production of affected items, our revenue could be harmed.

We rely on access to third-party IP, which may not be available to us on commercially reasonable terms or at all.

Many of our products include third-party technology and/or implement industry standards, and may require licenses from third parties. Based on past experience and industry practice, we believe such licenses generally can be obtained on commercially reasonable terms. However, there is no assurance that the necessary licenses can be obtained on acceptable terms or at all. Failure to obtain the right to use third-party technology, or to license IP on commercially reasonable terms, could preclude us from selling certain products or otherwise have a material adverse impact on our financial condition and operating results.

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We are subject to risks associated with litigation and regulatory proceedings. We may face legal claims or regulatory matters involving stockholder, consumer, competition, commercial, IP, and other issues on a global basis. As described in "Note 20: Commitments and Contingencies" within the Consolidated Financial Statements, we are engaged in a number of litigation and regulatory matters. Litigation and regulatory proceedings are inherently uncertain, and adverse rulings could occur, including monetary damages, or an injunction stopping us from manufacturing or selling certain products, engaging in certain business practices, or requiring other remedies, such as compulsory licensing of patents. An unfavorable outcome may result in a material adverse impact on our business, financial condition, and results of operations. In addition, regardless of the outcome, litigation and regulatory proceedings can be costly, time-consuming, disruptive to our operations, and distracting to management.

**WE MUST ATTRACT, RETAIN, AND MOTIVATE KEY EMPLOYEES.**

To be competitive, we must attract, retain, and motivate executives and other key employees. Hiring and retaining qualified executives, scientists, engineers, technical staff, and sales representatives are critical to our business, and competition for highly skilled employees in our industry can be intense. In addition, changes in immigration policies may impair our ability to recruit and hire technical and professional talent. Changes in the interpretation and application of employment-related laws to our workforce practices may also result in increased operating costs and less flexibility in how we meet our changing workforce needs. To help attract, retain, and motivate qualified employees, we use share-based awards, such as RSUs, and performance-based cash incentive awards. Our employee hiring and retention also depend on our ability to build and maintain a diverse and inclusive workplace culture and be viewed as an employer of choice. If our share-based or other compensation programs and workplace culture cease to be viewed as competitive, our ability to attract, retain, and motivate employees could be weakened, which could harm our results of operations. Furthermore, changes in our management team may disrupt our business, and the failure to successfully transition and assimilate key employees could adversely affect our results of operations.

**WE ARE SUBJECT TO RISKS ASSOCIATED WITH OUR STRATEGIC TRANSACTIONS.**

Our acquisitions, divestitures, and other strategic transactions could fail to achieve our financial or strategic objectives, disrupt our ongoing business, and adversely impact our results of operations. In furtherance of our business strategy, we routinely evaluate opportunities and enter into agreements for possible acquisitions, divestitures, and other strategic transactions. These transactions involve numerous risks, including:

- we may not be able to identify opportunities in a timely manner or on terms acceptable to us;
- the transaction may not advance our business strategy and its anticipated benefits may never materialize;
- we may experience disruption of our ongoing operations and our management's attention may be diverted;
- we may fail to complete a transaction in a timely manner, if at all, due to our inability to obtain required government or other approvals, IP disputes or other litigation, difficulty in obtaining financing on terms acceptable to us, or other unforeseen factors;
- we may not realize a satisfactory return on our investment, potentially resulting in an impairment of goodwill and other assets, and restructuring charges;
- we may be unable to effectively enter new market segments through our strategic transactions or retain customers and partners of acquired businesses;
- we may be unable to retain key personnel of acquired businesses or may have difficulty integrating employees, business systems, and technology;
- controls, processes, and procedures of acquired businesses may not adequately ensure compliance with laws and regulations, and we may fail to identify compliance issues or liabilities;
- we may fail to identify, or may underestimate, commitments, liabilities, and other risks associated with acquired businesses or assets; and/or
- our acquisitions may result in dilutive issuances of our equity securities or significant additional debt.

Moreover, our resources are limited and our decision to pursue a transaction has opportunity costs; accordingly, if we pursue a particular transaction, we may need to forgo the prospect of entering into other transactions that could help us achieve our financial or strategic objectives.

Any of these risks could have a material adverse effect on our business, results of operations, financial condition, or cash flows, particularly in the case of a large acquisition or several concurrent acquisitions.

We invest in public and private companies and may not realize a return on our investments. We make investments in public and private companies around the world to further our strategic and financial objectives and to support certain key business initiatives. Companies in which we invest range from early-stage companies still defining their strategic direction to mature companies with established revenue streams and business models. Many of the instruments in which we invest are non-marketable and illiquid at the time of our initial investment, and we may not be able to achieve a return, if any, in a timely fashion. Our ability to realize a return on our investment in a private company, if any, is typically dependent on the company participating in a liquidity event, such as a public offering or acquisition. To the extent our investments are in marketable equity securities, as is typically the case for our public company investments, fluctuations in the fair value of those securities are recognized as gains or losses in our income statement, and consequently, declines in the fair value of these investments can reduce our net income. If any of the companies in which we invest are not successful, which may include failures to achieve business objectives as well as bankruptcy filings, we could recognize an impairment and/or lose all or part of our investment.

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Table of Contents**WE ARE SUBJECT TO SALES-RELATED RISKS.**

We face risks related to sales through distributors and other third parties. We sell a significant portion of our products through third parties such as distributors, value-added resellers, and channel partners (collectively referred to as distributors), as well as OEMs and ODMs. We depend on many distributors to help us create end-customer demand, provide technical support and other value-added services to customers, fill customer orders, and stock our products. We may rely on one or more key distributors for a product, and a material change in our relationship with one or more of these distributors or their failure to perform as expected could reduce our revenue. Our ability to add or replace distributors for some of our products may be limited. In addition, our distributors' expertise in the determination and stocking of acceptable inventory levels for some of our products may not be easily transferable to a new distributor; as a result, end customers may be hesitant to accept the addition or replacement of a distributor. Using third parties for distribution exposes us to many risks, including competitive pressure and concentration, credit, and compliance risks. Distributors and other third parties may sell products that compete with our products, and we may need to provide financial and other incentives to focus them on the sale of our products. They may face financial difficulties, including bankruptcy, which could harm our collection of accounts receivable and financial results. Violations of the Foreign Corrupt Practices Act or similar laws by distributors or other third-party intermediaries could have a material impact on our business. Failure to manage risks related to our use of distributors and other third parties may reduce sales, increase expenses, and weaken our competitive position.

We receive a significant portion of our revenue from a limited number of customers. Collectively, our three largest customers accounted for approximately 39% of our net revenue in 2018 and 40% of our net revenue in 2017. We expect a small number of customers will continue to account for a significant portion of our revenue in the foreseeable future. Industry trends, such as the increasing shift of data center workloads to the public cloud, may increase customer concentration for certain of our data-centric businesses. If one of our key customers stops purchasing from us, materially reduces its demand for our products, or delays its orders for our products, we may experience a reduction in revenue, which could harm our results of operations and financial condition. To the extent we differentiate our products through customization to meet customer specifications, order changes, delays, or cancellations may result in non-recoverable costs. For more information about our customers, including customers who accounted for greater than 10% of our net consolidated revenue, see "Note 4: Operating Segments" within the Consolidated Financial Statements.

We face risks related to business transactions with U.S. government entities. We receive proceeds from services and products we provide to the U.S. government. U.S. government demand and payment may be affected by public sector budgetary cycles and funding authorizations. U.S. government contracts are subject to oversight, including special rules on accounting, IP rights, expenses, reviews, information handling, and security. Failure to comply with these rules could result in civil and criminal penalties and sanctions, including termination of contracts, fines, and suspensions, or debarment from future business with the U.S. government.

**CHANGES IN OUR EFFECTIVE TAX RATE MAY REDUCE OUR NET INCOME.**

A number of factors may increase our effective tax rates, which could reduce our net income, including:

- changes in the volume and mix of profits earned across jurisdictions with varying tax rates;
- the resolution of issues arising from tax audits, including payment of interest and penalties;
- changes in the valuation of our deferred tax assets and liabilities, and in deferred tax valuation allowances;
- adjustments to income taxes upon finalization of tax returns;
- increases in expenses not deductible for tax purposes, including impairments of goodwill;
- changes in available tax credits;
- changes in our ability to secure new or renew existing tax holidays and incentives;
- changes in U.S. federal, state, or foreign tax laws or their interpretation, including changes in the U.S. to the taxation of manufacturing enterprises and of non-U.S. income and expenses;
- changes in accounting standards; and
- our decision to repatriate non-U.S. earnings for which we have not previously provided for local country withholding taxes incurred upon repatriation.



**WE MAY HAVE FLUCTUATIONS IN THE AMOUNT AND FREQUENCY OF OUR STOCK REPURCHASES.** We are not obligated to make repurchases under our stock repurchase program, and the amount, timing, and execution of our repurchases may fluctuate based on our priorities for the use of cash for other purposes—such as investing in our business, including operational spending, capital spending, and acquisitions, and returning cash to our stockholders as dividend payments—and because of changes in cash flows, tax laws, and the market price of our common stock.

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Table of Contents**NON-GAAP FINANCIAL MEASURES**

In addition to disclosing financial results in accordance with GAAP, this document contains references to the non-GAAP financial measures described below. We believe these non-GAAP financial measures provide investors with useful supplemental information about the financial performance of our business, enable comparison of financial results between periods where certain items may vary independent of business performance, and allow for greater transparency with respect to key metrics used by management in operating our business and measuring our performance.

Our non-GAAP operating income and diluted earnings per share reflect adjustments for the following items, as well as the related income tax effects. Income tax effects have been calculated using an appropriate tax rate for each adjustment. We also provide a non-GAAP financial measure of free cash flow, as described below. These non-GAAP financial measures should not be considered a substitute for, or superior to, financial measures calculated in accordance with GAAP, and the financial results calculated in accordance with GAAP and reconciliations from these results should be carefully evaluated.

**ACQUISITION-RELATED ADJUSTMENTS**

**Deferred revenue write-down:** Sales to distributors are made under agreements allowing for subsequent price adjustments and returns, and prior to 2018, were deferred until the products were resold by the distributor. Business combination accounting principles require us to write down to fair value the deferred revenue assumed in our acquisitions, as we have limited performance obligations associated with this deferred revenue. Our GAAP revenue and related cost of sales for the subsequent reselling by distributors to end customers after an acquisition do not reflect the full amounts that would have been reported if the acquired deferred revenue was not written down to fair value. The non-GAAP adjustments made in Q1 2016 eliminated the effect of the deferred revenue write-down associated with our acquisition of Altera. We believe these adjustments are useful to investors as an additional means to reflect revenue and gross margin trends of our business.

**Inventory valuation adjustments:** Business combination accounting principles require us to measure acquired inventory at fair value. The fair value of inventory reflects the acquired company's cost of manufacturing plus a portion of the expected profit margin. The non-GAAP adjustments to our cost of sales exclude the expected profit margin component that is recorded under business combination accounting principles associated with our acquisitions of Mobileye and Altera. We believe the adjustments are useful to investors as an additional means to reflect cost of sales and gross margin trends of our business.

**Amortization of acquisition-related intangible assets:** Amortization of acquisition-related intangible assets consists of amortization of intangible assets such as developed technology, brands, and customer relationships acquired in connection with business combinations. We record charges related to the amortization of these intangibles within both cost of sales and operating expenses in our GAAP financial statements. Amortization charges for our acquisition-related intangible assets are inconsistent in size and are significantly impacted by the timing and valuation of our acquisitions. Consequently, our non-GAAP adjustments exclude these charges to facilitate an evaluation of our current operating performance and comparisons to our past operating performance.

**Other acquisition-related charges:** Other acquisition-related charges exclude the impact of other charges associated with the acquisitions of Mobileye and Altera. These charges primarily include bankers' fees, compensation-related costs, and valuation charges for stock-based compensation incurred related to the acquisitions. We believe these adjustments are useful to investors as an additional means to reflect the spending trends of our business.

**RESTRUCTURING AND OTHER CHARGES**

Restructuring charges are costs associated with a formal restructuring plan and are primarily related to employee severance and benefit arrangements. Other charges include asset impairments, pension charges, and costs associated with the ISecG divestiture. We exclude restructuring and other charges, including any adjustments to charges recorded in prior periods, for purposes of calculating certain non-GAAP measures. We believe that these costs do not reflect our current operating performance. Consequently, our non-GAAP adjustments exclude these charges to facilitate an evaluation of our current operating performance and comparisons to our past operating performance.

**ONGOING MARK-TO-MARKET ON MARKETABLE EQUITY SECURITIES**

We exclude gains and losses resulting from ongoing mark-to-market adjustments of our marketable equity securities, after the initial mark-to-market adjustment is recorded upon a security becoming marketable, when calculating certain non-GAAP measures, as we do not believe this volatility correlates to our core operational performance.

Consequently, our non-GAAP earnings per share figures exclude these impacts to facilitate an evaluation of our current performance and comparisons to our past operating performance.

#### GAINS OR LOSSES FROM DIVESTITURE

We divested ISecG in Q2 2017 and Wind River in Q2 2018. We exclude gains or losses and related tax impacts resulting from divestitures when calculating certain non-GAAP measures. We believe making these adjustments facilitates a better evaluation of our current operating performance and comparisons to our past operating performance.

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We recognized a higher income tax expense in Q4 2017 as a result of Tax Reform and have made adjustments to the original estimate in 2018. We exclude the Q4 2017 provisional tax estimate and 2018 provisional tax adjustments relating to the transition tax on our previously untaxed foreign earnings and the remeasurement of our deferred income taxes to the new U.S. statutory tax rate for purposes of calculating certain non-GAAP measures. We believe making this adjustment facilitates a better evaluation of our current operating performance and comparisons to past operating results.

**FREE CASH FLOW**

We reference a non-GAAP financial measure of free cash flow, which is used by management when assessing our sources of liquidity, capital resources, and quality of earnings. We believe this non-GAAP financial measure is helpful to investors in understanding our capital requirements and provides an additional means to reflect the cash flow trends of our business.

Following are the reconciliations of our most comparable GAAP measures to our non-GAAP measures presented:

Years Ended	Dec 29,	Dec 30,	Dec 31,		
(In Millions, Except Per Share Amounts)	2018	2017	2016		
Operating income	\$23,316	\$18,050	\$13,133		
Deferred revenue write-down, net of cost of sales	—	—	64		
Inventory valuation adjustments	—	55	387		
Amortization of acquisition-related intangible assets	1,305	1,089	1,231		
Other acquisition-related charges	—	113	100		
Restructuring and other charges	(72 )	384	1,744		
Non-GAAP operating income	\$24,549	\$19,691	\$16,659		
Earnings per share - Diluted	\$4.48	\$1.99	\$2.12		
Deferred revenue write-down, net of cost of sales	—	—	0.01		
Inventory valuation adjustments	—	0.01	0.08		
Amortization of acquisition-related intangible assets	0.28	0.22	0.25		
Other acquisition-related charges	—	0.02	0.02		
Restructuring and other charges	(0.02 )	0.08	0.39		
(Gains) losses from divestitures	(0.11 )	(0.08 )	—		
Ongoing mark-to-market on marketable equity securities	0.03	—	—		
Tax Reform	(0.06 )	1.13	—		
Income tax effect	(0.02 )	0.09	(0.15 )		
Non-GAAP earnings per share - Diluted	\$4.58	\$3.46	\$2.72		
Years Ended	Dec 29,	Dec 30,	Dec 31,	Dec 26,	Dec 27,
(In Millions)	2018	2017	2016	2015	2014
Net cash provided by operating activities	\$29,432	\$22,110	\$21,808	\$19,018	\$20,418
Additions to property, plant and equipment	(15,181 )	(11,778 )	(9,625 )	(7,326 )	(10,105 )
Free cash flow	\$14,251	\$10,332	\$12,183	\$11,692	\$10,313
Net cash used for investing activities	\$(11,239)	\$(15,762)	\$(25,817)	\$(8,183 )	\$(9,905 )
Net cash provided by (used for) financing activities	\$(18,607)	\$(8,475 )	\$(5,739 )	\$1,912	\$(13,611)

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## PROPERTIES

As of December 29, 2018, our major facilities consisted of:

(Square Feet in Millions)	United States	Other Countries	Total
Owned facilities	30.5	22.2	52.7
Leased facilities	1.0	6.6	7.6
Total facilities	31.5	28.8	60.3

Our principal executive offices are located in the U.S. and approximately half of our wafer manufacturing activities in 2018 were also located in the U.S. For more information on our wafer fabrication and our assembly and test facilities, see "Manufactured Capital" within Fundamentals of Our Business.

We believe that the facilities described above are suitable and adequate for our present purposes and that the productive capacity in our facilities is being utilized or in the process of being prepared for utilization as we continue to invest capital to meet demand.

We do not identify or allocate assets by operating segment, as they are interchangeable in nature and used by multiple operating segments. For information on net property, plant and equipment by country, see "Note 7: Other Financial Statement Details" within the Consolidated Financial Statements.

## MARKET FOR OUR COMMON STOCK

The principal U.S. market on which Intel's common stock (symbol INTC) is traded is the Nasdaq Global Select Market. For dividend information, see "Financial Information by Quarter (Unaudited)" within the Consolidated Financial Statements.

As of January 26, 2019, there were approximately 116,000 registered holders of record of Intel's common stock. A substantially greater number of holders of Intel common stock are "street name" or beneficial holders, whose shares of record are held by banks, brokers, and other financial institutions.

## ISSUER PURCHASES OF EQUITY SECURITIES

We have an ongoing authorization, originally approved by our Board of Directors in 2005, and subsequently amended, to repurchase shares of our common stock in open market or negotiated transactions. As of December 29, 2018, we were authorized to repurchase up to \$90.0 billion, of which \$17.3 billion remained available. This amount includes an increase of \$15.0 billion in the authorization limit approved by our Board of Directors in November 2018.

Common stock repurchase activity under our publicly announced stock repurchase program during each quarter of 2018 was as follows:

Period	Total Number of Shares Purchased (In Millions)	Average Price Paid Per Share	Dollar Value of Shares That May Yet Be Purchased Under the Program (In Millions)
December 31, 2017 - March 31, 2018	40.8	\$ 47.93	\$ 11,237
April 1, 2018 - June 30, 2018	75.9	\$ 52.87	\$ 7,224
July 1, 2018 - September 29, 2018	50.1	\$ 49.83	\$ 4,728
September 30, 2018 - December 29, 2018	50.6	\$ 47.38	\$ 17,333
Total	217.3		

Common stock repurchase activity under our stock repurchase program during Q4 2018 was as follows:

Period	Total Number of Shares	Average Price Paid Per Share	Dollar Value of Shares That May
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	Purchased (In Millions)		Yet Be Purchased Under the Program (In Millions)
September 30, 2018 - October 27, 2018	—	\$ —	\$ 19,728
October 28, 2018 - November 24, 2018	21.3	\$ 47.71	\$ 18,714
November 25, 2018 - December 29, 2018	29.3	\$ 47.15	\$ 17,333
Total	50.6		

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We issue RSUs as part of our equity incentive plans. In our consolidated financial statements, we treat shares of common stock withheld for tax purposes on behalf of our employees in connection with the vesting of RSUs as common stock repurchases because they reduce the number of shares that would have been issued upon vesting. These withheld shares of common stock are not considered common stock repurchases under our authorized common stock repurchase plan, and accordingly are not included in the common stock repurchase totals in the preceding table.

**AVAILABILITY OF COMPANY INFORMATION**

Our Internet address is [www.intel.com](http://www.intel.com). We publish voluntary reports on our website that outline our performance with respect to corporate responsibility, including environmental, health, and safety compliance.

We use our Investor Relations website, [www.intc.com](http://www.intc.com), as a routine channel for distribution of important information, including news releases, analyst presentations, financial information, corporate governance practices, and corporate responsibility information. We post our filings at [www.intc.com/sec](http://www.intc.com/sec) the same day they are electronically filed with, or furnished to, the SEC, including our annual and quarterly reports on Forms 10-K and 10-Q and current reports on Form 8-K; our proxy statements; and any amendments to those reports or statements. We post our quarterly and annual earnings results at [www.intc.com/results.cfm](http://www.intc.com/results.cfm), and do not distribute our financial results via a news wire service. All such postings and filings are available on our Investor Relations website free of charge. In addition, our Investor Relations website allows interested persons to sign up to automatically receive e-mail alerts when we post financial information. The SEC's website, [www.sec.gov](http://www.sec.gov), contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The content on any website referred to in this Form 10-K is not incorporated by reference in this Form 10-K unless expressly noted.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
TO THE STOCKHOLDERS AND THE BOARD OF DIRECTORS OF INTEL CORPORATION

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Intel Corporation (the Company) as of December 29, 2018 and December 30, 2017, the related consolidated statements of income, comprehensive income, cash flows and stockholders' equity for each of the three years in the period ended December 29, 2018, and the related notes and Schedule II - Valuation and Qualifying Accounts (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 29, 2018 and December 30, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 29, 2018, in conformity with U.S. generally accepted accounting principles.

We also have 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 29, 2018, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 1, 2019 expressed an unqualified opinion thereon.

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.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1968.

San Jose, California

February 1, 2019

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
TO THE STOCKHOLDERS AND THE BOARD OF DIRECTORS OF INTEL CORPORATION

Opinion on Internal Control Over Financial Reporting

We have audited Intel Corporation's internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), (the COSO criteria). In our opinion, Intel Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 29, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2018 consolidated financial statements of the Company and our report dated February 1, 2019 expressed an unqualified opinion thereon.

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 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.

/s/ Ernst & Young LLP

San Jose, California  
February 1, 2019

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## CONSOLIDATED STATEMENTS OF INCOME

Years Ended (In Millions, Except Per Share Amounts)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Net revenue	\$70,848	\$62,761	\$59,387
Cost of sales	27,111	23,663	23,154
Gross margin	43,737	39,098	36,233
Research and development	13,543	13,035	12,685
Marketing, general and administrative	6,750	7,452	8,377
Restructuring and other charges	(72 )	384	1,744
Amortization of acquisition-related intangibles	200	177	294
Operating expenses	20,421	21,048	23,100
Operating income	23,316	18,050	13,133
Gains (losses) on equity investments, net	(125 )	2,651	506
Interest and other, net	126	(349 )	(703 )
Income before taxes	23,317	20,352	12,936
Provision for taxes	2,264	10,751	2,620
Net income	\$21,053	\$9,601	\$10,316
Earnings per share - Basic	\$4.57	\$2.04	\$2.18
Earnings per share - Diluted	\$4.48	\$1.99	\$2.12
Weighted average shares of common stock outstanding:			
Basic	4,611	4,701	4,730
Diluted	4,701	4,835	4,875
See accompanying notes.			

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CONSOLIDATED  
STATEMENTS OF  
COMPREHENSIVE  
INCOME

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Net income	\$21,053	\$9,601	\$10,316
Changes in other comprehensive income, net of tax:			
Net unrealized holding gains (losses) on available-for-sale equity investments	—	(434	) 415
Net unrealized holding gains (losses) on derivatives	(253	) 365	7
Actuarial valuation and other pension benefits (expenses), net	210	317	(364 )
Translation adjustments and other	(3	) 508	(12 )
Other comprehensive income (loss)	(46	) 756	46
Total comprehensive income	\$21,007	\$10,357	\$10,362
See accompanying notes.			

FINANCIAL STATEMENTS Consolidated Statements of Comprehensive Income 66

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## CONSOLIDATED BALANCE SHEETS

(In Millions, Except Par Value)	Dec 29, 2018	Dec 30, 2017
Assets		
Current assets:		
Cash and cash equivalents	\$3,019	\$3,433
Short-term investments	2,788	1,814
Trading assets	5,843	8,755
Accounts receivable, net of allowance for doubtful accounts of \$33 (\$25 in 2017)	6,722	5,607
Inventories	7,253	6,983
Other current assets	3,162	2,908
Total current assets	28,787	29,500
Property, plant and equipment, net	48,976	41,109
Equity investments	6,042	8,579
Other long-term investments	3,388	3,712
Goodwill	24,513	24,389
Identified intangible assets, net	11,836	12,745
Other long-term assets	4,421	3,215
Total assets	\$127,963	\$123,249
Liabilities, temporary equity, and stockholders' equity		
Current liabilities:		
Short-term debt	\$1,261	\$1,776
Accounts payable	3,824	2,928
Accrued compensation and benefits	3,622	3,526
Deferred income	—	1,656
Other accrued liabilities	7,919	7,535
Total current liabilities	16,626	17,421
Debt	25,098	25,037
Contract liabilities	2,049	—
Income taxes payable, non-current	4,897	4,069
Deferred income taxes	1,665	3,046
Other long-term liabilities	2,646	3,791
Commitments and Contingencies (Note 21)		
Temporary equity	419	866
Stockholders' equity:		
Preferred stock, \$0.001 par value, 50 shares authorized; none issued	—	—
Common stock, \$0.001 par value, 10,000 shares authorized; 4,516 shares issued and outstanding (4,687 issued and outstanding in 2017) and capital in excess of par value	25,365	26,074
Accumulated other comprehensive income (loss)	(974)	) 862
Retained earnings	50,172	42,083
Total stockholders' equity	74,563	69,019
Total liabilities, temporary equity, and stockholders' equity	\$127,963	\$123,249
See accompanying notes.		



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## CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Cash and cash equivalents, beginning of period	\$3,433	\$5,560	\$15,308
Cash flows provided by (used for) operating activities:			
Net income	21,053	9,601	10,316
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	7,520	6,752	6,266
Share-based compensation	1,546	1,358	1,444
Amortization of intangibles	1,565	1,377	1,524
(Gains) losses on equity investments, net	155	(2,583 )	(432 )
Loss on debt conversion and extinguishment	260	476	—
(Gains) losses on divestitures	(497 )	(387 )	—
Deferred taxes	(1,749 )	1,548	257
Changes in assets and liabilities:			
Accounts receivable	(1,714 )	(781 )	65
Inventories	(214 )	(1,300 )	119
Accounts payable	211	191	182
Accrued compensation and benefits	(260 )	311	291
Customer deposits and prepaid supply agreements	1,367	1,105	—
Income taxes payable and receivable	148	5,230	1,382
Other assets and liabilities	41	(788 )	394
Total adjustments	8,379	12,509	11,492
Net cash provided by operating activities	29,432	22,110	21,808
Cash flows provided by (used for) investing activities:			
Additions to property, plant and equipment	(15,181)	(11,778)	(9,625 )
Acquisitions, net of cash acquired	(190 )	(14,499)	(15,470 )
Purchases of available-for-sale debt investments	(3,843 )	(2,746 )	(9,269 )
Sales of available-for-sale debt investments	195	1,833	2,847
Maturities of available-for-sale debt investments	2,968	3,687	5,654
Purchases of trading assets	(9,503 )	(13,700)	(12,237 )
Maturities and sales of trading assets	12,111	13,970	10,898
Purchases of equity investments	(874 )	(1,619 )	(963 )
Sales of equity investments	2,802	5,236	1,080
Proceeds from divestitures	548	3,124	—
Other investing	(272 )	730	1,268
Net cash used for investing activities	(11,239)	(15,762)	(25,817 )
Cash flows provided by (used for) financing activities:			
Increase (decrease) in short-term debt, net	460	12	(15 )
Issuance of long-term debt, net of issuance costs	423	7,716	2,734
Repayment of debt and debt conversion	(3,026 )	(8,080 )	(1,500 )
Proceeds from sales of common stock through employee equity incentive plans	555	770	1,108
Repurchase of common stock	(10,730)	(3,615 )	(2,587 )
Payment of dividends to stockholders	(5,541 )	(5,072 )	(4,925 )
Other financing	(748 )	(206 )	(554 )
Net cash provided by (used for) financing activities	(18,607)	(8,475 )	(5,739 )
Net increase (decrease) in cash and cash equivalents	(414 )	(2,127 )	(9,748 )
Cash and cash equivalents, end of period	\$3,019	\$3,433	\$5,560



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Supplemental disclosures:

Acquisition of property, plant and equipment included in accounts payable and accrued liabilities	\$2,340	\$1,417	\$979
Non-marketable equity investment in McAfee from divestiture	\$—	\$1,078	\$—
Cash paid during the year for:			
Interest, net of capitalized interest	\$448	\$624	\$682
Income taxes, net of refunds	\$3,813	\$3,824	\$877
See accompanying notes.			

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## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In Millions, Except Per Share Amounts)	Common Stock and Capital		Accumulated		Total
	Number of Shares	Amount in Excess of Par Value	Other Comprehensive Income (Loss)	Retained Earnings	
Balance as of December 26, 2015	4,725	\$ 23,411	\$ 60	\$37,614	\$61,085
Components of comprehensive income, net of tax:					
Net income	—	—	—	10,316	10,316
Other comprehensive income (loss)	—	—	46	—	46
Total comprehensive income					10,362
Proceeds from sales of common stock through employee equity incentive plans, net tax benefit, and other	101	1,322	—	—	1,322
Share-based compensation	—	1,438	—	—	1,438
Repurchase of common stock	(81 )	(412 )	—	(2,180 )	(2,592 )
Restricted stock unit withholdings	(15 )	(386 )	—	(78 )	(464 )
Cash dividends declared (\$1.04 per share of common stock)	—	—	—	(4,925 )	(4,925 )
Balance as of December 31, 2016	4,730	25,373	106	40,747	66,226
Components of comprehensive income, net of tax:					
Net income	—	—	—	9,601	9,601
Other comprehensive income (loss)	—	—	756	—	756
Total comprehensive income					10,357
Proceeds from sales of common stock through employee equity incentive plans, net excess tax benefit, and other <sup>1</sup>	70	1,172	—	(1 )	1,171
Share-based compensation	—	1,296	—	—	1,296
Convertible debt	—	(894 )	—	—	(894 )
Repurchase of common stock	(101 )	(552 )	—	(3,057 )	(3,609 )
Restricted stock unit withholdings	(12 )	(321 )	—	(135 )	(456 )
Cash dividends declared (\$1.0775 per share of common stock)	—	—	—	(5,072 )	(5,072 )
Balance as of December 30, 2017	4,687	26,074	862	42,083	69,019
Adjustment to opening balance for change in accounting principle	—	—	(1,790 )	2,424	634
Opening balance as of December 31, 2017	4,687	26,074	(928 )	44,507	69,653
Components of comprehensive income, net of tax:					
Net income	—	—	—	21,053	21,053
Other comprehensive income (loss)	—	—	(46 )	—	(46 )
Total comprehensive income					21,007
Proceeds from sales of common stock through employee equity incentive plans, net excess tax benefit, and other <sup>1</sup>	56	424	—	—	424
Share-based compensation	—	1,548	—	—	1,548
Temporary equity reduction	—	447	—	—	447
Convertible debt	—	(1,591 )	—	—	(1,591 )
Repurchase of common stock	(217 )	(1,208 )	—	(9,650 )	(10,858 )
Restricted stock unit withholdings	(10 )	(329 )	—	(197 )	(526 )
Cash dividends declared (\$1.20 per share of common stock)	—	—	—	(5,541 )	(5,541 )

Balance as of December 29, 2018 4,516 \$ 25,365 \$ (974 ) \$ 50,172 \$ 74,563

<sup>1</sup> Includes approximately \$375 million of non-controlling interest activity due to our acquisition of Mobileye in 2017, which was eliminated in 2018 due to purchase of remaining shares.

See accompanying notes.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 : BASIS OF PRESENTATION

We have a 52- or 53-week fiscal year that ends on the last Saturday in December. Fiscal years 2018 and 2017 were 52-week fiscal years. Fiscal year 2016 was a 53-week year with the first quarter of 2016 being a 14-week quarter. Our consolidated financial statements include the accounts of Intel Corporation (Intel) and our subsidiaries. We have eliminated intercompany accounts and transactions. We have reclassified certain prior period amounts to conform to current period presentation.

USE OF ESTIMATES

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires us to make estimates and judgments that affect the amounts reported in our consolidated financial statements and the accompanying notes. The actual results that we experience may differ materially from our estimates.

NOTE 2 : ACCOUNTING POLICIES

REVENUE RECOGNITION

We recognize net product revenue when we satisfy performance obligations as evidenced by the transfer of control of our products or services to customers. Substantially all of our revenue is derived from product sales. In accordance with contract terms, revenue for product sales is recognized at the time of product shipment from our facilities or delivery to the customer location, as determined by the agreed upon shipping terms. Prior to 2018, on sales made to distributors that allowed for price protections or right of return until the distributor sold through the merchandise, we deferred product revenue and related costs of sales. We include shipping charges billed to customers in net revenue, and include the related shipping costs in cost of sales.

We measure revenue based on the amount of consideration we expect to be entitled to in exchange for products or services. Variable consideration is estimated and reflected as an adjustment to the transaction price. We determine variable consideration, which consists primarily of various sales price concessions, by estimating the most likely amount of consideration we expect to receive from the customer based on historical analysis of customer purchase volumes. Sales rebates earned by customers are offset against their receivable balances. Rebates earned by customers when they do not have outstanding receivable balances are recorded within other accrued liabilities. The impacts of distributor sales price reductions resulting from price protection agreements are also estimated based on historical analysis of such activity and are reflected as a reduction in net revenue.

We make payments to our customers through cooperative advertising programs for marketing activities for certain of our products. We generally record the payment as a reduction in revenue in the period that the revenue is earned, unless the payment is for a distinct service, which we record as expense when the marketing activities occur. During the second half of 2017, we transitioned customers from previous offerings under the Intel Inside® program to cooperative advertising offerings more tailored to customers and their marketing audiences. These cooperative advertising costs are recorded as a reduction of revenue beginning in the second half of 2017, as we no longer meet the criteria for recording these as expense.

INVENTORIES

We compute inventory cost on a first-in, first-out basis. Our process and product development life cycle corresponds with substantive engineering milestones. These engineering milestones are regularly and consistently applied in assessing the point at which our activities and associated costs change in nature from research and development (R&D) to cost of sales, and when cost of sales can be capitalized as inventory.

For a product to be manufactured in high volumes and sold to our customers under our standard warranty, it must meet our rigorous technical quality specifications. This milestone is known as product release qualification (PRQ). We have identified PRQ as the point at which the costs incurred to manufacture our products are included in the valuation of inventory. Prior to PRQ, costs that do not meet the criteria for R&D are included in cost of sales in the period incurred. If the point at which we estimate that inventory meets PRQ criteria changes in the future, the timing and recognition of costs would shift between R&D, inventory, and costs of sales. A single PRQ has previously ranged up to \$770 million and is dependent on product type.

The valuation of inventory includes determining which fixed production overhead costs can be included in inventory based on the normal capacity of our manufacturing and assembly and test facilities. We apply our historical loadings compared to our total available capacity in a statistical model to determine our normal capacity level. If the factory loadings are below the established normal capacity level, a portion of our fixed production overhead costs would not be included in the cost of inventory; instead, it would be recognized as cost of sales in that period. We refer to these costs as excess capacity charges. Excess capacity charges are insignificant in the years presented. Charges in certain prior years have ranged from \$46 million to \$1.1 billion. The high end of the range would be \$540 million when excluding the \$1.1 billion charge taken in connection with the 2009 economic recession.

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Inventory is valued at the lower of cost or net realizable value, based upon assumptions about future demand and market conditions. Product-specific facts and circumstances reviewed in the inventory valuation process include a review of our customer base, the stage of the product life cycle, and an assessment of selling price in relation to product cost. Inventory reserves increased by approximately \$295 million in 2018 compared to 2017.

The valuation of inventory also requires us to estimate obsolete and excess inventory, as well as inventory that is not of saleable quality. We use the demand forecast to develop our short-term manufacturing plans to enable consistency between inventory valuations and build decisions. We compare the estimate of future demand to work in process and finished goods inventory levels to determine the amount, if any, of obsolete or excess inventory. If our demand forecast for specific products is greater than actual demand and we fail to reduce manufacturing output accordingly, we could be required to write off inventory.

**PROPERTY, PLANT AND EQUIPMENT**

We compute depreciation using the straight-line method over the estimated useful life of assets. We also capitalize interest on borrowings related to eligible capital expenditures. Capitalized interest is added to the cost of qualified assets and depreciated together with that asset cost. We record capital-related government grants earned as a reduction to property, plant and equipment.

Annually, we evaluate the period over which we expect to recover the economic value of our property, plant and equipment, considering factors such as the process technology cadence between node transitions, changes in machinery and equipment technology, and re-use of machinery and tools across each generation of process technology. As we make manufacturing process conversions and other factory planning decisions, we use assumptions involving the use of management judgments regarding the remaining useful lives of assets, primarily process-specific semiconductor manufacturing tools and building improvements. When we determine that the useful lives of assets are shorter or longer than we had originally estimated, we adjust the rate of depreciation to reflect the assets' revised useful lives.

Assets are "grouped" and evaluated for impairment at the lowest level of identifiable cash flows. We assess property, plant and equipment for impairment when events or changes in circumstances indicate that the carrying value of the assets or the asset grouping may not be recoverable. Factors that we consider in deciding when to perform an impairment review include significant under-performance of a business or product line in relation to expectations, significant negative industry or economic trends, and significant changes or planned changes in our use of the assets. We measure the recoverability of assets that we will continue to use in our operations by comparing the carrying value of the asset grouping to our estimate of the related total future undiscounted net cash flows arising from the use of that asset grouping. If an asset grouping carrying value is not recoverable through the related undiscounted cash flows, the asset grouping is considered to be impaired. We measure the impairment by comparing the difference between the asset grouping carrying value and its fair value.

We may have certain facilities, included within construction in progress, being held in a safe state and not currently in use that we plan to place into service at a future date. The time at which these assets are placed into service depends on our existing manufacturing capacity, market demand for our products, and where we are in the transition of products on our roadmap. Management makes judgments about the timing of when these facilities will be readied for their intended use and placed into service for the manufacturing of our products. Depreciation is not recognized on these assets and they are not eligible for capitalized interest when construction is on hold.

**FAIR VALUE**

When determining fair value, we consider the principal or most advantageous market in which we would transact, as well as assumptions that market participants would use when pricing the asset or liability. Our financial assets are measured and recorded at fair value on a recurring basis, except for equity securities measured using the measurement alternative, equity method investments, cost method loans receivable, grants receivable, and reverse repurchase agreements with original maturities greater than three months. We assess fair value hierarchy levels for our issued debt and fixed-income investment portfolio based on the underlying instrument type.

The three levels of inputs that may be used to measure fair value are:

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Level 1. Quoted prices in active markets for identical assets or liabilities. We evaluate security-specific market data when determining whether a market is active.

Level 2. Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in less active markets, or model-derived valuations. All significant inputs used in our valuations, such as discounted cash flows, are observable or can be derived principally from or corroborated with observable market data for substantially the full term of the assets or liabilities. We use LIBOR-based yield curves, currency spot and forward rates, and credit ratings as significant inputs in our valuations. Level 2 inputs also include non-binding market consensus prices, as well as quoted prices that were adjusted for security-specific restrictions. When we use non-binding market consensus prices, we corroborate them with quoted market prices for similar instruments or compare them to output from internally developed pricing models such as discounted cash flow models.

Level 3. Unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of assets or liabilities. We monitor and review the inputs and results of these valuation models to help ensure the fair value measurements are reasonable and consistent with market experience in similar asset classes. Level 3 inputs also include non-binding market consensus prices or non-binding broker quotes that we were unable to corroborate with observable market data.

Table of Contents**DEBT INVESTMENTS**

We consider all highly liquid debt investments with original maturities from the date of purchase of three months or less as cash equivalents. Cash equivalents can include investments such as corporate debt, financial institution instruments, government debt, and reverse repurchase agreements.

Marketable debt investments are generally designated as trading assets when a market risk is economically hedged at inception with a related derivative instrument, or when the marketable debt investment itself is used to economically hedge currency exchange rate risk from remeasurement. Investments designated as trading assets are reported at fair value. Gains or losses on these investments arising from changes in fair value due to interest rate and currency market fluctuations and credit market volatility, largely offset by losses or gains on the related derivative instruments and balance sheet remeasurement, are recorded in interest and other, net.

Marketable debt investments are considered available-for-sale investments when the interest rate and foreign currency risks are not hedged at the inception of the investment or when our criteria for designation as trading assets are not met. Available-for-sale debt investments with original maturities of approximately three months or less from the date of purchase are classified within cash and cash equivalents. Available-for-sale debt investments with original maturities at the date of purchase greater than approximately three months and remaining maturities of less than one year are classified as short-term investments. Available-for-sale debt investments with remaining maturities beyond one year are classified as other long-term investments. Available-for-sale debt investments are reported at fair value, with unrealized gains or losses, net of tax, recorded in accumulated other comprehensive income (loss). We determine the cost of the investment sold based on an average cost basis at the individual security level, and record the interest income and realized gains or losses on the sale of these investments in interest and other, net.

Our available-for-sale debt investments are subject to periodic impairment reviews. For these investments, we consider whether it is more likely than not that we will be required to sell the investment before recovery of its amortized cost basis, or whether recovery of the entire amortized cost basis of the investment is unlikely because a credit loss exists. When we do not expect to recover the entire amortized cost basis of the investment, we separate other-than-temporary impairments into amounts representing credit losses, which are recognized in interest and other, net, and amounts not related to credit losses, which are recognized in other comprehensive income (loss).

**EQUITY INVESTMENTS**

We regularly invest in equity securities of public and private companies to promote business and strategic objectives. Equity investments are measured and recorded as follows:

Marketable equity securities are equity securities with readily determinable fair value (RDFV) that are measured and recorded at fair value on a recurring basis with changes in fair value, whether realized or unrealized, recorded through the income statement. Prior to 2018, these securities were classified as available-for-sale securities and measured and recorded at fair value with unrealized changes in fair value recorded through other comprehensive income.

Non-marketable equity securities are equity securities without RDFV that are measured and recorded using a measurement alternative that measures the securities at cost minus impairment, if any, plus or minus changes resulting from qualifying observable price changes. Prior to fiscal 2018, these securities were accounted for using the cost method of accounting, measured at cost less other-than-temporary impairment.

Equity method investments are equity securities in investees we do not control but over which we have the ability to exercise significant influence. Equity method investments are measured at cost minus impairment, if any, plus or minus our share of equity method investee income or loss. Our proportionate share of the income or loss from equity method investments is recognized on a one-quarter lag.

Realized and unrealized gains and losses resulting from changes in fair value or the sale of our equity investments are recorded in gains (losses) on equity investments, net. Prior to 2018, we recorded unrealized gains and losses through other comprehensive income (loss) and realized gains and losses on the sale, exchange, or impairment of these equity investments through gains (losses) on equity investments, net. The carrying value of our non-marketable equity securities is adjusted for qualifying observable price changes resulting from the issuance of similar or identical securities by the same issuer. Determining whether an observed transaction is similar to a security within our portfolio requires judgment based on the rights and preferences of the securities. Recording upward and downward adjustments



to the carrying value of our equity securities as a result of observable price changes requires quantitative assessments of the fair value of our securities using various valuation methodologies and involves the use of estimates. Non-marketable equity securities and equity method investments (collectively referred to as non-marketable equity investments) are also subject to periodic impairment reviews. Our quarterly impairment analysis considers both qualitative and quantitative factors that may have a significant impact on the investee's fair value. Qualitative factors considered include the investee's financial condition and business outlook, industry and sector performance, market for technology, operational and financing cash flow activities, and other relevant events and factors affecting the investee. When indicators of impairment exist, we prepare quantitative assessments of the fair value of our non-marketable equity investments using both the market and income approaches, which require judgment and the use of estimates, including discount rates, investee revenue and costs, and comparable market data of private and public companies, among others.

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Non-marketable equity securities are tested for impairment using a qualitative model similar to the model used for goodwill and long-lived assets. Upon determining that an impairment may exist, the security's fair value is calculated and compared to its carrying value and an impairment is recognized immediately if the carrying value exceeds the fair value. Prior to 2018, non-marketable equity securities were tested for impairment using the other-than-temporary impairment model.

Equity method investments are subject to periodic impairment reviews using the other-than-temporary impairment model, which considers the severity and duration of a decline in fair value below cost and our ability and intent to hold the investment for a sufficient period of time to allow for recovery.

Impairments of equity investments are recorded in gains (losses) on equity investments, net.

**DERIVATIVE FINANCIAL INSTRUMENTS**

Our primary objective for holding derivative financial instruments is to manage currency exchange rate risk and interest rate risk, and, to a lesser extent, equity market risk, commodity price risk, and credit risk. We enter into master netting arrangements to mitigate credit risk in derivative transactions by permitting net settlement of transactions with the same counterparty. A master netting arrangement allows counterparties to net settle amounts owed to each other as a result of multiple, separate derivative transactions. We also enter into collateral security arrangements with certain of our counterparties to exchange cash collateral when the net fair value of certain derivative instruments fluctuates from contractually established thresholds. We record the collateral within current other assets and long-term other assets with a corresponding liability. For presentation on our consolidated balance sheets, we do not offset fair value amounts recognized for derivative instruments under master netting arrangements. Our derivative financial instruments are presented at fair value on a gross basis and are included in other current assets, other long-term assets, other accrued liabilities, or other long-term liabilities.

Cash flow hedges use foreign currency contracts, such as currency forwards and currency interest rate swaps, to hedge exposures for the following items:

- variability in the U.S.-dollar equivalent of non-U.S.-dollar-denominated cash flows associated with our forecasted operating and capital purchases spending; and
- coupon and principal payments for our non-U.S.-dollar-denominated indebtedness.

The after-tax gains or losses from the effective portion of a cash flow hedge is reported as a component of accumulated other comprehensive income (loss) and reclassified into earnings in the same period or periods in which the hedged transaction affects earnings, and in the same line item on the consolidated statements of income as the impact of the hedge transaction. For foreign currency contracts hedging our capital purchases, forward points are excluded from the hedge effectiveness assessment. Ineffective portions of cash flow hedges, as well as amounts excluded from the hedge effectiveness assessment, are recognized in earnings in interest and other, net. If the cash flow hedge transactions become probable not to occur, the corresponding amounts deferred in accumulated other comprehensive income (loss) would be immediately reclassified to interest and other, net. These derivatives are classified in the consolidated statements of cash flows in the same section as the underlying item.

Fair value hedges use interest rate contracts, such as interest rate swaps, to hedge against changes in the fair value on certain of our fixed-rate indebtedness attributable to changes in the benchmark interest rate. The gains or losses on these hedges, as well as the offsetting losses or gains related to the changes in the fair value of the underlying hedged item attributable to the hedged risk, are recognized in earnings in the current period, primarily in interest and other, net. These derivatives are classified in the consolidated statements of cash flows in the same section as the underlying item, primarily within cash flows from financing activities.

Non-designated hedges use foreign currency contracts to economically hedge the functional currency equivalent cash flows of recognized monetary assets and liabilities, non-U.S.-dollar-denominated debt instruments classified as trading assets, and non-U.S.-dollar-denominated loans receivables recognized at fair value. We also use interest rate contracts to hedge interest rate risk related to our U.S.-dollar-denominated fixed-rate debt instruments classified as trading assets.

The change in fair value of these derivatives is recorded through earnings in the line item on the consolidated statements of income to which the derivatives most closely relate, primarily in interest and other, net. Changes in the

fair value of the underlying assets and liabilities associated with the hedged risk are generally offset by the changes in the fair value of the related derivatives.

**LOANS RECEIVABLE**

We elect the fair value option when the interest rate or foreign currency exchange rate risk is economically hedged at the inception of the loan with a related derivative instrument. When the fair value option is not elected, the loans are carried at amortized cost. We measure interest income for all loans receivable using the interest method, which is based on the effective yield of the loans rather than the stated coupon rate. We classify our loans within other current and long-term assets.

Table of Contents**CREDIT RISK**

Financial instruments that potentially subject us to concentrations of credit risk consist principally of investments in debt instruments, derivative financial instruments, loans receivable, reverse repurchase agreements, and trade receivables. We enter into master netting arrangements to mitigate credit risk in derivative transactions by permitting net settlement of transactions with the same counterparty.

We generally place investments with high-credit-quality counterparties and, by policy, we limit the amount of credit exposure to any one counterparty based on our analysis of that counterparty's relative credit standing. As required per our investment policy, substantially all of our investments in debt instruments and financing receivables are in investment-grade instruments. Credit-rating criteria for derivative instruments are similar to those for other investments. Due to master netting arrangements, the amounts subject to credit risk related to derivative instruments are generally limited to the amounts, if any, by which the counterparty's obligations exceed our obligations with that counterparty. As of December 29, 2018, our total credit exposure to any single counterparty, excluding money market funds invested in U.S. treasury and U.S. agency securities and reverse repurchase agreements collateralized by treasury and agency securities, did not exceed \$750 million. To further reduce credit risk, we obtain and secure available collateral from counterparties against obligations, including securities lending transactions, when we deem it appropriate.

A substantial majority of our trade receivables are derived from sales to original equipment manufacturers (OEMs) and original design manufacturers (ODMs). We also have accounts receivable derived from sales to industrial and communications equipment manufacturers in the computing and communications industries. We believe that the net accounts receivable balances from our three largest customers (45% as of December 29, 2018) do not represent a significant credit risk, based on cash flow forecasts, balance sheet analysis, and past collection experience. For more information about the customers that represent our accounts receivable balance, see "Note 4: Operating Segments." We have adopted credit policies and standards intended to accommodate industry growth and inherent risk. We believe that credit risks are moderated by the financial stability of our major customers. We assess credit risk through quantitative and qualitative analysis. From this analysis, we establish shipping and credit limits, and determine whether we will seek to use one or more credit support protection devices, such as obtaining a parent guarantee, standby letter of credit, or credit insurance.

**BUSINESS COMBINATIONS**

We allocate the purchase price paid for assets acquired and liabilities assumed in connection with our acquisitions based on their estimated fair values at the time of acquisition. This allocation involves a number of assumptions, estimates, and judgments that could materially affect the timing or amounts recognized in our financial statements. The most subjective areas include determining the fair value of the following:

- intangible assets, including the valuation methodology, estimations of future cash flows, discount rates, market segment growth rates, and our assumed market segment share, as well as the estimated useful life of intangible assets;
- deferred tax assets and liabilities, uncertain tax positions, and tax-related valuation allowances, which are initially estimated as of the acquisition date;
- inventory; property, plant and equipment; pre-existing liabilities or legal claims; deferred revenue; and contingent consideration, each as may be applicable; and
- goodwill as measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed.

Our assumptions and estimates are based upon comparable market data and information obtained from our management and the management of the acquired companies. We allocate goodwill to the reporting units of the business that are expected to benefit from the business combination.

**GOODWILL**

We perform an annual impairment assessment of goodwill at the reporting unit level in the fourth quarter of each year, or more frequently if indicators of potential impairment exist. The analysis may include both qualitative and quantitative factors to assess the likelihood of an impairment. The reporting unit's carrying value used in an impairment test represents the assignment of various assets and liabilities, excluding certain corporate assets and

liabilities, such as cash, investments, and debt.

Qualitative factors include industry and market considerations, overall financial performance, and other relevant events and factors affecting the reporting unit. Additionally, as part of this assessment, we may perform a quantitative analysis to support the qualitative factors above by applying sensitivities to assumptions and inputs used in measuring a reporting unit's fair value.

Our quantitative impairment test considers both the income approach and the market approach to estimate a reporting unit's fair value. Significant estimates include market segment growth rates, our assumed market segment share, estimated costs, and discount rates based on a reporting unit's weighted average cost of capital.

We test the reasonableness of the inputs and outcomes of our discounted cash flow analysis against available market data. In the current year, the fair value for all of our reporting units substantially exceeds their carrying value, and our annual qualitative assessment did not indicate that a more detailed quantitative analysis was necessary.

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**IDENTIFIED INTANGIBLE ASSETS**

We amortize acquisition-related intangible assets that are subject to amortization over their estimated useful life. Acquisition-related in-process R&D assets represent the fair value of incomplete R&D projects that had not reached technological feasibility as of the date of acquisition; initially, these are classified as in-process R&D and are not subject to amortization. Once these R&D projects are completed, the asset balances are transferred from in-process R&D to acquisition-related developed technology and are subject to amortization from this point forward. The asset balances relating to projects that are abandoned after acquisition are impaired and expensed to R&D.

We perform a quarterly review of significant finite-lived identified intangible assets to determine whether facts and circumstances indicate that the carrying amount may not be recoverable. These reviews can be affected by various factors, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our forecasts for specific product lines.

**EMPLOYEE EQUITY INCENTIVE PLANS**

We use the straight-line amortization method to recognize share-based compensation expense over the service period of the award, net of estimated forfeitures. Upon exercise, cancellation, forfeiture, or expiration of stock options, or upon vesting or forfeiture of restricted stock units (RSUs), we eliminate deferred tax assets for options and RSUs with multiple vesting dates for each vesting period on a first-in, first-out basis as if each vesting period were a separate award.

**INCOME TAXES**

We compute the provision for income taxes using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. We measure deferred tax assets and liabilities using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets are expected to be realized or settled.

We assess the likelihood that we will be able to recover our deferred tax assets. If recovery is not likely, we must increase our provision for taxes by recording a valuation allowance against the deferred tax assets that we estimate will not ultimately be recoverable. We believe that we will ultimately recover the deferred tax assets recorded on our consolidated balance sheets. Recovery of a portion of our deferred tax assets is affected by management's plans with respect to holding or disposing of certain investments; therefore, such changes could also affect our future provision for taxes.

We recognize tax benefits from uncertain tax positions only if (based on the technical merits of the position) it is more likely than not that the tax positions will be sustained on examination by the tax authority. The tax benefits recognized in the financial statements from such positions are measured based on the largest amount that is more than 50% likely to be realized upon ultimate settlement. We recognize interest and penalties related to unrecognized tax benefits within the provision for taxes on the consolidated statements of income.

We have completed the accounting associated with the December 22, 2017 enactment of the U.S. Tax Cuts and Jobs Act (Tax Reform). The U.S. Securities and Exchange Commission (SEC) had provided accounting and reporting guidance that allowed us to report provisional amounts within a measurement period up to one year from the enactment date. Complexities inherent in adopting the changes included additional guidance, interpretations of the law, and further analysis of data and tax positions. During 2018, as part of completing our accounting, we recognized approximately \$300 million reduction to our one-time net tax charge related to the transition tax and the remeasurement of deferred income taxes. For more information about Tax Reform impacts, see "Note 9: Income Taxes."

We recognize the tax impact of including certain foreign earnings in U.S. taxable income as a period cost. We have recognized deferred income taxes for local country income and withholding taxes that could be incurred on distributions of certain non-U.S. earnings or for outside basis differences in our subsidiaries, because we do not plan to indefinitely reinvest such earnings and basis differences. Remittances of non-U.S. earnings are based on estimates and judgments of projected cash flow needs, as well as the working capital and investment requirements of our non-U.S. and U.S. operations. Material changes in our estimates of cash, working capital, and investment needs in

various jurisdictions could require repatriation of indefinitely reinvested non-U.S. earnings, which could be subject to applicable non-U.S. income and withholding taxes.

**LOSS CONTINGENCIES**

We are subject to loss contingencies, including various legal and regulatory proceedings, asserted and potential claims, liabilities related to repair or replacement of parts in connection with product defects, as well as product warranties and potential asset impairments that arise in the ordinary course of business. An estimated loss from such contingencies is recognized as a charge to income if it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

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NOTE 3 : RECENT ACCOUNTING STANDARDS

ACCOUNTING STANDARDS ADOPTED

Retirement Benefits - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

Standard/Description: This amended standard was issued to provide additional guidance on the presentation of net periodic benefit cost in the income statement and on the components eligible for capitalization in assets. In accordance with the revised standard, we have separated the different components of net periodic benefit cost, presenting service cost components within operating income and other non-service components separately outside of operating income on the income statement. In addition, only service costs are now eligible for inventory capitalization.

Effective Date and Adoption Considerations: Effective in the first quarter of 2018. Changes to the presentation of benefit costs were required to be adopted retrospectively, while changes to the capitalization of service costs into inventories were required to be adopted prospectively. The standard permits, as a practical expedient, use of the amounts disclosed in the Retirement Benefit Plans footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation requirement.

Effect on Financial Statements or Other Significant Matters: Adoption of the amended standard resulted in the reclassification of non-service net periodic benefit costs from line items within operating income to interest and other, net, of approximately \$114 million for the year ended December 30, 2017 (\$259 million for the year ended December 31, 2016).

Revenue Recognition - Contracts with Customers

Standard/Description: This standard was issued to achieve a consistent application of revenue recognition within the U.S., resulting in a single revenue model to be applied by all companies. Under the new model, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires that companies disclose the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

Effective Date and Adoption Considerations: Effective in the first quarter of 2018. This standard was adopted using a modified retrospective approach through a cumulative adjustment to retained earnings for the fiscal year beginning December 31, 2017.

Effect on Financial Statements or Other Significant Matters: Our adoption assessments identified a change in revenue recognition timing on our component sales made to distributors. Under the new standard, we now recognize revenue when we deliver to the distributor rather than deferring recognition until the distributor sells the components.

On the date of initial application, we removed the deferred income and related receivables on component sales made to distributors through a cumulative adjustment to retained earnings. The revenue deferral that was historically recognized in the following period is expected to be primarily offset by the acceleration of revenue recognition in the current period as control of the product transfers to our customer.

Our assessment also identified a change in expense recognition timing related to payments we make to our customers for distinct services they perform as part of cooperative advertising programs, which were previously recorded as operating expenses. We now recognize the expense for cooperative advertising in the period the marketing activities occur. Previously we recognized the expense in the period the customer was entitled to participate in the program, which coincided with the period of sale. On the date of initial adoption, we capitalized the expense of cooperative advertising not performed through a cumulative adjustment to retained earnings.

We have completed our adoption and implemented policies, processes, and controls to support the standard's measurement and disclosure requirements. Refer to the tables below, which summarize the impacts of the changes discussed above to our financial statements recorded as an adjustment to opening balances for the fiscal year beginning December 31, 2017, and also provide comparative reporting of the impacts of adopting the standard.

Financial Instruments - Recognition and Measurement

Standard/Description: Requires changes to the accounting for financial instruments that primarily affect equity securities, financial liabilities measured using the fair value option, and the presentation and disclosure requirements



for such instruments.

Effective Date and Adoption Considerations: Effective in the first quarter of 2018. Changes to our marketable equity securities were required to be adopted using a modified retrospective approach through a cumulative effect adjustment to retained earnings for the fiscal year beginning December 31, 2017. Since management has elected to apply the measurement alternative to non-marketable equity securities, changes to these securities were adopted prospectively.

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Effect on Financial Statements or Other Significant Matters: Marketable equity securities previously classified as available-for-sale equity investments are now measured and recorded at fair value with changes in fair value recorded through the income statement.

All non-marketable equity securities formerly classified as cost method investments are measured and recorded using the measurement alternative. Equity securities measured and recorded using the measurement alternative are recorded at cost minus impairment, if any, plus or minus changes resulting from qualifying observable price changes. Adjustments resulting from impairments and qualifying observable price changes are recorded in the income statement.

Beginning in the first quarter of 2018, in accordance with the standard, recurring fair value disclosures are no longer provided for equity securities measured using the measurement alternative. In addition, the previous impairment model has been replaced with a simplified qualitative impairment model. No initial adoption adjustment was recorded for these instruments since the standard was required to be applied prospectively for securities measured using the measurement alternative.

We have completed our adoption and implemented policies, processes, and controls to support the standard's measurement and disclosure requirements. Refer to the table below, which summarizes impacts, net of tax, of the changes discussed above to our financial statements. This reflects an adjustment to opening balances for the fiscal year beginning December 31, 2017.

## Opening Balance Adjustments

The following table summarizes the effects of adopting Revenue Recognition - Contracts with Customers and Financial Instruments - Recognition and Measurement on our financial statements for the fiscal year beginning December 31, 2017 as an adjustment to the opening balance:

(In Millions)	Balance as of Dec 30, 2017	Adjustments from			Opening Balance as of Dec 31, 2017
		Revenue Standard	Financial Instruments Update	Other <sup>1</sup>	
<b>Assets:</b>					
Accounts receivable, net	\$5,607	\$(530 )	\$ —	\$ —	\$5,077
Inventories	\$6,983	\$47	\$ —	\$ —	\$7,030
Other current assets	\$2,908	\$64	\$ —	\$(8 )	\$2,964
Equity investments	\$ —	\$ —	\$ 8,579	\$ —	\$8,579
Marketable equity securities	\$4,192	\$ —	\$(4,192 )	\$ —	\$ —
Other long-term assets	\$7,602	\$ —	\$(4,387 )	\$(43 )	\$3,172
<b>Liabilities:</b>					
Deferred income	\$1,656	\$(1,356)	\$ —	\$ —	\$300
Other accrued liabilities	\$7,535	\$81	\$ —	\$ —	\$7,616
Long-term deferred tax liabilities	\$3,046	\$191	\$ —	\$(20 )	\$3,217
<b>Stockholders' equity:</b>					
Accumulated other comprehensive income (loss)	\$862	\$ —	\$(1,745 )	\$(45 )	\$(928 )
Retained earnings	\$42,083	\$665	\$ 1,745	\$ 14	\$44,507

Includes adjustments from the adoption of "Income Taxes - Intra-Entity Transfers of Assets Other Than Inventory"<sup>1</sup> and "Income Statement—Reporting Comprehensive Income - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income."

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The following table summarizes the impacts of adopting the new revenue standard on our consolidated statements of income and balance sheets:

(In Millions)	For the fiscal year ended December 29, 2018		
	As reported	Adjustments	Without new revenue standard
Net revenue	\$70,848	\$ (616 )	\$ 70,232
Cost of sales	27,111	(206 )	26,905
Gross margin	43,737	(410 )	43,327
Marketing, general and administrative	6,750	(70 )	6,680
Operating income	23,316	(340 )	22,976
Income before taxes	23,317	(340 )	22,977
Provision for taxes	2,264	(64 )	2,200
Net income	\$21,053	\$ (276 )	\$ 20,777

## Assets:

Accounts receivable	\$6,722	\$ 216	\$ 6,938
Inventories	\$7,253	\$ 62	\$ 7,315
Other current assets	\$3,162	\$ 4	\$ 3,166

## Liabilities:

Deferred income	\$—	\$ 1,846	\$ 1,846
Other accrued liabilities	\$7,919	\$ (514 )	\$ 7,405
Deferred income taxes	\$1,665	\$ (109 )	\$ 1,556

## Equity:

Retained earnings	\$50,172	\$ (941 )	\$ 49,231
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## ACCOUNTING STANDARDS NOT YET ADOPTED

## Leases

**Standard/Description:** This new lease accounting standard requires that we recognize operating leased assets and corresponding liabilities on the balance sheet and provide enhanced disclosure of lease activity.

**Effective Date and Adoption Considerations:** Effective in the first quarter of 2019. The standard requires a modified retrospective adoption. We can choose to apply the provisions at the beginning of the earliest comparative period presented in the financial statements or at the beginning of the period of adoption. We have elected to apply the guidance at the beginning of the period of adoption. Our leased assets and corresponding liabilities will exclude non-lease components.

**Effect on Financial Statements or Other Significant Matters:** We expect to record right-of-use leased assets and corresponding liabilities of approximately \$625 million at the beginning of first quarter 2019.

## Cloud Computing Implementation Costs

**Standard/Description:** The standard requires implementation costs incurred in cloud computing (i.e., hosting) arrangements that are service contracts to be assessed under existing guidance to determine which costs to capitalize as assets or expense as incurred.

**Effective Date and Adoption Considerations:** Effective in the first quarter of 2020. The standard requires adoption either retrospectively or prospectively.

Effect on Financial Statements or Other Significant Matters: We have not yet determined the impact of this standard on our financial statements.

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## NOTE 4 : OPERATING SEGMENTS

We manage our business through the following operating segments:

- Client Computing Group (CCG)
- Data Center Group (DCG)
- Internet of Things Group (IOTG)
- Non-Volatile Memory Solutions Group (NSG)
- Programmable Solutions Group (PSG)
- All other

We offer platform products that incorporate various components and technologies, including a microprocessor and chipset, a stand-alone System-on-Chip (SoC), or a multichip package. A platform product may be enhanced by additional hardware, software, and services offered by Intel. Platform products are used in various form factors across our CCG, DCG, and IOTG operating segments. We derive a substantial majority of our revenue from platform products, which are our principal products and considered as one class of product.

CCG and DCG are our reportable operating segments. IOTG, NSG, and PSG do not meet the quantitative thresholds to qualify as reportable operating segments; however, we have elected to disclose the results of these non-reportable operating segments.

We have sales and marketing, manufacturing, engineering, finance, and administration groups. Expenses for these groups are generally allocated to the operating segments.

The "all other" category includes revenue and expenses such as:

- results of operations from non-reportable segments not otherwise presented, including Mobileye results;
  - historical results of operations from divested businesses, including Intel Security Group (ISecG) results;
  - results of operations of start-up businesses that support our initiatives, including our foundry business;
  - amounts included within restructuring and other charges;
  - a portion of employee benefits, compensation, and other expenses not allocated to the operating segments; and
  - acquisition-related costs, including amortization and any impairment of acquisition-related intangibles and goodwill.
- The Chief Operating Decision Maker (CODM), which is our Chief Executive Officer (CEO), allocates resources to and assesses the performance of each operating segment using information about its revenue and operating income (loss). The CODM does not evaluate operating segments using discrete asset information and we do not identify or allocate assets by operating segments. Based on the interchangeable nature of our manufacturing and assembly and test assets, most of the related depreciation expense is not directly identifiable within our operating segments, as it is included in overhead cost pools and subsequently absorbed into inventory as each product passes through our manufacturing process. As our products are then sold across multiple operating segments, it is impracticable to determine the total depreciation expense included as a component of each operating segment's operating income (loss) results. Operating segments do not record inter-segment revenue. We do not allocate gains and losses from equity investments, interest and other income, or taxes to operating segments. Although the CODM uses operating income to evaluate the segments, operating costs included in one segment may benefit other segments. Except for these differences, the accounting policies for segment reporting are the same as for Intel as a whole.

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Net revenue and operating income (loss) for each period were as follows:

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Net revenue:			
Client Computing Group			
Platform	\$33,234	\$31,226	\$30,751
Adjacent	3,770	2,777	2,157
	37,004	34,003	32,908
Data Center Group			
Platform	21,155	17,439	15,895
Adjacent	1,836	1,625	1,341
	22,991	19,064	17,236
Internet of Things Group			
Platform	3,065	2,645	2,290
Adjacent	390	524	348
	3,455	3,169	2,638
Non-Volatile Memory Solutions Group			
Programmable Solutions Group	4,307	3,520	2,576
All other	2,123	1,902	1,669
	968	1,103	2,360
Total net revenue	\$70,848	\$62,761	\$59,387

Operating income (loss):

Client Computing Group	\$14,222	\$12,919	\$10,646
Data Center Group	11,476	8,395	7,520
Internet of Things Group	980	650	585
Non-Volatile Memory Solutions Group	(5 )	(260 )	(544 )
Programmable Solutions Group	466	458	(104 )
All other	(3,823 )	(4,112 )	(4,970 )
Total operating income	\$23,316	\$18,050	\$13,133

Disaggregated net revenue for each period was as follows:

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Platform revenue			
Desktop platform	\$12,220	\$11,647	\$12,371
Notebook platform	20,930	19,414	18,203
DCG platform	21,155	17,439	15,895
Other platform <sup>1</sup>	3,149	2,810	2,467
	57,454	51,310	48,936
Adjacent revenue <sup>2</sup>			
	13,394	10,917	8,290
ISecG divested business	—	534	2,161
Total revenue	\$70,848	\$62,761	\$59,387

<sup>1</sup> Includes our tablet, service provider, and IOTG platform revenue.

<sup>2</sup> Includes all of our non-platform products for CCG, DCG, and IOTG, such as modem, Ethernet, and silicon photonics, as well as NSG, PSG, and Mobileye products.

In 2018, our three largest customers accounted for 39% of our net revenue (40% in 2017, 38% in 2016), with Dell Inc. accounting for 16% (16% in 2017, 15% in 2016), Lenovo Group Limited accounting for 12% (13% in 2017, 13% in 2016), and HP Inc. accounting for 11% (11% in 2017, 10% in 2016). These three customers accounted for 45% of our

accounts receivable as of December 29, 2018 (36% as of December 30, 2017). Substantially all of the revenue from these customers was from the sale of platforms and other components by the CCG and DCG operating segments.

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Net revenue by country as presented below is based on the billing location of the customer. Revenue from unaffiliated customers for each period was as follows:

Years Ended (In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
China (including Hong Kong)	\$18,824	\$14,796	\$13,977
Singapore	15,409	14,285	12,780
United States	14,303	12,543	12,957
Taiwan	10,646	10,518	9,953
Other countries	11,666	10,619	9,720
Total net revenue	\$70,848	\$62,761	\$59,387

**NOTE 5 : EARNINGS PER SHARE**

We computed basic earnings per share of common stock based on the weighted average number of shares of common stock outstanding during the period. We computed diluted earnings per share of common stock based on the weighted average number of shares of common stock outstanding plus potentially dilutive shares of common stock outstanding during the period.

Years Ended (In Millions, Except Per Share Amounts)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Net income available to common stockholders	\$21,053	\$9,601	\$10,316
Weighted average shares of common stock outstanding—basic	4,611	4,701	4,730
Dilutive effect of employee incentive plans	50	47	53
Dilutive effect of convertible debt	40	87	92
Weighted average shares of common stock outstanding—diluted	4,701	4,835	4,875
Earnings per share - Basic	\$4.57	\$2.04	\$2.18
Earnings per share - Diluted	\$4.48	\$1.99	\$2.12

Potentially dilutive shares of common stock from employee incentive plans are determined by applying the treasury stock method to the assumed exercise of outstanding stock options, the assumed vesting of outstanding RSUs, and the assumed issuance of common stock under the stock purchase plan. In December 2017, we paid cash to satisfy the conversion of our convertible debentures due 2035, which we excluded from our diluted earnings per share computation starting in the fourth quarter of 2017 and are no longer dilutive. Our convertible debentures due 2039 (2009 debentures) require settlement of the principal amount of the debt in cash upon conversion. Since the conversion premium is paid in cash or stock at our option, we determined the potentially dilutive shares of common stock by applying the treasury stock method. During 2018, we paid cash to satisfy the conversion of a portion of our 2009 debentures. The potentially dilutive shares associated with the converted portion were excluded from our diluted earnings per share computation in the quarter when conversions were tendered.

In all years presented, potentially dilutive securities that would have been anti-dilutive are insignificant and are excluded from the computation of diluted earnings per share. In all years presented, we included our 2009 debentures in the calculation of diluted earnings per share of common stock because the average market price was above the conversion price. We could potentially exclude the 2009 debentures in the future if the average market price is below the conversion price.



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## NOTE 6 : CONTRACT LIABILITIES

(In Millions)	Dec 29, 2018	Opening Balance as of Dec 31, 2017
Prepaid supply agreements	\$ 2,587	\$ 105
Other	122	195
Total contract liabilities	\$ 2,709	\$ 300

Contract liabilities are primarily related to partial prepayments received from customers on long-term supply agreements toward future NSG product delivery. As new prepaid supply agreements are entered into and performance obligations are negotiated, this component of the contract liability balance will increase, and as customers purchase product and utilize their prepaid balances, the balance will decrease. The short-term portion of prepayments from supply agreements is reported on the consolidated balance sheets within other accrued liabilities.

The following table shows the changes in contract liability balances relating to prepaid supply agreements during 2018:

(In Millions)	
Prepaid supply agreements balance as of December 31, 2017	\$ 105
Additions and adjustments	2,753
Prepays utilized	(271 )
Prepaid supply agreements balance as of December 29, 2018	\$ 2,587

Additions and adjustments in 2018 include a \$1.0 billion reclassification from customer deposits previously included in other long-term liabilities. The long-term supply agreements represent \$4.6 billion in future anticipated revenues to be recognized ratably over the next five years.

## NOTE 7 : OTHER FINANCIAL STATEMENT DETAILS

## INVENTORIES

(In Millions)	Dec 29, 2018	Dec 30, 2017
Raw materials	\$ 813	\$ 738
Work in process	4,511	4,213
Finished goods	1,929	2,032
Total inventories	\$ 7,253	\$ 6,983

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## PROPERTY, PLANT AND EQUIPMENT

(In Millions)	Dec 29, 2018	Dec 30, 2017
Land and buildings	\$30,954	\$27,391
Machinery and equipment	66,721	57,192
Construction in progress	16,643	15,812
Total property, plant and equipment, gross	114,318	100,395
Less: accumulated depreciation	65,342	59,286
Total property, plant and equipment, net	\$48,976	\$41,109

Substantially all of our depreciable property, plant and equipment assets were depreciated over the following estimated useful lives: machinery and equipment, 2 to 5 years, and buildings, 10 to 30 years.

Net property, plant and equipment by country at the end of each period was as follows:

(In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
United States	\$27,512	\$24,459	\$23,598
Israel	8,861	6,501	3,923
China	6,417	4,275	2,306
Ireland	3,947	3,938	4,865
Other countries	2,239	1,936	1,479
Total property, plant and equipment, net	\$48,976	\$41,109	\$36,171

## OTHER ACCRUED LIABILITIES

Other accrued liabilities include deferred compensation of \$1.7 billion as of December 29, 2018 (\$1.7 billion as of December 30, 2017).

## ADVERTISING

Advertising costs, including direct marketing, recorded within marketing, general and administrative (MG&A) expenses were \$1.2 billion in 2018 (\$1.4 billion in 2017 and \$1.8 billion in 2016).

## INTEREST AND OTHER, NET

The components of interest and other, net for each period were as follows:

Years Ended	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
(In Millions)			
Interest income	\$ 438	\$ 441	\$ 222
Interest expense	(468 )	(646 )	(733 )
Other, net	156	(144 )	(192 )
Total interest and other, net	\$ 126	\$ (349 )	\$ (703 )

Interest expense in the preceding table is net of \$496 million of interest capitalized in 2018 (\$313 million in 2017 and \$135 million in 2016).

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## NOTE 8 : RESTRUCTURING AND OTHER CHARGES

Years Ended	Dec 29, Dec 30, Dec 31,		
(In Millions)	2018	2017	2016
2016 Restructuring Program	\$ (72 )	\$ 135	\$ 1,681
ISecG separation costs and other charges	—	249	63
Total restructuring and other charges	\$ (72 )	\$ 384	\$ 1,744

## 2016 RESTRUCTURING PROGRAM

In the second quarter of 2016, management approved and commenced the 2016 Restructuring Program to accelerate our transformation from a PC company to one that powers the cloud and billions of smart, connected computing devices. Under this program, we closed certain facilities and reduced headcount globally to align our operations with evolving business needs by investing in our growth businesses and improving efficiencies. This program was completed in 2017.

Restructuring and other charges (benefits) by type for the 2016 Restructuring Program were as follows:

Years Ended	Dec 29, Dec 30, Dec 31,		
(In Millions)	2018	2017	2016
Employee severance and benefit arrangements	\$ (72 )	\$ 70	\$ 1,652
Pension settlement charges	—	25	—
Asset impairment and other charges	—	40	29
Total restructuring and other charges	\$ (72 )	\$ 135	\$ 1,681

## NOTE 9 : INCOME TAXES

The Tax Reform enacted in December 2017 reduced the U.S. federal corporate tax rate from 35.0% to 21.0% starting in 2018, assessed a one-time transition tax on earnings of non-U.S. subsidiaries that have not been taxed previously in the U.S., and created new taxes on certain future foreign sourced earnings. We recorded a provisional income tax expense of \$5.4 billion, net within our 2017 results related to Tax Reform. We completed our accounting for Tax Reform in the fourth quarter of 2018. Our final tax charge for Tax Reform was \$5.1 billion, net and was made up of the recognition of the transition tax imposed on undistributed earnings from non-U.S. subsidiaries and remeasurement of deferred income taxes using the newly enacted statutory tax rate of 21.0%.

## INCOME TAX PROVISION

Income before taxes and the provision for taxes consisted of the following:

Years Ended	Dec 29,	Dec 30,	Dec 31,
(In Millions)	2018	2017	2016
Income before taxes:			
U.S.	\$14,753	\$11,141	\$6,957
Non-U.S.	8,564	9,211	5,979
Total income before taxes	23,317	20,352	12,936
Provision for taxes:			
Current:			
Federal	2,786	8,307	1,319
State	(11 )	27	13
Non-U.S.	1,097	899	756
Total current provision for taxes	3,872	9,233	2,088
Deferred:			
Federal	(1,389 )	1,680	658
Other	(219 )	(162 )	(126 )
Total deferred provision for taxes	(1,608 )	1,518	532
Total provision for taxes	\$2,264	\$10,751	\$2,620
Effective tax rate	9.7	% 52.8	% 20.3



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The difference between the tax provision at the statutory federal income tax rate and the tax provision as a percentage of income before income taxes (effective tax rate) for each period was as follows:

Years Ended	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Statutory federal income tax rate	21.0 %	35.0 %	35.0 %
Increase (reduction) in rate resulting from:			
Non-U.S. income taxed at different rates	(3.6 )	(7.6 )	(11.7 )
Research and development tax credits	(2.7 )	(2.3 )	(2.3 )
Domestic manufacturing deduction benefit	—	(1.3 )	(1.4 )
Foreign derived intangible income benefit	(3.7 )	—	—
Tax Reform	(1.3 )	26.8	—
ISecG divestiture	—	3.3	—
Other	(0.1 )	(1.1 )	0.7
Effective tax rate	9.7 %	52.8 %	20.3 %

The majority of the decrease in our effective tax rate in 2018 compared to 2017 was driven by non-recurring impacts in 2017 from Tax Reform and the ISecG divestiture. The reduction of the U.S. statutory rate combined with the net impact of the enactment or repeal of specific tax law provisions through Tax Reform drove the remaining decrease in our effective tax rate in 2018.

Substantially all of the increase in our effective tax rate in 2017 compared to 2016 was driven by the one-time impacts from Tax Reform enacted on December 22, 2017, the 2017 ISecG divestiture, and a higher proportion of our income in higher tax rate jurisdictions.

We derive the effective tax rate benefit attributed to non-U.S. income taxed at different rates primarily from our operations in China, Hong Kong, Ireland, and Israel. The statutory tax rates in these jurisdictions range from 12.5% to 25.0%. In addition, we are subject to reduced tax rates in China and Israel as long as we conduct certain eligible activities and make certain capital investments. These conditional reduced tax rates expire at various dates through 2026 and we expect to apply for renewals upon expiration.

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## DEFERRED AND CURRENT INCOME TAXES

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. Significant components of our deferred tax assets and liabilities at the end of each period were as follows:

(In Millions)	Dec 29, 2018	Dec 30, 2017
Deferred tax assets:		
Accrued compensation and other benefits	\$ 570	\$ 711
Share-based compensation	273	241
Deferred income	—	211
Inventory	517	675
State credits and net operating losses	1,297	1,081
Other, net	512	887
Gross deferred tax assets	3,169	3,806
Valuation allowance	(1,302)	(1,171)
Total deferred tax assets	1,867	2,635
Deferred tax liabilities:		
Property, plant and equipment	(878)	(943)
Licenses and intangibles	(744)	(881)
Convertible debt	(204)	(374)
Unrealized gains on investments and derivatives	(266)	(421)
Transition tax	—	(1,850)
Other, net	(318)	(373)
Total deferred tax liabilities	(2,410)	(4,842)
Net deferred tax assets (liabilities)	\$ (543)	\$ (2,207)

## Reported as:

Deferred tax assets	1,122	840
Deferred tax liabilities	(1,665)	(3,046)
Net deferred tax assets (liabilities)	\$ (543)	\$ (2,207)

Deferred tax assets are included within other long-term assets on the consolidated balance sheets.

The valuation allowance as of December 29, 2018 included allowances primarily related to unrealized state credit carryforwards of \$1.3 billion.

As of December 29, 2018, our federal and non-U.S. net operating loss carryforwards for income tax purposes were \$246 million and \$414 million, respectively. Most of the non-U.S. net operating loss carryforwards have no expiration date. The remaining non-U.S. and U.S. federal and state net operating loss carryforwards expire at various dates through 2039. A significant amount of the net operating loss carryforwards in the U.S. relates to acquisitions and, as a result, is limited in the amount that can be recognized in any one year. The non-U.S. net operating loss carryforwards include \$39 million that is not likely to be recovered and has been reduced by a valuation allowance.

At December 29, 2018, we have undistributed earnings of certain foreign subsidiaries of approximately \$18.0 billion that we have indefinitely invested, and on which we have not recognized deferred taxes. Estimating the amount of potential tax is not practicable because of the complexity and variety of assumptions necessary to compute the tax. Current income taxes receivable of \$162 million as of December 29, 2018 (\$71 million as of December 30, 2017) are included in other current assets. Current income taxes payable of \$366 million as of December 29, 2018 (\$1.4 billion as of December 30, 2017) are included in other accrued liabilities.

Long-term income taxes payable of \$4.9 billion as of December 29, 2018 (\$4.1 billion as of December 30, 2017) includes uncertain tax positions, reduced by the associated federal deduction for state taxes and non-U.S. tax credits. Long-term income taxes payable may also include other long-term tax liabilities that are not uncertain but have not yet

been paid, including the substantial majority of the transition tax from the Tax Reform, which is payable over eight years beginning in 2018.

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Table of Contents**UNCERTAIN TAX POSITIONS**

Unrecognized tax benefits were \$283 million as of December 29, 2018 (\$211 million as of December 30, 2017 and \$154 million as of December 31, 2016). If the remaining balance of unrecognized tax benefits were recognized in a future period, it would result in a tax benefit of \$178 million as of December 29, 2018 (\$139 million as of December 30, 2017) and a reduction in the effective tax rate. The tax benefit for settlements, effective settlements, and remeasurements was insignificant in all periods presented. Interest, penalties, and accrued interest related to unrecognized tax benefits were insignificant in the periods presented.

We comply with the laws, regulations, and filing requirements of all jurisdictions in which we conduct business. We regularly engage in discussions and negotiations with tax authorities regarding tax matters in various jurisdictions. Although the timing of the resolutions and/or closures of audits is highly uncertain, it is reasonably possible that certain U.S. federal and non-U.S. tax audits may be concluded within the next 12 months, which could increase or decrease the balance of our gross unrecognized tax benefits.

We file federal, state, and non-U.S. tax returns. For U.S. federal and non-U.S. tax returns, we are generally no longer subject to tax examinations for years prior to 2004. For U.S. state tax returns, we are no longer subject to tax examination for years prior to 2010. We have filed petitions before the U.S. Tax Court relating to the treatment of stock-based compensation expense in an inter-company cost-sharing transaction for certain pre-acquisition Altera tax years. The U.S. Tax Court ruled in favor of Altera and the U.S. Internal Revenue Service appealed the ruling to the U.S. Court of Appeals for the Ninth Circuit. During 2018, the U.S. Court of Appeals heard oral arguments and the outcome of those appeals is pending.

**NOTE 10 : INVESTMENTS****DEBT INVESTMENTS****Trading Assets**

Net losses related to trading assets still held at the reporting date were \$188 million in 2018 (net gains of \$414 million in 2017 and net losses of \$295 million in 2016). Net gains on the related derivatives were \$163 million in 2018 (net losses of \$422 million in 2017 and net gains of \$300 million in 2016).

**Available-for-Sale Debt Investments**

(In Millions)	December 29, 2018				December 30, 2017			
	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate debt	\$3,068	\$ 2	\$ (28 )	\$3,042	\$2,294	\$ 4	\$ (13 )	\$2,285
Financial institution instruments	3,076	3	(11 )	3,068	3,387	3	(9 )	3,381
Government debt	1,069	1	(9 )	1,061	961	—	(6 )	955
Total available-for-sale debt investments	\$7,213	\$ 6	\$ (48 )	\$7,171	\$6,642	\$ 7	\$ (28 )	\$6,621

Government debt includes instruments such as non-U.S. government bonds and U.S. agency securities. Financial institution instruments include instruments issued or managed by financial institutions in various forms, such as commercial paper, fixed- and floating-rate bonds, money market fund deposits, and time deposits. Substantially all time deposits were issued by institutions outside the U.S. as of December 29, 2018 and December 30, 2017.

The fair values of available-for-sale debt investments by contractual maturity as of December 29, 2018 were as follows:

(In Millions)	Fair Value
Due in 1 year or less	\$ 3,233
Due in 1–2 years	404
Due in 2–5 years	2,776
Due after 5 years	208
Instruments not due at a single maturity date	550
Total	\$ 7,171





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## EQUITY INVESTMENTS

(In Millions)	Dec 29, Dec 30,	
	2018	2017
Marketable equity securities	\$ 1,440	\$ 4,192
Non-marketable equity securities	2,978	2,613
Equity method investments	1,624	1,774
Total	\$ 6,042	\$ 8,579

The components of gains (losses) on equity investments, net for each period were as follows:

(In Millions)	Years Ended		
	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Ongoing mark-to-market adjustments on marketable equity securities <sup>1</sup>	\$(129 )	\$—	\$—
Observable price adjustments on non-marketable equity securities <sup>1</sup>	202	—	—
Impairment charges	(424 )	(833 )	(187 )
Sale of equity investments and other <sup>2</sup>	226	3,484	693
Total gains (losses) on equity investments, net	\$(125 )	\$2,651	\$ 506

<sup>1</sup> Ongoing mark-to-market adjustments and observable price adjustments relate to the new financial instruments standard adopted in the first quarter of 2018, and are not applicable in prior periods.

Sale of equity investments and other includes realized gains (losses) on sales of non-marketable equity investments, our share of equity method investee gains (losses), and initial fair value adjustments recorded upon a security becoming marketable. In 2017 and 2016, sales of equity investments and other also includes realized gains (losses) on sales of available-for-sale equity securities, which are now reflected in ongoing mark-to-market adjustments on marketable equity securities.

In 2018, we recognized \$202 million in upward observable price adjustments and there were no downward adjustments. Observable price adjustments are not applicable to prior periods. We also recognized impairments of \$132 million on non-marketable equity securities (\$555 million in 2017 and \$184 million in 2016).

In 2018, we recognized \$153 million in equity method investee losses (\$223 million in 2017 and \$38 million in 2016). In 2017 and 2016, we recognized \$3.4 billion and \$407 million, respectively, in realized gains on sales of a portion of our interest in ASML Holding N.V. (ASML). During the second quarter of 2017, we determined we had an other-than-temporary decline in the fair value of our investment in Cloudera, Inc. and recognized an impairment charge of \$278 million.

Gains and losses for our marketable and non-marketable equity securities during the period were as follows:

(In Millions)	Dec 29, 2018
Net gains (losses) recognized during the period on equity securities	\$ 298
Less: Net (gains) losses recognized during the period on equity securities sold during the period	(445 )
Unrealized gains (losses) recognized during the period on equity securities still held at the reporting date	\$(147 )

Equity method investments at the end of each period were as follows:

(Dollars In Millions)	December 29, 2018		December 30, 2017	
	Carrying Value	Ownership Percentage	Carrying Value	Ownership Percentage
IM Flash Technologies, LLC	\$ 1,574	49 %	\$ 1,505	49 %
McAfee	—	49 %	153	49 %
Other equity method investments	50		116	
Total	\$ 1,624		\$ 1,774	

## IM Flash Technologies, LLC

IM Flash Technologies, LLC (IMFT) was formed in 2006 by Micron Technology, Inc. (Micron) and Intel to jointly develop NAND flash memory and 3D XPoint™ technology products. IMFT is an unconsolidated variable interest entity

and all costs of IMFT are passed on to Micron and Intel through sale of products or services in proportional share of ownership. As of December 29, 2018, we own a 49% interest in IMFT. Our portion of IMFT costs was approximately \$494 million in 2018 (approximately \$415 million in 2017 and \$400 million in 2016).

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IMFT depends on Micron and Intel for any additional cash needs to be provided in the form of cash calls or member debt financing (MDF). Extensions of MDF may be converted to a capital contribution at the lender's request, or may be repaid upon availability of funds.

In July 2018, Intel and Micron announced that they agreed to complete joint development for the second generation of 3D XPoint technology, which is expected to occur in the first half of 2019 and technology development beyond that generation will be pursued independently by the two companies to optimize the technology for their respective product and business needs. We recognized an impairment charge of \$290 million million during the third quarter of 2018. This reduced the carrying value of our equity method investment in IMFT to \$1.6 billion in line with our expectation of future cash flows. In January 2019, Micron exercised its right to call our interest in IMFT. The call transaction will close between six and twelve months from the date Micron exercised the call option. We will continue to purchase product manufactured at the IMFT facility for a period of up to one year following the close date.

McAfee

During the second quarter of 2017, we closed our divestiture of the ISecG business and retained a 49% interest in McAfee as partial consideration. Our investment is accounted for under the equity method of accounting. During the third quarter of 2017, we received a \$735 million dividend from McAfee. For further information related to the divestiture of the ISecG business, see "Note 11: Acquisitions and Divestitures."

Beijing Unisoc Technology Ltd. (Unisoc)

During 2014, we entered into an agreement with Tsinghua Unigroup Ltd. (Tsinghua Unigroup), an operating subsidiary of Tsinghua Holdings Co. Ltd., to jointly develop Intel® architecture- and communications-based solutions for phones. During 2015, we invested \$966 million for a minority stake of Beijing UniSpreadtrum Technology Ltd, a holding company under Tsinghua Unigroup. During 2017, we reduced our expectation of the company's future operating performance due to competitive pressures, which resulted in an impairment charge of \$308 million. During 2018, Beijing UniSpreadtrum Technology Ltd and RDA Microelectronics merged and rebranded themselves as Beijing Unisoc Technology Ltd. (Unisoc). We account for our interest in Unisoc as a non-marketable equity security.

#### NOTE 11 : ACQUISITIONS AND DIVESTITURES

##### ACQUISITIONS

During 2018, we completed five acquisitions qualifying as business combinations that were not material to our operations. During 2017, in addition to the Mobileye acquisition shown below, we completed two acquisitions qualifying as business combinations. During 2016, we acquired Altera for \$14.5 billion, and, in addition, completed 11 acquisitions qualifying as business combinations for aggregate consideration of \$1.1 billion.

Other acquisitions completed in 2018, 2017, and 2016, both individually and in the aggregate, were not significant to our results of operations, and substantially all of the consideration, which primarily consisted of cash, was allocated to goodwill and identifiable intangible assets. For information on the assignment of goodwill to our operating segments, see "Note 12: Goodwill," and for information on the classification of intangible assets, see "Note 13: Identified Intangible Assets."

Mobileye

As of August 21, 2017, upon the completion of our tender offer, we acquired 97.3% of the outstanding ordinary shares of Mobileye, a global leader in the development of computer vision and machine learning, data analysis, localization, and mapping for advanced driver- assistance systems and autonomous driving. This acquisition combines Mobileye's leading computer vision expertise with Intel's high-performance computing and connectivity expertise to create automated driving solutions from car to cloud. The combination is expected to accelerate innovation for the automotive industry and position Intel as a leading technology provider in the fast-growing market for highly and fully autonomous vehicles. The transaction also extends Intel's strategy to invest in data-intensive market opportunities that build on our strengths in computing and connectivity from the cloud, through the network, to the device. We acquired the remaining 2.7% of Mobileye shares in April 2018.

Total consideration to acquire Mobileye was \$14.9 billion (net of \$366 million of cash and cash equivalents acquired), of which \$14.5 billion was paid in 2017 and the remainder in 2018.

The fair values of the assets acquired and liabilities assumed in the acquisition of Mobileye, by major class, were recognized as follows:

(In Millions)

Short-term investments and marketable securities	\$370
Tangible assets	227
Goodwill	10,283
Identified intangible assets	4,482
Current liabilities	(69 )
Deferred tax liabilities and other	(418 )
Total	\$14,875

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We assumed outstanding unvested Mobileye stock options and RSUs granted under two Mobileye equity plans. We will not grant additional equity awards under these two Mobileye equity plans. In connection with the acquisition, we recognized share-based compensation expense of \$71 million for cash-settled awards.

Goodwill of \$10.3 billion arising from the acquisition is attributed to the expected synergies and other benefits that will be generated from the combination of Intel and Mobileye. Substantially all of the goodwill recognized is not expected to be deductible for tax purposes. The goodwill recognized from the acquisition is included within "all other."

The identified intangible assets assumed in the acquisition of Mobileye were recognized as follows:

	Fair Value (In Millions)	Weighted Average Estimated Useful Life (In Years)
Developed technology	\$ 2,346	9
Customer relationships and brands	777	12
Identified intangible assets subject to amortization	3,123	
In-process research and development	1,359	
Identified intangible assets not subject to amortization	1,359	
Total identified intangible assets	\$ 4,482	

**DIVESTITURES**

Wind River Systems, Inc. (Wind River)

During the second quarter of 2018, we completed the divestiture of Wind River and recognized a pre-tax gain of \$494 million.

Intel Security Group

On April 3, 2017, we closed the transaction with TPG VII Manta Holdings, L.P., now known as Manta Holdings, L.P. (TPG), transferring certain assets and liabilities relating to ISecG to a newly formed, jointly owned, separate cybersecurity company called McAfee.

Total consideration received was \$4.2 billion, consisting of \$924 million in cash proceeds, \$1.1 billion in the form of equity representing a 49% ownership interest in McAfee, and \$2.2 billion in the form of promissory notes issued by McAfee and TPG. During the third quarter of 2017, McAfee and TPG repaid the \$2.2 billion of promissory notes, which are included within proceeds from divestiture.

The carrying amounts of the major classes of ISecG assets and liabilities as of the transaction close date included the following:

(In Millions)	Apr 1, 2017
Accounts receivable	\$317
Goodwill	3,601
Identified intangible assets	965
Other assets	276
Total assets	\$5,159
Deferred income	\$1,553
Other liabilities	276
Total liabilities	\$1,829

As of the transaction close date, we recognized a pre-tax gain of \$387 million within "Interest and other, net," which is net of \$507 million of currency translation adjustment losses reclassified from accumulated other comprehensive income (loss) associated with currency charges on the carrying values of ISecG goodwill and identified intangible assets. In addition, we recognized a tax expense of \$822 million.



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## NOTE 12 : GOODWILL

Goodwill activity for each period was as follows:

(In Millions)	Dec 30, 2017	Acquisitions	Transfers	Other	Dec 29, 2018
Client Computing Group	\$4,356	\$ 47	\$ —	\$—	\$4,403
Data Center Group	5,421	3	—	—	5,424
Internet of Things Group	1,126	16	480	(43 )	1,579
Programmable Solutions Group	2,490	89	—	—	2,579
All other	10,996	7	(480 )	5	10,528
Total	\$24,389	\$ 162	\$ —	\$(38)	\$24,513

  

(In Millions)	Dec 31, 2016	Acquisitions	Transfers	Other	Dec 30, 2017
Client Computing Group	\$4,356	\$ —	\$ —	—\$	—\$4,356
Data Center Group	5,412	9	—	—	5,421
Internet of Things Group	1,123	3	—	—	1,126
Programmable Solutions Group	2,490	—	—	—	2,490
All other	718	10,278	—	—	10,996
Total	\$14,099	\$ 10,290	\$ —	—\$	—\$24,389

During the third quarter of 2018, we made an organizational change to combine our artificial intelligence investments in edge computing with IOTG; accordingly, approximately \$480 million of goodwill was reallocated from "all other" to the IOTG operating segment.

During the fourth quarters of 2018, 2017, and 2016, we completed our annual impairment assessments and we concluded that goodwill was not impaired in any of these years. The accumulated impairment losses as of December 29, 2018 were \$719 million: \$365 million associated with CCG, \$275 million associated with DCG, and \$79 million associated with IOTG.



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## NOTE 13 : IDENTIFIED INTANGIBLE ASSETS

(In Millions)	December 29, 2018		
	Gross Assets	Accumulated Amortization	Net
Acquisition-related developed technology	\$9,611	\$ (3,021 )	\$6,590
Acquisition-related customer relationships and brands	2,179	(527 )	1,652
Licensed technology and patents	2,932	(1,406 )	1,526
Identified intangible assets subject to amortization	14,722	(4,954 )	9,768
In-process research and development	1,497	—	1,497
Other intangible assets	571	—	571
Identified intangible assets not subject to amortization	2,068	—	2,068
Total identified intangible assets	\$16,790	\$ (4,954 )	\$11,836
(In Millions)	December 30, 2017		
	Gross Assets	Accumulated Amortization	Net
Acquisition-related developed technology	\$8,912	\$ (1,922 )	\$6,990
Acquisition-related customer relationships and brands	2,195	(342 )	1,853
Licensed technology and patents	3,104	(1,370 )	1,734
Identified intangible assets subject to amortization	14,211	(3,634 )	10,577
In-process research and development	2,168	—	2,168
Identified intangible assets not subject to amortization	2,168	—	2,168
Total identified intangible assets	\$16,379	\$ (3,634 )	\$12,745

Identified intangible assets subject to amortization recorded for each period and their respective estimated weighted average useful lives were as follows:

	December 29, 2018		December 30, 2017	
	Gross Assets	Estimated Useful Life (In Years)	Gross Assets	Estimated Useful Life (In Years)
Acquisition-related developed technology	\$35 7		\$2,346 9	
Acquisition-related customer relationships and brands	\$— 0		\$777 12	
Licensed technology and patents	\$66 6		\$162 7	

Amortization expenses recorded for identified intangible assets in the consolidated statements of income for each period and the estimated useful life ranges were as follows:

Years Ended (In Millions)	Location	Dec 29, Dec 30, Dec 31,			Estimated Useful Life Range (In Years)
		2018	2017	2016	
Acquisition-related developed technology	Cost of sales	\$1,105	\$912	\$937	5 – 11
Acquisition-related customer relationships and brands	Amortization of acquisition-related intangibles	200	177	294	6 – 12
Licensed technology and patents	Cost of sales	260	288	293	2 – 17
Total amortization expenses		\$1,565	\$1,377	\$1,524	

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We expect future amortization expense for the next five years to be as follows:

(In Millions)	2019	2020	2021	2022	2023
Acquisition-related developed technology	\$1,114	\$1,082	\$1,047	\$1,008	\$1,005
Acquisition-related customer relationships and brands	200	199	199	177	173
Licensed technology and patents	249	218	204	196	139
Total future amortization expenses	\$1,563	\$1,499	\$1,450	\$1,381	\$1,317

## NOTE 14 : OTHER LONG-TERM ASSETS

(In Millions)	Dec 29, 2018	Dec 30, 2017
Non-current deferred tax assets	\$1,122	\$840
Pre-payments for property, plant and equipment	1,507	714
Loans receivable	479	860
Other	1,313	801
Total other long-term assets	\$4,421	\$3,215

## NOTE 15 : BORROWINGS

## SHORT-TERM DEBT

(In Millions)	Dec 29, 2018	Dec 30, 2017
Commercial paper and drafts payable	\$500	\$37
Current portion of long-term debt	761	1,739
Total short-term debt	\$1,261	\$1,776

Our current portion of long-term debt includes our 2009 junior subordinated convertible debentures due 2039, as well as debt classified as short-term based on contractual maturity.

We have an ongoing authorization from our Board of Directors to borrow up to \$10.0 billion under our commercial paper program.

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## LONG-TERM DEBT

(In Millions)	December 29, 2018		December
	Effective Interest Rate	Amount	30, 2017 Amount
Floating-rate senior notes:			
Three-month LIBOR plus 0.08%, due May 2020	2.29%	\$700	\$700
Three-month LIBOR plus 0.35%, due May 2022	2.56%	800	800
Fixed-rate senior notes:			
2.50%, due November 2018	—%	—	600
3.25%, due December 2019 <sup>1</sup>	2.11%	177	194
1.85%, due May 2020	1.89%	1,000	1,000
2.45%, due July 2020	2.49%	1,750	1,750
1.70%, due May 2021	1.79%	500	500
3.30%, due October 2021	3.67%	2,000	2,000
2.35%, due May 2022	2.67%	750	750
3.10%, due July 2022	3.47%	1,000	1,000
4.00%, due December 2022 <sup>1</sup>	2.89%	389	428
2.70%, due December 2022	3.06%	1,500	1,500
4.10%, due November 2023	3.22%	400	400
2.88%, due May 2024	3.03%	1,250	1,250
2.70%, due June 2024	2.79%	600	600
3.70%, due July 2025	4.16%	2,250	2,250
2.60%, due May 2026	2.62%	1,000	1,000
3.15%, due May 2027	3.21%	1,000	1,000
4.00%, due December 2032	3.70%	750	750
4.80%, due October 2041	4.49%	802	802
4.25%, due December 2042	3.87%	567	567
4.90%, due July 2045	4.56%	772	772
4.70%, due December 2045	3.45%	915	915
4.10%, due May 2046	3.72%	1,250	1,250
4.10%, due May 2047	3.59%	1,000	1,000
4.10%, due August 2047	2.91%	640	640
3.73%, due December 2047	3.90%	1,967	1,967
Oregon and Arizona bonds:			
2.40% - 2.70%, due December 2035 - 2040	2.49%	423	—
Junior subordinated convertible debentures:			
3.25%, due August 2039 <sup>2</sup>	3.42%	988	2,000
Total senior notes and other borrowings		27,140	28,385
Unamortized premium/discount and issuance costs		(891 )	(1,357 )
Hedge accounting fair value adjustments		(390 )	(252 )
Long-term debt		25,859	26,776
Current portion of long-term debt		(761 )	(1,739 )
Total long-term debt		\$25,098	\$25,037

<sup>1</sup> To manage foreign currency risk associated with the Australian-dollar-denominated notes issued in 2015, we entered into currency interest rate swaps with an aggregate notional amount of \$577 million, which effectively converted these notes to U.S.-dollar-denominated notes. For further discussion on our currency interest rate swaps, see "Note 18: Derivative Financial Instruments." Principal and unamortized discount/issuance costs for the Australian-dollar-denominated notes in the table above were calculated using foreign currency exchange rates as of

December 29, 2018 and December 30, 2017.

<sup>2</sup> Effective interest rate for the year ended December 30, 2017 was 4.03%.

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The fair value of our convertible debentures is determined using discounted cash flow models with observable market inputs, and takes into consideration variables such as interest rate changes, comparable instruments, subordination discount, and credit-rating changes. As of December 29, 2018 and December 30, 2017, the fair value of short- and long-term debt (excluding commercial paper and drafts payable) was \$27.1 billion and \$29.4 billion, respectively. These liabilities are classified as Level 2 within the fair value hierarchy, based on the nature of the fair value inputs.

**Senior Notes**

During 2017, we issued a total of \$7.7 billion aggregate principal amount of senior notes, which excludes the private placement of \$2.0 billion of senior notes issued in December 2017, as discussed in the following paragraph. We used the net proceeds from the offerings of the notes for general corporate purposes, which included refinancing of outstanding debt and repurchase of shares of our common stock. Additionally, we redeemed our \$1.0 billion, 4.90% senior notes due August 2045.

In December 2017, we completed exchange and cash offers for our outstanding 4.80% senior notes due 2041, 4.25% senior notes due 2042, and 4.90% senior notes due 2045 (Old Notes). As a result of the exchange offer, we issued in a private placement \$2.0 billion principal amount of 3.73% senior notes due 2047 and paid \$293 million cash in exchange for \$1.9 billion aggregate principal amount of the Old Notes. As a result of the cash offer, we paid \$518 million to repurchase \$425 million aggregate principal amount and recognized a \$93 million loss on the extinguishment of the Old Notes.

Our floating-rate senior notes pay interest quarterly and our fixed-rate senior notes pay interest semiannually. As of December 29, 2018 and December 30, 2017, the total principal amount of our fixed-rate senior notes that was converted to variable-rate indebtedness using interest rate swaps was \$20.0 billion and \$12.9 billion, respectively. We may redeem the fixed-rate notes prior to their maturity at our option at specified redemption prices and subject to certain restrictions. The obligations under the notes rank equally in right of payment with all of our other existing and future senior unsecured indebtedness and will effectively rank junior to all liabilities of our subsidiaries.

**Oregon and Arizona Bonds**

During the third quarter of 2018, we remarketed \$423 million principal of bonds issued by the Industrial Development Authority of the City of Chandler, Arizona (the Arizona bonds) and the State of Oregon Business Development Commission (the Oregon bonds). The bonds are our unsecured general obligations in accordance with loan agreements we entered into with the Industrial Development Authority of the City of Chandler, Arizona and the State of Oregon Business Development Commission. The bonds mature between 2035 and 2040 and carry interest rates of 2.40% - 2.70%. Each series of the Arizona bonds and the Oregon bonds is subject to mandatory tender in August 2023, at which time we can remarket the bonds as either fixed-rate bonds for a specified period, or as variable-rate bonds until another fixed-rate period is selected or their final maturity date.

**Convertible Debentures**

In 2009, we issued junior subordinated convertible debentures due 2039 (2009 debentures), which pay a fixed rate of interest semiannually. In 2018, we paid \$2.4 billion in cash to satisfy conversion obligations for \$1.0 billion in principal, resulting in a cumulative loss of \$260 million in interest and other, net and \$1.6 billion as a reduction to stockholders' equity related to the conversion feature.

The 2009 debentures have a contingent interest component that requires us to pay interest based on certain thresholds or for certain events, commencing on August 1, 2019. After such date, if the 10-day average trading price of \$1,000 principal amount of the bond immediately preceding any six-month interest period is less than or equal to \$650 or greater than or equal to \$1,500, we are required to pay contingent 0.25% or 0.50% annual interest, respectively.

The 2009 debentures are convertible, subject to certain conditions. Holders can surrender the 2009 debentures for conversion if the closing price of Intel common stock has been at least 130% of the conversion price then in effect for at least 20 trading days during the 30 consecutive trading-day period ending on the last trading day of the preceding fiscal quarter. We will settle any conversion of the 2009 debentures in cash up to the face value, and any amount in excess of face value will be settled in cash or stock at our option. On or after August 5, 2019, we can redeem, for cash, all or part of the 2009 debentures for the principal amount, plus any accrued and unpaid interest, if the closing price of Intel common stock has been at least 150% of the conversion price then in effect for at least 20 trading days during

any 30 consecutive trading-day period. In addition, if certain events occur in the future, the indenture governing the 2009 debentures provides that each holder of the debentures can, for a pre-defined period of time, require us to repurchase the holder's debentures for the principal amount plus any accrued and unpaid interest. The 2009 debentures are subordinated in right of payment to any existing and future senior debt and to the other liabilities of our subsidiaries. We have concluded that the 2009 debentures are not conventional convertible debt instruments and that the embedded stock conversion options qualify as derivatives. In addition, we have concluded that the embedded conversion options would be classified in stockholders' equity if they were freestanding derivative instruments and are not accounted for separately as derivative liabilities.

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During the fourth quarter of 2018, the closing stock price conversion right condition of the 2009 debentures continued to be met and the debentures will be convertible at the option of the holders during the first quarter of 2019. As a result, the \$569 million carrying amount of the 2009 debentures was classified as short-term debt on our consolidated balance sheet as of December 29, 2018 (\$1.1 billion as of December 30, 2017). The excess of the amount required to be settled in cash if converted over the carrying amount of the 2009 debentures of \$419 million has been classified as temporary equity on our consolidated balance sheet as of December 29, 2018 (\$866 million as of December 30, 2017). In future periods, if the closing stock price conversion right condition is no longer met, all outstanding 2009 debentures would be reclassified to long-term debt and the temporary equity would be reclassified to stockholders' equity on our consolidated balance sheet.

(In Millions, Except Per Share Amounts)	2009 Debentures	
	Dec 29, 2018	Dec 30, 2017
Outstanding principal	\$988	\$2,000
Unamortized discount <sup>1</sup>	\$419	\$866
Net debt carrying amount	\$569	\$1,134
Conversion rate (shares of common stock per \$1,000 principal amount of debentures)	49.01	48.37
Effective conversion price (per share of common stock)	\$20.40	\$20.68

<sup>1</sup> The unamortized discounts for the 2009 debentures are amortized over the remaining life of the debt.

The conversion rate adjusts for certain events outlined in the indentures governing the 2009 debentures, such as quarterly dividend distributions in excess of \$0.14 per share, but it does not adjust for accrued interest. In addition, the conversion rate will increase for a holder of the 2009 debentures who elects to convert the debentures in connection with certain share exchanges, mergers, or consolidations involving Intel.

**Debt Maturities**

Our aggregate debt maturities, excluding commercial paper and drafts payable, based on outstanding principal as of December 29, 2018, by year payable, were as follows:

(In Millions)	2019	2020	2021	2022	2023	2024 and thereafter	Total
	\$177	\$3,450	\$2,500	\$4,439	\$400	\$16,174	\$27,140

In the preceding table, the 2009 debentures are classified based on their stated maturity date, regardless of their classification on the consolidated balance sheet.

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## NOTE 16 : FAIR VALUE

## ASSETS AND LIABILITIES MEASURED AND RECORDED AT FAIR VALUE ON A RECURRING BASIS

(In Millions)	December 29, 2018				December 30, 2017			
	Fair Value Measured and Recorded at Reporting Date Using			Total	Fair Value Measured and Recorded at Reporting Date Using			Total
	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3	
<b>Assets</b>								
Cash equivalents:								
Corporate debt	\$—	\$262	\$—	\$262	\$—	\$30	\$—	\$30
Financial institution instruments <sup>1</sup>	550	183	—	733	335	640	—	975
Government debt <sup>2</sup>	—	—	—	—	—	90	—	90
Reverse repurchase agreements	—	1,850	—	1,850	—	1,399	—	1,399
Short-term investments:								
Corporate debt	—	937	—	937	—	672	3	675
Financial institution instruments <sup>1</sup>	—	1,423	—	1,423	—	1,009	—	1,009
Government debt <sup>2</sup>	—	428	—	428	—	130	—	130
Trading assets:								
Asset-backed securities	—	—	—	—	—	2	—	2
Corporate debt	—	2,635	—	2,635	—	2,842	—	2,842
Financial institution instruments <sup>1</sup>	67	1,273	—	1,340	59	1,064	—	1,123
Government debt <sup>2</sup>	—	1,868	—	1,868	30	4,758	—	4,788
Other current assets:								
Derivative assets	—	180	—	180	—	279	—	279
Loans receivable	—	354	—	354	—	30	—	30
Marketable equity securities	1,440	—	—	1,440	4,148	44	—	4,192
Other long-term investments:								
Corporate debt	—	1,843	—	1,843	—	1,576	4	1,580
Financial institution instruments <sup>1</sup>	—	912	—	912	—	1,397	—	1,397
Government debt <sup>2</sup>	—	633	—	633	—	735	—	735
Other long-term assets:								
Derivative assets	—	100	—	100	—	77	7	84
Loans receivable	—	229	—	229	—	610	—	610
Total assets measured and recorded at fair value	\$2,057	\$15,110	\$—	\$17,167	\$4,572	\$17,384	\$14	\$21,970
<b>Liabilities</b>								
Other accrued liabilities:								
Derivative liabilities	\$—	\$412	\$—	\$412	\$—	\$454	\$—	\$454
Other long-term liabilities:								
Derivative liabilities	—	415	68	483	—	297	6	303
Total liabilities measured and recorded at fair value	\$—	\$827	\$68	\$895	\$—	\$751	\$6	\$757

<sup>1</sup> Level 1 investments consist of money market funds. Level 2 investments consist primarily of commercial paper, certificates of deposit, time deposits, and notes and bonds issued by financial institutions.

<sup>2</sup> Level 1 investments consist primarily of U.S. Treasury securities. Level 2 investments consist primarily of U.S. agency notes and non-U.S. government debt.





Table of Contents**ASSETS MEASURED AND RECORDED AT FAIR VALUE ON A NON-RECURRING BASIS**

Our non-marketable equity securities, equity method investments, and certain non-financial assets, such as intangible assets and property, plant and equipment, are recorded at fair value only if an impairment or observable price adjustment is recognized in the current period. If an impairment or observable price adjustment is recognized on our non-marketable equity securities during the period, we classify these assets as Level 3 within the fair value hierarchy based on the nature of the fair value inputs.

We classified non-marketable equity securities and non-marketable equity method investments as Level 3.

Impairments recognized on these investments held as of December 29, 2018 were \$416 million (\$537 million held as of December 30, 2017 and \$153 million held as of December 31, 2016).

**FINANCIAL INSTRUMENTS NOT RECORDED AT FAIR VALUE ON A RECURRING BASIS**

Financial instruments not recorded at fair value on a recurring basis include non-marketable equity securities and equity method investments that have not been remeasured or impaired in the current period, grants receivable, loans receivable, reverse repurchase agreements, and our short-term and long-term debt.

Prior to the adoption of the new financial instrument standard, our non-marketable cost method investments were disclosed at fair value on a recurring basis. The carrying amount and fair value of our non-marketable cost method investments as of December 30, 2017 were \$2.6 billion and \$3.6 billion, respectively. These measures are classified as Level 3 within the fair value hierarchy based on the nature of the fair value inputs.

As of December 29, 2018, the aggregate carrying value of grants receivable, loans receivable, and reverse repurchase agreements was \$833 million (the aggregate carrying amount as of December 30, 2017 was \$935 million). The estimated fair value of these financial instruments approximates their carrying value and is categorized as Level 2 within the fair value hierarchy based on the nature of the fair value inputs.

For information related to the fair value of our short-term and long-term debt, see "Note 15: Borrowings."

**NOTE 17 : OTHER COMPREHENSIVE INCOME (LOSS)**

The changes in accumulated other comprehensive income (loss) by component and related tax effects for each period were as follows:

(In Millions)	Unrealized Holding Gains (Losses) on Available-for-Sale Equity Investments	Unrealized Holding Gains (Losses) on Derivatives	Actuarial Valuation and Other Pension Expenses	Translation Adjustments and Other	Total
December 31, 2016	\$ 2,179	\$ (259 )	\$ (1,280 )	\$ (534 )	\$ 106
Other comprehensive income (loss) before reclassifications	2,765	605	275	(2 )	3,643
Amounts reclassified out of accumulated other comprehensive income (loss)	(3,433 )	(69 )	103	509	(2,890)
Tax effects	234	(171 )	(61 )	1	3
Other comprehensive income (loss)	(434 )	365	317	508	756
December 30, 2017	1,745	106	(963 )	(26 )	862
Impact of change in accounting standards	(1,745 )	24	(65 )	(4 )	(1,790)
Opening balance as of December 31, 2017	—	130	(1,028 )	(30 )	(928 )
Other comprehensive income (loss) before reclassifications	—	(310 )	157	(16 )	(169 )
Amounts reclassified out of accumulated other comprehensive income (loss)	—	9	109	8	126
Tax effects	—	48	(56 )	5	(3 )
Other comprehensive income (loss)	—	(253 )	210	(3 )	(46 )
December 29, 2018	\$ —	\$ (123 )	\$ (818 )	\$ (33 )	\$ (974)



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The amounts reclassified out of accumulated other comprehensive income (loss) into the consolidated statements of income for each period were as follows:

Comprehensive Income Components	Location	Income Before Taxes Impact for Years Ended (In Millions)		
		Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Unrealized holding gains (losses) on available-for-sale investments:				
	Gains (losses) on equity investments, net	\$—	\$3,433	\$ 530
		—	3,433	530
Unrealized holding gains (losses) on derivatives:				
Foreign currency contracts	Cost of sales	(16 )	(65 )	(65 )
	Research and development	41	45	7
	Marketing, general and administrative	22	7	5
	Gains (losses) on equity investments, net	—	57	11
	Interest and other, net	(56 )	25	4
		(9 )	69	(38 )
Amortization of pension and postretirement benefit components:				
Actuarial valuation and other pension expenses		(109 )	(103 )	(170 )
		(109 )	(103 )	(170 )
Translation adjustments and other	Interest and other, net	(8 )	(509 )	—
Total amounts reclassified out of accumulated other comprehensive income (loss)		\$(126)	\$2,890	\$ 322

The amortization of pension and postretirement benefit components is included in the computation of net periodic benefit cost. For more information, see "Note 19: Retirement Benefit Plans."

We estimate that we will reclassify approximately \$202 million (before taxes) of net derivative losses included in accumulated other comprehensive income (loss) into earnings within the next 12 months.

During the second quarter of 2017, we reclassified \$507 million (before taxes) of currency translation adjustment losses included in accumulated other comprehensive income (loss) into earnings as a result of our divestiture of ISecG. For more information, see "Note 11: Acquisitions and Divestitures."

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VOLUME OF DERIVATIVE ACTIVITY

Total gross notional amounts for outstanding derivatives (recorded at fair value) at the end of each period were as follows:

(In Millions)	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Foreign currency contracts	\$19,223	\$19,958	\$17,960
Interest rate contracts	22,447	16,823	14,228
Other	1,356	1,636	1,340
Total	\$43,026	\$38,417	\$33,528

During 2018, 2017, and 2016, we entered into \$7.1 billion, \$4.8 billion, and \$4.7 billion, respectively, of interest rate swaps to hedge against changes in the fair value attributable to the benchmark interest rates related to our outstanding senior notes. These hedges were designated as fair value hedges.

## FAIR VALUE OF DERIVATIVE INSTRUMENTS IN THE CONSOLIDATED BALANCE SHEETS

(In Millions)	December 29, 2018		December 30, 2017	
	Assets <sup>1</sup>	Liabilities <sup>2</sup>	Assets <sup>1</sup>	Liabilities <sup>2</sup>
Derivatives designated as hedging instruments				
Foreign currency contracts <sup>3</sup>	\$ 44	\$ 244	\$ 283	\$ 32
Interest rate contracts	84	474	1	254
Total derivatives designated as hedging instruments	128	718	284	286
Derivatives not designated as hedging instruments				
Foreign currency contracts <sup>3</sup>	132	155	52	447
Interest rate contracts	20	22	18	24
Other	—	—	9	—
Total derivatives not designated as hedging instruments	152	177	79	471
Total derivatives	\$ 280	\$ 895	\$ 363	\$ 757

<sup>1</sup> Derivative assets are recorded as other assets, current and non-current.

<sup>2</sup> Derivative liabilities are recorded as other liabilities, current and non-current.

<sup>3</sup> The majority of these instruments mature within 12 months.

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## AMOUNTS OFFSET IN THE CONSOLIDATED BALANCE SHEETS

The gross amounts of our derivative instruments and reverse repurchase agreements subject to master netting arrangements with various counterparties, and cash and non-cash collateral posted under such agreements at the end of each period were as follows:

		December 29, 2018		Gross Amounts Not Offset in the Balance Sheet		
(In Millions)	Gross Amounts Recognized in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments	Cash and Non-Cash Collateral Received or Pledged	Net Amount	
Assets:						
Derivative assets subject to master netting arrangements	\$292	—\$ 292	\$(220)	\$(72)	\$ —	
Reverse repurchase agreements	2,099	— 2,099	—	(1,999)	100	
Total assets	2,391	— 2,391	(220)	(2,071)	100	
Liabilities:						
Derivative liabilities subject to master netting arrangements	890	— 890	(220)	(576)	94	
Total liabilities	\$890	—\$ 890	\$(220)	\$(576)	\$ 94	
		December 30, 2017		Gross Amounts Not Offset in the Balance Sheet		
(In Millions)	Gross Amounts Recognized in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments	Cash and Non-Cash Collateral Received or Pledged	Net Amount	
Assets:						
Derivative assets subject to master netting arrangements	\$350	—\$ 350	\$(206)	\$(130)	\$ 14	
Reverse repurchase agreements	1,649	— 1,649	—	(1,649)	—	
Total assets	1,999	— 1,999	(206)	(1,779)	14	
Liabilities:						
Derivative liabilities subject to master netting arrangements	745	— 745	(206)	(504)	35	
Total liabilities	\$745	—\$ 745	\$(206)	\$(504)	\$ 35	

We obtain and secure available collateral from counterparties against obligations, including securities lending transactions and reverse repurchase agreements, when we deem it appropriate.

Table of Contents**DERIVATIVES IN CASH FLOW HEDGING RELATIONSHIPS**

The before-tax net gains or losses attributed to the effective portion of cash flow hedges, recognized in other comprehensive income (loss), were \$310 million net losses in 2018 (\$605 million net gains in 2017 and \$26 million net losses in 2016). Substantially all of our cash flow hedges are foreign currency contracts for all periods presented. Hedge ineffectiveness and amounts excluded from effectiveness testing were insignificant during all periods presented.

For information on the unrealized holding gains (losses) on derivatives reclassified out of accumulated other comprehensive income into the consolidated statements of income, see "Note 17: Other Comprehensive Income (Loss)."

**DERIVATIVES IN FAIR VALUE HEDGING RELATIONSHIPS**

The effects of derivative instruments designated as fair value hedges, recognized in interest and other, net for each period were as follows:

Years Ended (In Millions)	Gains (Losses) Recognized in Statement of Income on Derivatives		
	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016
Interest rate contracts	\$(138)	\$ (68 )	\$(171 )
Hedged items	138	68	171
Total	\$—	\$—	\$—

There was no ineffectiveness during all periods presented in the preceding table.

The amounts recorded on the consolidated balance sheet related to cumulative basis adjustments for fair value hedges for each period were as follows:

Line Item in the Consolidated Balance Sheet in Which the Hedged Item Is Included	Carrying Amount of the Hedged Item Asset/(Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount Assets/(Liabilities)	
	Dec 29, 2018	Dec 30, 2017	Dec 29, 2018	Dec 30, 2017
Long-term debt	\$(19,622)	\$(12,653)	\$ 390	\$ 252

As of December 29, 2018 and December 30, 2017, the total notional amount of pay variable/receive fixed-interest rate swaps was \$20.0 billion and \$12.9 billion, respectively.

**DERIVATIVES NOT DESIGNATED AS HEDGING INSTRUMENTS**

The effects of derivative instruments not designated as hedging instruments on the consolidated statements of income for each period were as follows:

Years Ended (In Millions)	Location of Gains (Losses) Recognized in Income on Derivatives	Dec 29, Dec 30, Dec 31,		
		2018	2017	2016
Foreign currency contracts	Interest and other, net	\$ 372	\$(547 )	\$ 388
Interest rate contracts	Interest and other, net	9	9	8
Other	Various	(147 )	203	113
Total		\$ 234	\$(335 )	\$ 509





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## NOTE 19 : RETIREMENT BENEFIT PLANS

## DEFINED CONTRIBUTION PLANS

We provide tax-qualified defined contribution plans for the benefit of eligible employees, former employees, and retirees in the U.S. and certain other countries. The plans are designed to provide employees with an accumulation of funds for retirement on a tax-deferred basis. For the benefit of eligible U.S. employees, we also provide an unfunded non-tax-qualified supplemental deferred compensation plan for certain highly compensated employees.

We expensed \$372 million for discretionary contributions to the U.S. qualified defined contribution and non-qualified deferred compensation plans in 2018 (\$346 million in 2017 and \$326 million in 2016).

## U.S. POSTRETIREMENT MEDICAL BENEFITS PLAN

Upon retirement, we provide benefits to eligible U.S. employees who were hired prior to 2014 under the U.S. Postretirement Medical Benefits Plan. The benefits can be used to pay all or a portion of the cost to purchase eligible coverage in a medical plan.

As of December 29, 2018 and December 30, 2017, the projected benefit obligation was \$547 million and \$567 million, respectively, which used the discount rate of 4.4% and 3.8%, respectively. The December 29, 2018 and December 30, 2017 corresponding fair value of plan assets was \$476 million and \$563 million, respectively.

The investment strategy for U.S. Postretirement Medical Benefits Plan assets is to invest primarily in liquid assets, due to the level of expected future benefit payments. The assets are invested solely in a tax-aware global equity portfolio, which is actively managed by an external investment manager. The tax-aware global equity portfolio is composed of a diversified mix of equities in developed countries. As of December 29, 2018, substantially all of the U.S. Postretirement Medical Benefits Plan assets were invested in exchange-traded equity securities and were measured at fair value using Level 1 inputs.

The estimated benefit payments for this plan over the next 10 years are as follows:

(In Millions)	2019	2020	2021	2022	2023	2024-2028
Postretirement Medical Benefits	\$ 28	\$ 30	\$ 31	\$ 32	\$ 33	\$ 181

## PENSION BENEFIT PLANS

We provide defined-benefit pension plans in certain countries, most significantly the U.S., Ireland, Germany, and Israel. The substantial majority of the plans' benefits have been frozen and beginning on January 1, 2020, future benefit accruals for the U.S. plan will be frozen to remaining eligible employees, reducing our projected benefit obligation by \$150 million at December 29, 2018.

Table of Contents**BENEFIT OBLIGATION AND PLAN ASSETS FOR PENSION BENEFIT PLANS**

The vested benefit obligation for a defined-benefit pension plan is the actuarial present value of the vested benefits to which the employee is currently entitled based on the employee's expected date of separation or retirement.

(In Millions)	Dec 29, 2018	Dec 30, 2017
Changes in projected benefit obligation:		
Beginning projected benefit obligation	\$3,842	\$3,640
Service cost	65	84
Interest cost	113	117
Actuarial (gain) loss	(204 )	24
Currency exchange rate changes	(121 )	281
Plan curtailments	(150 )	(162 )
Plan settlements	(74 )	(101 )
Other	(38 )	(41 )
Ending projected benefit obligation <sup>1</sup>	3,433	3,842
Changes in fair value of plan assets:		
Beginning fair value of plan assets	2,287	1,696
Actual return on plan assets	(38 )	136
Employer contributions	480	471
Currency exchange rate changes	(62 )	124
Plan settlements	(74 )	(101 )
Other	(42 )	(39 )
Ending fair value of plan assets <sup>2</sup>	2,551	2,287
Net funded status	\$882	\$1,555

## Amounts recognized in the consolidated balance sheets

Other long-term assets	\$244	\$—
Other long-term liabilities	\$1,126	\$1,555
Accumulated other comprehensive loss (income), before tax <sup>3</sup>	\$1,038	\$1,257

<sup>1</sup> The split between U.S. and non-U.S. in the projected benefit obligation was approximately 35% and 65%, respectively, as of December 29, 2018 and 40% and 60%, respectively, as of December 30, 2017.

<sup>2</sup> The split between the U.S. and non-U.S. in the fair value of plan assets was approximately 55% and 45%, respectively, as of December 29, 2018 and 50% and 50%, respectively, as of December 30, 2017.

The split between U.S. and non-U.S. in the accumulated other comprehensive loss (income), before tax, was approximately 35% and 65%, respectively, as of December 29, 2018 and 40% and 60%, respectively, as of December 30, 2017.

Changes in actuarial gains and losses in the projected benefit obligation are generally driven by discount rate movement. We use the corridor approach to amortize actuarial gains and losses. Under this approach, net actuarial gains or losses in excess of 10% of the larger of the projected benefit obligation or the fair value of plan assets are amortized on a straight-line basis.

As of December 29, 2018, the accumulated benefit obligations were \$1.2 billion and \$2.0 billion for the U.S. plan and non-U.S. plans, respectively. In 2018, the U.S. plan was in the net asset position and all non-U.S. plans had accumulated benefit obligations and projected benefit obligations in excess of plan assets. As of December 30, 2017, the accumulated benefit obligations were \$1.3 billion and \$2.1 billion for the U.S. plan and non-U.S. plans, respectively, and all plans had accumulated benefit obligations and projected benefit obligations in excess of plan assets.



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(In Millions)	Dec 29, 2018	Dec 30, 2017
Plans with accumulated benefit obligation in excess of plan assets		
Accumulated benefit obligation	\$ 1,965	\$ 3,423
Plan assets	\$ 1,106	\$ 2,287
Plans with projected benefit obligation in excess of plan assets		
Projected benefit obligation	\$ 2,232	\$ 3,842
Plan assets	\$ 1,106	\$ 2,287

## ASSUMPTIONS FOR PENSION BENEFIT PLANS

	Dec 29, 2018	Dec 30, 2017
Weighted average actuarial assumptions used to determine benefit obligations		
Discount rate	3.3 %	3.0 %
Rate of compensation increase	3.5 %	3.3 %
	2018	2017
Weighted average actuarial assumptions used to determine costs		
Discount rate	3.0 %	3.2 %
Expected long-term rate of return on plan assets	4.7 %	4.6 %
Rate of compensation increase	3.3 %	3.8 %

We establish the discount rate for each pension plan by analyzing current market long-term bond rates and matching the bond maturity with the average duration of the pension liabilities.

We establish the long-term expected rate of return by developing a forward-looking, long-term return assumption for each pension fund asset class, taking into account factors such as the expected real return for the specific asset class and inflation. A single, long-term rate of return is then calculated as the weighted average of the target asset allocation percentages and the long-term return assumption for each asset class.

## FUNDING

**Policy.** Our practice is to fund the various pension plans in amounts sufficient to meet the minimum requirements of applicable local laws and regulations. Additional funding may be provided as deemed appropriate. Funding for the U.S. Postretirement Medical Benefits Plan is discretionary under applicable laws and regulations; additional funding may be provided as deemed appropriate.

**Funding Status.** On a worldwide basis, our pension and postretirement benefit plans were 76% funded as of December 29, 2018. The U.S. Intel Minimum Pension Plan, which accounts for 30% of the worldwide pension and postretirement benefit obligations, was 120% funded. Funded status is not indicative of our ability to pay ongoing pension benefits or of our obligation to fund retirement trusts. Required pension funding for U.S. retirement plans is determined in accordance with the Employee Retirement Income Security Act (ERISA), which sets required minimum contributions. Cumulative company funding to the U.S. Intel Minimum Pension Plan currently exceeds the minimum ERISA funding requirements.

## NET PERIODIC BENEFIT COST

The net periodic benefit cost for pension benefits and U.S. postretirement medical benefits was \$197 million in 2018 (\$243 million in 2017 and \$415 million in 2016). The decrease in the net periodic pension benefit cost in 2017 compared to 2016 was primarily attributed to plan settlements and remeasurement in conjunction with our 2016 Restructuring Program. See "Note 8: Restructuring and Other Charges."

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## PENSION PLAN ASSETS

(In Millions)	December 29, 2018			Dec 30, 2017	
	Fair Value Measured at Reporting Date Using Level			Total	Total
	1	2	3		
Equity securities	\$—	\$261	\$—	\$261	\$473
Fixed income	—	93	18	111	465
Other investments	—	—	—	—	19
Assets measured by fair value hierarchy	\$—	\$354	\$18	\$372	\$957
Assets measured at net asset value				2,138	1,208
Cash and cash equivalents				41	122
Total pension plan assets at fair value				\$2,551	\$2,287

## U.S. Plan Assets

The investment strategy for U.S. Intel Minimum Pension Plan assets is to maximize risk-adjusted returns, taking into consideration the investment horizon and expected volatility to help ensure that sufficient assets are available to pay pension benefits as they come due. The allocation to each asset class will fluctuate with market conditions, such as volatility and liquidity concerns, and will typically be rebalanced when outside the target ranges, which were 45% fixed income, 30% hedge funds, and 25% equity investments in 2018. During 2018, the U.S. Intel Minimum Pension Plan assets were invested in collective investment trust funds, which are measured at net asset value.

## Non-U.S. Plan Assets

The investments of the non-U.S. plans are managed by insurance companies, pension funds, or third-party trustees, consistent with regulations or market practice of the country where the assets are invested. The investment manager makes investment decisions within the guidelines set by Intel or local regulations. Investments managed by qualified insurance companies or pension funds under standard contracts follow local regulations, and we are not actively involved in their investment strategies. For the assets that we have discretion to set investment guidelines, the assets are invested in developed country equity investments and fixed-income investments, either through index funds or direct investment. In general, the investment strategy is designed to accumulate a diversified portfolio among markets, asset classes, or individual securities to reduce market risk and to help ensure that the pension assets are available to pay benefits as they come due. The target allocation of the non-U.S. plan assets that we have control over was approximately 45% fixed income, 35% equity, and 20% hedge fund investments in 2018.

The equity investments in the non-U.S. plan assets are invested in a diversified mix of equities of developed countries, including the U.S., and emerging markets throughout the world.

We have control over the investment strategy related to the majority of the assets measured at net asset value, which are invested in hedge funds, bond index, and equity index funds.

## ESTIMATED FUTURE BENEFIT PAYMENTS FOR PENSION BENEFIT PLANS

Estimated benefit payments over the next 10 years are as follows:

(In Millions)	2019	2020	2021	2022	2023	2024-2028
Pension benefits	\$117	\$111	\$113	\$115	\$115	\$603

## NOTE 20 : EMPLOYEE EQUITY INCENTIVE PLANS

Our equity incentive plans are broad-based, long-term programs intended to attract and retain talented employees and align stockholder and employee interests. Our plans include our 2006 Equity Incentive Plan (2006 Plan) and our 2006 Employee Stock Purchase Plan (2006 ESPP).

Under the 2006 Plan, 786 million shares of common stock have been authorized for issuance as equity awards to employees and non-employee directors through June 2020. As of December 29, 2018, 185 million shares of common

stock remained available for future grants.

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Under the 2006 Plan, we grant RSUs and previously granted stock options. We grant RSUs with a service condition, as well as RSUs with both a market condition and a service condition, which we call outperformance stock units (OSUs), and have been granted to a group of senior officers, employees, and non-employee directors. For OSUs granted in 2018, the number of shares of our common stock to be received at vesting will range from 0% to 200% of the target grant amount, based on total stockholder return (TSR) of our common stock measured against the benchmark TSR of the S&P 500 IT Sector Index over a three-year period. TSR is a measure of stock price appreciation plus any dividends paid in this performance period. As of December 29, 2018, 11 million OSUs were outstanding. These OSUs generally vest three years and one month from the grant date, and OSUs granted prior to 2017 accrue dividend equivalents. Other RSU awards and option awards generally vest over four years from the grant date. Stock options generally expire seven years from the date of grant.

**SHARE-BASED COMPENSATION**

Share-based compensation recognized in 2018 was \$1.5 billion (\$1.4 billion in 2017 and \$1.4 billion in 2016). During 2018, the tax benefit that we realized for the tax deduction from share-based awards totaled \$399 million (\$520 million in 2017 and \$616 million in 2016).

We estimate the fair value of RSUs with a service condition using the value of our common stock on the date of grant, reduced by the present value of dividends expected to be paid on our shares of common stock prior to vesting. We estimate the fair value of OSUs using a Monte Carlo simulation model on the date of grant. We base expected volatility for OSUs on historical volatility.

We based the weighted average estimated value of RSU and OSU grants on the weighted average assumptions for each period as follows:

	RSUs and OSUs			
	Dec 29, 2018	Dec 30, 2017	Dec 31, 2016	
Estimated values	\$48.95	\$35.30	\$29.76	
Risk-free interest rate	2.4	% 1.4	% 0.9	%
Dividend yield	2.4	% 2.9	% 3.3	%
Volatility	22	% 23	% 23	%

**RESTRICTED STOCK UNIT AWARDS**

RSU activity in 2018 was as follows:

	Number of RSUs (In Millions)	Weighted Average Grant-Date Fair Value
December 30, 2017	100.4	\$ 32.36
Granted	36.4	\$ 48.95
Vested	(39.5 )	\$ 31.64
Forfeited	(7.4 )	\$ 36.23
December 29, 2018	89.9	\$ 39.07
Expected to vest as of December 29, 2018	85.3	\$ 38.92

The aggregate fair value of awards that vested in 2018 was \$2.0 billion (\$1.6 billion in 2017 and \$1.6 billion in 2016), which represents the market value of our common stock on the date that the RSUs vested. The grant-date fair value of awards that vested in 2018 was \$1.2 billion (\$1.1 billion in 2017 and \$1.3 billion in 2016). The number of RSUs vested includes shares of common stock that we withheld on behalf of employees to satisfy the minimum statutory tax withholding requirements. RSUs that are expected to vest are net of estimated future forfeitures.

As of December 29, 2018, unrecognized compensation costs related to RSUs granted under our equity incentive plans were \$2.1 billion. We expect to recognize those costs over a weighted average period of 1.3 years.

#### STOCK PURCHASE PLAN

The 2006 ESPP allows eligible employees to purchase shares of our common stock at 85% of the value of our common stock on specific dates. Under the 2006 ESPP, 373 million shares of common stock are authorized for issuance through August 2021. As of December 29, 2018, 137 million shares of common stock remained available for issuance.

Employees purchased 13.7 million shares of common stock in 2018 for \$468 million under the 2006 ESPP (14.5 million shares of common stock for \$432 million in 2017 and 16.5 million shares of common stock for \$415 million in 2016). As of December 29, 2018, unrecognized share-based compensation costs related to rights to acquire shares of common stock under the 2006 ESPP totaled \$20 million. We expect to recognize those costs over a period of approximately two months.



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## NOTE 21 : COMMITMENTS AND CONTINGENCIES

## COMMITMENTS

## Leases

Portions of our real property and equipment are under operating leases that expire at various dates through 2028. Rental expense was \$231 million in 2018 (\$264 million in 2017 and \$282 million in 2016).

(In Millions)	2019	2020	2021	2022	2023	2024 and Thereafter	Total
Minimum rental commitments under all non-cancelable leases <sup>1</sup>	\$ 229	\$ 181	\$ 133	\$ 101	\$ 70	\$ 121	\$ 835

<sup>1</sup> Includes leases with initial term in excess of one year.

## Other Commitments

Commitments for construction or purchase of property, plant and equipment totaled \$9.0 billion as of December 29, 2018 (\$12.1 billion as of December 30, 2017), a substantial majority of which will be due within the next 12 months. Other purchase obligations and commitments totaled approximately \$3.2 billion as of December 29, 2018 (approximately \$2.7 billion as of December 30, 2017). Other purchase obligations and commitments include payments due under various types of licenses and agreements to purchase goods or services, as well as payments due under non-contingent funding obligations. In addition, we have various contractual commitments with IMFT. For further information on these contractual commitments, see "Note 10: Investments."

## LEGAL PROCEEDINGS

We are a party to various legal proceedings, including those noted in this section. Although management at present believes that the ultimate outcome of these proceedings, individually and in the aggregate, will not materially harm our financial position, results of operations, cash flows, or overall trends, legal proceedings and related government investigations are subject to inherent uncertainties, and unfavorable rulings or other events could occur. Unfavorable resolutions could include substantial monetary damages. In addition, in matters for which injunctive relief or other conduct remedies are sought, unfavorable resolutions could include an injunction or other order prohibiting us from selling one or more products at all or in particular ways, precluding particular business practices, or requiring other remedies. An unfavorable outcome may result in a material adverse impact on our business, results of operations, financial position, and overall trends. We might also conclude that settling one or more such matters is in the best interests of our stockholders, employees, and customers, and any such settlement could include substantial payments. Except as specifically described below, we have not concluded that settlement of any of the legal proceedings noted in this section is appropriate at this time.

## European Commission Competition Matter

In 2001, the European Commission (EC) commenced an investigation regarding claims by Advanced Micro Devices, Inc. (AMD) that we used unfair business practices to persuade customers to buy our microprocessors. We received numerous requests for information and documents from the EC and we responded to each of those requests. The EC issued a Statement of Objections in July 2007 and held a hearing on that Statement in March 2008. The EC issued a Supplemental Statement of Objections in July 2008. In May 2009, the EC issued a decision finding that we had violated Article 82 of the EC Treaty and Article 54 of the European Economic Area Agreement. In general, the EC found that we violated Article 82 (later renumbered as Article 102 by a new treaty) by offering alleged "conditional rebates and payments" that required our customers to purchase all or most of their x86 microprocessors from us. The EC also found that we violated Article 82 by making alleged "payments to prevent sales of specific rival products." The EC imposed a fine in the amount of €1.1 billion (\$1.4 billion as of May 2009), which we subsequently paid during the third quarter of 2009, and ordered us to "immediately bring to an end the infringement referred to in" the EC decision.

The EC decision contained no specific direction on whether or how we should modify our business practices. Instead, the decision stated that we should "cease and desist" from further conduct that, in the EC's opinion, would violate applicable law. We took steps, which are subject to the EC's ongoing review, to comply with that decision pending appeal. We had discussions with the EC to better understand the decision and to explain changes to our business

practices.

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We appealed the EC decision to the Court of First Instance (which has been renamed the General Court) in July 2009. The hearing of our appeal took place in July 2012. In June 2014, the General Court rejected our appeal in its entirety. In August 2014, we filed an appeal with the European Court of Justice. In November 2014, Intervener Association for Competitive Technologies filed comments in support of Intel's grounds of appeal. The EC and interveners filed briefs in November 2014, we filed a reply in February 2015, and the EC filed a rejoinder in April 2015. The Court of Justice held oral argument in June 2016. In October 2016, Advocate General Wahl, an advisor to the Court of Justice, issued a non-binding advisory opinion that favored Intel on a number of grounds. The Court of Justice issued its decision in September 2017, setting aside the judgment of the General Court and sending the case back to the General Court to examine whether the rebates at issue were capable of restricting competition. The General Court has appointed a panel of five judges to consider our appeal of the EC's 2009 decision in light of the Court of Justice's clarifications of the law. In November 2017, the parties filed initial "Observations" about the Court of Justice's decision and the appeal, and were invited by the General Court to offer supplemental comments to each other's "Observations," which the parties submitted in March 2018. Responses to other questions posed by the General Court were filed in May and June 2018. We are now awaiting notice as to whether the General Court will hold a management conference before it conducts oral argument at some future date. Pending the final decision in this matter, the fine paid by Intel has been placed by the EC in commercial bank accounts where it accrues interest.

## McAfee, Inc. Shareholder Litigation

On August 19, 2010, we announced that we had agreed to acquire all of the common stock of McAfee, Inc. (McAfee) for \$48.00 per share. Four McAfee shareholders filed putative class-action lawsuits in Santa Clara County, California Superior Court challenging the proposed transaction. The cases were ordered consolidated in September 2010.

Plaintiffs filed an amended complaint that named former McAfee board members, McAfee, and Intel as defendants, and alleged that the McAfee board members breached their fiduciary duties and that McAfee and Intel aided and abetted those breaches of duty. The complaint requested rescission of the merger agreement, such other equitable relief as the court may deem proper, and an award of damages in an unspecified amount. In June 2012, the plaintiffs' damages expert asserted that the value of a McAfee share for the purposes of assessing damages should be \$62.08.

In January 2012, the court certified the action as a class action, appointed the Central Pension Laborers' Fund to act as the class representative, and scheduled trial to begin in January 2013. In March 2012, defendants filed a petition with the California Court of Appeal for a writ of mandate to reverse the class certification order; the petition was denied in June 2012. In March 2012, at defendants' request, the court held that plaintiffs were not entitled to a jury trial and ordered a bench trial. In April 2012, plaintiffs filed a petition with the California Court of Appeal for a writ of mandate to reverse that order, which the court of appeal denied in July 2012. In August 2012, defendants filed a motion for summary judgment. The trial court granted that motion in November 2012, and entered final judgment in the case in February 2013. In April 2013, plaintiffs appealed the final judgment. The California Court of Appeal heard oral argument in October 2017, and in November 2017, affirmed the judgment as to McAfee's nine outside directors, reversed the judgment as to former McAfee director and chief executive officer David DeWalt, Intel, and McAfee, and affirmed the trial court's ruling that the plaintiffs are not entitled to a jury trial. At a June 2018 case management conference following remand, the Superior Court set an October hearing date for any additional summary judgment motions that may be filed, and set trial to begin in December 2018. In July 2018, plaintiffs filed a motion for leave to amend the complaint, which the court denied in September 2018. Also in July 2018, McAfee and Intel filed a motion for summary judgment on the aiding and abetting claims asserted against them; in October 2018, the court granted the motion as to McAfee and denied the motion as to Intel.

In late October 2018, the parties agreed in principal to settle the case for an aggregate payment by defendants of \$11.7 million. Intel's contribution to the settlement will be immaterial to its financial statements. The parties will seek court approval of the settlement after they have completed documenting the agreement.

## Litigation Related to Security Vulnerabilities

In June 2017, a Google research team notified us and other companies that it had identified security vulnerabilities (now commonly referred to as "Spectre" and "Meltdown") that affect many types of microprocessors, including our products. As is standard when findings like these are presented, we worked together with other companies in the

industry to verify the research and develop and validate software and firmware updates for impacted technologies. On January 3, 2018, information on the security vulnerabilities was publicly reported, before software and firmware updates to address the vulnerabilities were made widely available. Numerous lawsuits have been filed against Intel and, in certain cases, our executives and directors, in U.S. federal and state courts and in certain courts in other countries relating to the Spectre and Meltdown security vulnerabilities, as well as another variant of these vulnerabilities (“Foreshadow”) that has since been identified.

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As of January 31, 2019, 48 consumer class action lawsuits and three securities class action lawsuits have been filed. The consumer class action plaintiffs, who purport to represent various classes of end users of our products, generally claim to have been harmed by Intel's actions and/or omissions in connection with the security vulnerabilities and assert a variety of common law and statutory claims seeking monetary damages and equitable relief. Of the consumer class action lawsuits, 44 have been filed in the U.S., two of which have been dismissed; two have been filed in Canada; and two have been filed in Israel. In April 2018, the U.S. Judicial Panel on Multidistrict Litigation ordered the U.S. consumer class action lawsuits consolidated for pretrial proceedings in the U.S. District Court for the District of Oregon. Intel filed a motion to dismiss that consolidated action in October 2018, and a hearing on that motion has been scheduled for February 2019. In the case pending in the Superior Court of Justice of Ontario, an initial status conference has not yet been scheduled. In the case pending in the Superior Court of Justice of Quebec, the court entered an order in October 2018, staying that case for one year. In Israel, both consumer class action lawsuits were filed in the District Court of Haifa. The District Court denied the parties' joint request for a stay in the first case. Intel filed a motion to stay the second case, and a hearing on that motion has been scheduled for April 2019. In the securities class action litigation, the lead securities class action plaintiffs, who purport to represent classes of acquirers of Intel stock between October 27, 2017 and January 9, 2018, generally allege that Intel and certain officers violated securities laws by making statements about Intel's products that were revealed to be false or misleading by the disclosure of the security vulnerabilities. The securities class actions have been consolidated and are pending in the U.S. District Court for the Northern District of California. Defendants moved to dismiss those actions on various grounds; a hearing on that motion was scheduled for November 2018, but was taken off calendar by the court and has not been rescheduled. Additional lawsuits and claims may be asserted on behalf of customers and shareholders seeking monetary damages or other related relief. We dispute the claims described above and intend to defend the lawsuits vigorously. Given the procedural posture and the nature of these cases, including that the proceedings are in the early stages, that alleged damages have not been specified, that uncertainty exists as to the likelihood of a class or classes being certified or the ultimate size of any class or classes if certified, and that there are significant factual and legal issues to be resolved, we are unable to make a reasonable estimate of the potential loss or range of losses, if any, that might arise from these matters.

In addition to these lawsuits, Intel stockholders have filed seven shareholder derivative lawsuits since January 2018 against certain current and former members of our Board of Directors and certain current and former officers, alleging that the defendants breached their duties to Intel in connection with the disclosure of the security vulnerabilities and the failure to take action in relation to alleged insider trading. The complaints seek to recover damages from the defendants on behalf of Intel. Three of the derivative actions were filed in the U.S. District Court for the Northern District of California and have been consolidated, and the other four were filed in the Superior Court of the State of California in San Mateo County and have been consolidated. In August 2018, the federal court granted defendants' motion to dismiss the consolidated complaint on the ground that plaintiffs failed to plead facts sufficient to show they were excused from making a pre-lawsuit demand on the Board. The federal court granted plaintiffs leave to amend their complaint, but in September 2018, plaintiffs instead requested that the action be dismissed. The federal court ordered the case dismissed without prejudice in January 2019. In August 2018, the California Superior Court granted defendants' motion to dismiss the consolidated complaint in the action on the ground that plaintiffs failed to plead facts sufficient to show they were excused from making a pre-lawsuit demand on the Board. The state court granted plaintiffs leave to amend their complaint, and the parties have stipulated that plaintiffs must file any amended complaint by February 2019.

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## FINANCIAL INFORMATION BY QUARTER (UNAUDITED)

2018 for Quarter Ended (In Millions, Except Per Share Amounts)	December 29	September 29	June 30	March 31
Net revenue	\$ 18,657	\$ 19,163	\$ 16,962	\$ 16,066
Gross margin	\$ 11,227	\$ 12,360	\$ 10,419	\$ 9,731
Net income	\$ 5,195	\$ 6,398	\$ 5,006	\$ 4,454
Earnings per share - Basic	\$ 1.14	\$ 1.40	\$ 1.08	\$ 0.95
Earnings per share - Diluted	\$ 1.12	\$ 1.38	\$ 1.05	\$ 0.93
Dividends per share of common stock:				
Declared	\$ —	\$ 0.60	\$ —	\$ 0.60
Paid	\$ 0.30	\$ 0.30	\$ 0.30	\$ 0.30
2017 for Quarter Ended (In Millions, Except Per Share Amounts)	December 30	September 30	July 1	April 1
Net revenue	\$ 17,053	\$ 16,149	\$ 14,763	\$ 14,796
Gross margin <sup>1</sup>	\$ 10,778	\$ 10,064	\$ 9,096	\$ 9,160
Net income (loss) <sup>2</sup>	\$(687 )	\$ 4,516	\$ 2,808	\$ 2,964
Earnings per share - Basic	\$(0.15 )	\$ 0.96	\$ 0.60	\$ 0.63
Earnings per share - Diluted	\$(0.15 )	\$ 0.94	\$ 0.58	\$ 0.61
Dividends per share of common stock:				
Declared	\$ —	\$ 0.5450	\$ —	\$ 0.5325
Paid	\$ 0.2725	\$ 0.2725	\$ 0.2725	\$ 0.2600

<sup>1</sup> In Q1 2018, we adopted "Retirement Benefits - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" on a retrospective basis. As a result of the adoption of this standard, cost of sales, operating expenses, and interest and other, net for the quarterly periods in 2017 in the preceding table have been restated.

<sup>2</sup> In Q4 2017, we recognized a \$5.4 billion higher income tax expense as a result of one-time impacts from Tax Reform. In 2018, our effective tax rate benefited from the reduction of the U.S. statutory federal tax rate.

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**CONTROLS AND PROCEDURES**

**Evaluation of Disclosure Controls and Procedures**

Based on management's evaluation (with the participation of our principal executive officer and principal financial officer), as of the end of the period covered by this report, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), are effective to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

**Changes in Internal Control Over Financial Reporting**

There were no changes to our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 29, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of consolidated financial statements for external purposes in accordance with GAAP.

Management assessed our internal control over financial reporting as of December 29, 2018. Management based its assessment on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Management's assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment.

Based on this assessment, management has concluded that our internal control over financial reporting was effective as of the end of the fiscal year to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with GAAP. We reviewed the results of management's assessment with the Audit Committee of our Board of Directors.

Our independent registered public accounting firm, Ernst & Young LLP, independently assessed the effectiveness of the company's internal control over financial reporting, as stated in the firm's attestation report, which is included within the Consolidated Financial Statements.

**Inherent Limitations on Effectiveness of Controls**

Our management, including the principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

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EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

1. Financial Statements: See "Index to Consolidated Financial Statements" within the Consolidated Financial Statements.
2. Financial Statement Schedule: See "Schedule II—Valuation and Qualifying Accounts" in this section of this Form 10-K.
3. Exhibits: The exhibits listed in the accompanying index to exhibits are filed, furnished, or incorporated by reference as part of this Form 10-K.

Certain of the agreements filed as exhibits to this Form 10-K contain representations and warranties by the parties to the agreements that have been made solely for the benefit of the parties to the agreement. These representations and warranties:

- may have been qualified by disclosures that were made to the other parties in connection with the negotiation of the agreements, which disclosures are not necessarily reflected in the agreements;
- may apply standards of materiality that differ from those of a reasonable investor; and
- were made only as of specified dates contained in the agreements and are subject to subsequent developments and changed circumstances.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date that these representations and warranties were made or at any other time. Investors should not rely on them as statements of fact.



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## Schedule II—Valuation and Qualifying Accounts

Years Ended (In Millions)	Balance at Beginning of Year	Additions Charged to Expenses/ Other Accounts	Net (Deductions) Recoveries	Balance at End of Year
Valuation allowance for deferred tax assets				
December 29, 2018	\$ 1,171	\$ 185	\$ (54 )	\$ 1,302
December 30, 2017	\$ 953	\$ 237	\$ (19 )	\$ 1,171
December 31, 2016	\$ 701	\$ 261	\$ (9 )	\$ 953

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## Exhibit Index

Exhibit Number	Exhibit Description	Incorporated by Reference			Filing Date	Filed or Furnished Herewith
		Form	File Number	Exhibit		
2.1 <sup>†</sup>	<u>Agreement and Plan of Merger among Intel Corporation, 615 Corporation and Altera Corporation, dated as of May 31, 2015</u>	8-K	000-06217	2.1	6/1/2015	
2.2 <sup>†</sup>	<u>Purchase Agreement, dated as of March 12, 2017, by and among Intel Corporation, Cyclops Holdings, Inc. and Mobileye N.V.</u>	8-K	000-06217	2.1	3/13/2017	
3.1	<u>Intel Corporation Third Restated Certificate of Incorporation of Intel Corporation dated May 17, 2006</u>	8-K	000-06217	3.1	5/22/2006	
3.2	<u>Intel Corporation Bylaws, as amended and restated on January 16, 2019</u>	8-K	000-06217	3.2	1/17/2019	
4.1	<u>Indenture dated as of March 29, 2006 between Intel Corporation and Wells Fargo Bank, National Association (as successor to Citibank N.A.) (the "Open-Ended Indenture")</u>	S-3ASR	333-132865	4.4	3/30/2006	
4.2	<u>First Supplemental Indenture to Open-Ended Indenture, dated as of December 3, 2007</u>	10-K	000-06217	4.2.4	2/20/2008	
4.3	<u>Indenture for the Registrant's 3.25% Junior Subordinated Convertible Debentures due 2039 between Intel Corporation and Wells Fargo Bank, National Association, dated as of July 27, 2009</u>	10-Q	000-06217	4.1	11/2/2009	
4.4	<u>Second Supplemental Indenture to Open-Ended Indenture for the Registrant's 1.95% Senior Notes due 2016, 3.30% Senior Notes due 2021, and 4.80% Senior Notes due 2041, dated as of September 19, 2011</u>	8-K	000-06217	4.01	9/19/2011	
4.5	<u>Third Supplemental Indenture to Open-Ended Indenture for the Registrant's 1.35% Senior Notes due 2017, 2.70% Senior Notes due 2022, 4.00% Senior Notes due 2032, and 4.25% Senior Notes due 2042, dated as of December 11, 2012</u>	8-K	000-06217	4.01	12/11/2012	
4.6	<u>Fourth Supplemental Indenture to Open-Ended Indenture for the Registrant's 4.25% Senior Notes due 2042, dated as of December 14, 2012</u>	8-K	000-06217	4.01	12/14/2012	
4.7	<u>Fifth Supplemental Indenture to Open-Ended Indenture, dated as of July 29, 2015, between Intel Corporation and Wells Fargo Bank, National Association, as successor trustee</u>	8-K	000-06217	4.1	7/29/2015	
4.8	<u>Seventh Supplemental Indenture to Open-Ended Indenture, dated as of December 14, 2015, among Intel Corporation, Wells Fargo Bank, National Association, as successor trustee, and Elavon Financial Services Limited, UK Branch, as paying</u>	8-K	000-06217	4.1	12/14/2015	

	<u>agent</u>				
4.9	<u>Eighth Supplemental Indenture to Open-Ended Indenture, dated as of May 19, 2016, between Intel Corporation and Wells Fargo Bank, National Association, as successor trustee</u>	8-K	000-06217	4.1	5/19/2016
4.10	<u>Ninth Supplemental Indenture to Open-Ended Indenture, dated as of May 11, 2017, between Intel Corporation and Wells Fargo Bank, National Association, as successor trustee</u>	8-K	000-06217	4.1	5/11/2017
4.11	<u>Tenth Supplemental Indenture to Open-Ended Indenture, dated as of June 16, 2017, between Intel Corporation and Wells Fargo Bank, National Association, as successor trustee</u>	8-K	000-06217	4.1	6/16/2017
4.12	<u>Eleventh Supplemental Indenture to Open-Ended Indenture, dated as of August 14, 2017, among Intel Corporation, Wells Fargo Bank, National Association, as successor trustee, and Elavon Financial Services DAC, UK Branch, as paying agent</u>	8-K	000-06217	4.1	8/14/2017

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Exhibit Number	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	File Number	Exhibit	
4.13	<u>Twelfth Supplemental Indenture to Open-Ended Indenture, dated as of December 8, 2017, between Intel Corporation and Wells Fargo Bank, National Association, as successor trustee</u>	10-K	000-06217	4.2.13	2/16/2018
4.14	<u>Guarantee dated December 28, 2015 by Intel Corporation in favor of U.S. Bank, National Association, as Trustee for the holders of Altera's 1.750% Senior Notes due 2017, 2.500% Senior Notes due 2018 and 4.100% Senior Notes due 2023</u> Certain instruments defining the rights of holders of long-term debt of Intel Corporation are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. Intel Corporation hereby agrees to furnish to the Securities and Exchange Commission, upon request, copies of such instruments.	8-K	000-06217	99.2	12/28/2015
10.1 <sup>††</sup>	<u>Intel Corporation 2006 Equity Incentive Plan, as amended and restated, effective May 18, 2017</u>	10-Q	000-06217	10.1	7/27/2017
10.1.2 <sup>††</sup>	<u>Form of Notice of Grant - Restricted Stock Units</u>	10-Q	000-06217	10.3	8/3/2009
10.1.3 <sup>††</sup>	<u>Intel Corporation Form of Notice of Grant - Restricted Stock Units</u>	10-Q	000-06217	10.1	10/25/2018
10.1.5 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after January 23, 2015 under the Executive RSU program)</u>	10-Q	000-06217	10.3	4/27/2015
10.1.6 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted to executives with annual vesting over 3 years)</u>	10-K	000-06217	10.1.27	2/17/2017
10.1.7 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted to executives with quarterly vesting over 2 years)</u>	10-K	000-06217	10.1.6	2/16/2018
10.1.8 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for time-based RSUs granted to Robert Swan as interim CEO on August 15, 2018)</u>	10-Q	000-06217	10.2	10/25/2018
10.1.9 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after January 23, 2015 under the Executive OSU program)</u>	10-Q	000-06217	10.4	4/27/2015
10.1.10 <sup>††</sup>	<u>Intel Corporation Restricted Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after February 1, 2017 under the Executive OSU</u>	10-Q	000-06217	10.1	4/27/2017

	<u>program)</u>				
	<u>Intel Corporation Restricted Stock Unit Agreement</u>				
10.1.11 <sup>††</sup>	<u>under the 2006 Equity Incentive Plan (for performance-based RSUs granted to Robert Swan as interim CEO on August 15, 2018)</u>	10-Q	000-06217	10.3	10/25/2018
	<u>Intel Corporation Non-Employee Director Restricted</u>				
10.1.12 <sup>††</sup>	<u>Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after January 23, 2015 under the Director RSU program)</u>	10-Q	000-06217	10.1	4/27/2015
	<u>Intel Corporation Non-Employee Director Restricted</u>				
10.1.13 <sup>††</sup>	<u>Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after January 23, 2015 under the Director OSU program)</u>	10-Q	000-06217	10.2	4/27/2015
	<u>Intel Corporation Non-Employee Director Restricted</u>				
10.1.14 <sup>††</sup>	<u>Stock Unit Agreement under the 2006 Equity Incentive Plan (for RSUs granted on or after February 1, 2017 under the Director OSU program)</u>	10-Q	000-06217	10.2	4/27/2017
10.2 <sup>††</sup>	<u>Intel Corporation 2006 Employee Stock Purchase Plan, as amended and restated, effective January 1, 2019</u>	10-K			X

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Exhibit Number	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	File Number	Exhibit	
10.3 <sup>††</sup>	<u>Intel Corporation 2014 Annual Performance Bonus Plan (amended and restated, effective January 1, 2014)</u>	10-K	000-06217	10.9.2	2/14/2014
10.4 <sup>††</sup>	<u>Form of Indemnification Agreement with Directors and Executive Officers</u>	10-K	000-06217	10.15	2/22/2005
10.5 <sup>††</sup>	<u>Form of Indemnification Agreement with Directors and Executive Officers (for Directors and Executive Officers who joined Intel after July 1, 2016)</u>	10-Q	000-06217	10.2	10/31/2016
10.6 <sup>††</sup>	<u>Intel Corporation Sheltered Employee Retirement Plan Plus, as amended and restated, effective January 1, 2009</u>	S-8	333-172024	99.1	2/2/2011
10.7 <sup>††</sup>	<u>Intel Corporation 2006 Deferral Plan for Outside Directors, effective November 15, 2006</u>	10-K	000-06217	10.41	2/26/2007
10.8	<u>Settlement Agreement Between Advanced Micro Devices, Inc. and Intel Corporation, dated November 11, 2009</u>	8-K	000-06217	10.1	11/12/2009
10.9 <sup>†††</sup>	<u>Patent Cross License Agreement between NVIDIA Corporation and Intel Corporation, dated January 10, 2011</u>	8-K	000-06217	10.1	1/10/2011
10.10 <sup>††</sup>	<u>Offer Letter by and between Intel Corporation and Dr. Venkata S.M. "Murthy" Renduchintala dated November 17, 2015</u>	10-K	000-06217	10.14	2/12/2016
10.11 <sup>††</sup>	<u>Offer Letter between Intel Corporation and Robert H. Swan, dated January 30, 2019</u>	8-K	000-06217	10.1	1/31/2019
10.12 <sup>††</sup>	<u>Confidential Retirement Agreement and General Release of Claims between Intel Corporation and Diane M. Bryant dated November 29, 2017</u>	10-K	000-06217	10.12	2/16/2018
10.13 <sup>††</sup>	<u>Retention Letter between Intel Corporation and Navin Shenoy dated December 12, 2017</u>	10-K	000-06217	10.13	2/16/2018
21.1	<u>Intel Corporation Subsidiaries</u>				X
23.1	<u>Consent of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm</u>				X
31.1	<u>Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Exchange Act</u>				X
31.2	<u>Certification of interim Chief Financial Officer pursuant to Rule 13a-14(a) of the Exchange Act</u>				X
32.1	<u>Certification of the Chief Executive Officer and interim Chief Financial Officer pursuant to Rule 13a-14(b) of the Exchange Act and 18 U.S.C. Section 1350</u>				X
99.1	<u>Supplement to Present Required Information in Searchable Format</u>				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF					X

XBRL Taxonomy Extension Definition Linkbase  
Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document X

101.PRE XBRL Taxonomy Extension Presentation Linkbase  
Document X

† Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Intel agrees to furnish supplementally a copy of any such schedule or exhibit to the SEC upon request.

†† Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

Portions of this exhibit have been omitted pursuant to an order granting confidential treatment.

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Part IV		
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Signatures

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- (a) As of December 29, 2018, we did not have any significant off-balance-sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.  
Incorporated by reference to "Proposal 1: Election of Directors," "Corporate Governance," "Code of Conduct," and "Other Matters-Section 16(a) Beneficial Ownership Reporting Compliance" in the 2019 Proxy Statement.
- (b) The information under the heading "Executive Officers of the Registrant" within Fundamentals of Our Business is also incorporated by reference in this section.
- (c) Incorporated by reference to "Director Compensation," "Compensation Discussion and Analysis," "Report of the Compensation Committee," and "Executive Compensation" in the 2019 Proxy Statement.
- (d) Incorporated by reference to "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in the 2019 Proxy Statement.
- (e) Incorporated by reference to "Corporate Governance" and "Certain Relationships and Related Transactions" in the 2019 Proxy Statement.
- (f) Incorporated by reference to "Report of the Audit Committee" and "Proposal 2: Ratification of Selection of Independent Registered Public Accounting Firm" in the 2019 Proxy Statement.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

INTEL CORPORATION

Registrant

By: /s/ ROBERT H. SWAN

Robert H. Swan

Chief Executive Officer, Director, and Principal Executive Officer

February 1, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/ ROBERT H. SWAN

Robert H. Swan

Chief Executive Officer, Director, and Principal Executive Officer

February 1, 2019

/s/ TODD M. UNDERWOOD

Todd M. Underwood

Interim Chief Financial Officer and Principal Financial Officer;

Vice President of Finance and Director, Corporate Planning and Reporting

February 1, 2019

/s/ KEVIN T. MCBRIDE

Kevin T. McBride

Vice President of Finance, Corporate Controller and Principal Accounting Officer

February 1, 2019

/s/ ANEEL BHUSRI

Aneel Bhusri

Director

February 1, 2019

/s/ DR. TSU-JAE KING LIU

Dr. Tsu-Jae King Liu

Director

February 1, 2019

/s/ ANDY D. BRYANT

Andy D. Bryant

Chairman of the Board and Director

February 1, 2019

/s/ GREGORY D. SMITH

Gregory D. Smith

Director

February 1, 2019

/s/ REED E. HUNDT

Reed E. Hundt

Director

February 1, 2019

/s/ ANDREW WILSON

Andrew Wilson

Director

February 1, 2019

/s/ DR. OMAR ISHRAK

Dr. Omar Ishrak

Director

February 1, 2019

/s/ FRANK D. YEARY

Frank D. Yeary

Director

February 1, 2019

/s/ DR. RISA LAVIZZO-MOUREY

Dr. Risa Lavizzo-Mourey

Director

February 1, 2019

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