

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**Form 10-K**

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

For the fiscal year ended December 31, 2019

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: 001-32877



**Mastercard Incorporated**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

13-4172551  
(IRS Employer  
Identification Number)

2000 Purchase Street  
Purchase, NY  
(Address of principal executive offices)

10577  
(Zip Code)

(914) 249-2000

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange of which registered
Class A Common Stock, par value \$0.0001 per share	MA	New York Stock Exchange
1.100% Notes due 2022	MA22	New York Stock Exchange
2.100% Notes due 2027	MA27	New York Stock Exchange
2.500% Notes due 2030	MA30	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

Class B common stock, par value \$0.0001 per share

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 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. (Check One):

Large accelerated filer

Accelerated filer

Non-accelerated filer  (do not check if a smaller reporting company)

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

The aggregate market value of the registrant's Class A common stock, par value \$0.0001 per share, held by non-affiliates (using the New York Stock Exchange closing price as of June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter) was approximately \$235.9 billion. There is currently no established public trading market for the registrant's Class B common stock, par value \$0.0001 per share. As of February 11, 2020, there were 994,281,310 shares outstanding of the registrant's Class A common stock, par value \$0.0001 per share and 10,827,654 shares outstanding of the registrant's Class B common stock, par value \$0.0001 per share.

Portions of the registrant's definitive proxy statement for the 2020 Annual Meeting of Stockholders are incorporated by reference into Part III hereof.

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*In this Report on Form 10-K ("Report"), references to the "Company," "Mastercard," "we," "us" or "our" refer to the business conducted by Mastercard Incorporated and its consolidated subsidiaries, including our operating subsidiary, Mastercard International Incorporated, and to the Mastercard brand.*

## Forward-Looking Statements

This Report contains forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts may be forward-looking statements. When used in this Report, the words "believe", "expect", "could", "may", "would", "will", "trend" and similar words are intended to identify forward-looking statements. Examples of forward-looking statements include, but are not limited to, statements that relate to the Company's future prospects, developments and business strategies.

Many factors and uncertainties relating to our operations and business environment, all of which are difficult to predict and many of which are outside of our control, influence whether any forward-looking statements can or will be achieved. Any one of those factors could cause our actual results to differ materially from those expressed or implied in writing in any forward-looking statements made by Mastercard or on its behalf, including, but not limited to, the following factors:

- regulation directly related to the payments industry (including regulatory, legislative and litigation activity with respect to interchange rates and surcharging)
- the impact of preferential or protective government actions
- regulation of privacy, data, security and the digital economy
- regulation that directly or indirectly applies to us based on our participation in the global payments industry (including anti-money laundering, counter terrorist financing, economic sanctions and anti-corruption; account-based payment systems; and issuer practice regulation)
- the impact of changes in tax laws, as well as regulations and interpretations of such laws or challenges to our tax positions
- potential or incurred liability and limitations on business related to any litigation or litigation settlements
- the impact of competition in the global payments industry (including disintermediation and pricing pressure)
- the challenges relating to rapid technological developments and changes
- the challenges relating to operating a real-time account-based payment system and to working with new customers and end users
- the impact of information security incidents, account data breaches or service disruptions
- issues related to our relationships with our financial institution customers (including loss of substantial business from significant customers, competitor relationships with our customers and banking industry consolidation), merchants and governments
- exposure to loss or illiquidity due to our role as guarantor and other contractual obligations
- the impact of global economic, political, financial and societal events and conditions
- reputational impact, including impact related to brand perception and lack of visibility of our brands in products and services
- the inability to attract, hire and retain a highly qualified and diverse workforce, or maintain our corporate culture
- issues related to acquisition integration, strategic investments and entry into new businesses
- issues related to our Class A common stock and corporate governance structure

Please see "Risk Factors" in Part I, Item 1A for a complete discussion of these risk factors. We caution you that the important factors referenced above may not contain all of the factors that are important to you. Our forward-looking statements speak only as of the date of this Report or as of the date they are made, and we undertake no obligation to update our forward-looking statements.

# PART I

**Item 1. Business**

**Item 1A. Risk factors**

**Item 1B. Unresolved staff comments**

**Item 2. Properties**

**Item 3. Legal proceedings**

**Item 4. Mine safety disclosures**

**Information about our executive officers**

## Item 1. Business

### Overview

Mastercard is a technology company in the global payments industry that connects consumers, financial institutions, merchants, governments, digital partners, businesses and other organizations worldwide, enabling them to use electronic forms of payment instead of cash and checks. We make payments easier and more efficient by providing a wide range of payment solutions and services using our family of well-known brands, including Mastercard®, Maestro® and Cirrus®. We are a multi-rail network that offers customers one partner to turn to for their domestic and cross-border payment needs. Through our unique and proprietary global payments network, which we refer to as our core network, we switch (authorize, clear and settle) payment transactions and deliver related products and services. We have additional payment capabilities that include automated clearing house (“ACH”) transactions (both batch and real-time account-based payments). We also provide integrated value-added offerings such as cyber and intelligence products, information and analytics services, consulting, loyalty and reward programs and processing. Our payment solutions offer customers choice and flexibility and are designed to ensure safety and security for the global payments system.




A typical transaction on our core network involves four participants in addition to us: account holder (a person or entity who holds a card or uses another device enabled for payment), issuer (the account holder’s financial institution), merchant and acquirer (the merchant’s financial institution). We do not issue cards, extend credit, determine or receive revenue from interest rates or other fees charged to account holders by issuers, or establish the rates charged by acquirers in connection with merchants’ acceptance of our products. In most cases, account holder relationships belong to, and are managed by, our financial institution customers.

We generate revenues from assessing our customers based on the gross dollar volume (“GDV”) of activity on the products that carry our brands, from the fees we charge to our customers for providing transaction switching and from other payment-related products and services.

For a full discussion of our business, please see page 8.

### Our Performance

The following are our key financial and operational highlights for 2019, including growth rates over the prior year:

GAAP		
Net revenue <b>\$16.9B</b> up 13%	Net income <b>\$8.1B</b> up 39%	Diluted EPS <b>\$7.94</b> up 42%
NON-GAAP <sup>1</sup> (currency-neutral)		
Net revenue <b>\$16.9B</b> up 16%	Adjusted net income <b>\$7.9B</b> up 20%	Adjusted diluted EPS <b>\$7.77</b> up 23%
<b>\$7.8B</b> in capital returned to stockholders	<b>\$6.5B</b> Repurchased shares <b>\$1.3B</b> Dividends paid	<b>\$8.2B</b> cash flows from operations
 Gross dollar volume (growth on a local currency basis) <b>\$6.5T</b> up 13%	 Cross-border volume growth on a local currency basis <sup>2</sup> <b>up 16%</b>	 Switched transactions <sup>2</sup> <b>87.3B</b> up 19%

<sup>1</sup> Non-GAAP results exclude the impact of gains and losses on equity investments, Special Items and/or foreign currency. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Financial Results Overview” in Part II, Item 7 for the reconciliation to the most direct comparable GAAP financial measures.

<sup>2</sup> Growth rates normalized to eliminate the effects of differing switching and carryover days between periods. Carryover days are those where transactions and volumes from days where the company does not clear and settle are processed.

## Our Strategy

We grow, diversify and build our business through a combination of organic and inorganic strategic initiatives. Our ability to grow our business is influenced by:

- personal consumption expenditure (“PCE”) growth
- driving cash and check transactions toward electronic forms of payment
- increasing our share in the payments space

Growing our business also includes supplementing our core network by providing integrated value-added products and services and enhanced payment capabilities to capture new payment flows, such as business to business (“B2B”), person to person (“P2P”), business to consumer (“B2C”) and government payments.



### GROW

#### CORE

Credit  
Debit  
Commercial  
Prepaid  
Digital-Physical Convergence  
Acceptance



### DIVERSIFY

#### CUSTOMERS AND GEOGRAPHIES

Financial Inclusion  
New Markets  
Businesses  
Governments  
Merchants  
Digital Players  
Local Schemes/Switches



### BUILD

#### NEW AREAS

Data Analytics  
Consulting  
Marketing Services  
Loyalty  
Cyber and Intelligence  
Processing  
New Payment Flows

## ENABLED BY BRAND, DATA, TECHNOLOGY AND PEOPLE

**Grow.** We focus on growing our core business globally, including growing our consumer and commercial products and solutions, as well as increasing the number of payment transactions we switch. We also look to provide effective and efficient payments solutions that cater to the evolving ways people interact and transact in the growing digital economy. This includes expanding merchant access to electronic payments through new technologies in an effort to deliver a better consumer experience, while creating greater efficiencies and security.

**Diversify.** We diversify our business by:

- working with new customers, including governments, merchants, financial technology companies, digital players, mobile providers and other corporate businesses
- scaling our capabilities and business into new geographies, including growing acceptance in markets with limited electronic payments acceptance today
- broadening financial inclusion for the unbanked and underbanked

**Build.** We build our business by:

- creating and acquiring differentiated products to provide unique, innovative solutions that we bring to market to support new payment flows and related applications, such as real-time account-based payments and the Mastercard Track™ suite of products
- providing services across data analytics, consulting, marketing services, loyalty, cyber and intelligence, and processing

**Strategic Partners.** We work with a variety of stakeholders. We provide financial institutions with solutions to help them increase revenue by driving preference for our products. We help merchants, financial institutions and other organizations by delivering data-driven insights and other services that help them grow and create simple and secure customer experiences. We partner with technology companies such as digital players and mobile providers to deliver digital payment solutions powered by our technology, expertise and security protocols. We help national and local governments drive increased financial inclusion and efficiency, reduce costs, increase transparency to reduce crime and corruption and advance social programs. For consumers, we provide faster, safer and more convenient ways to pay and transfer funds.

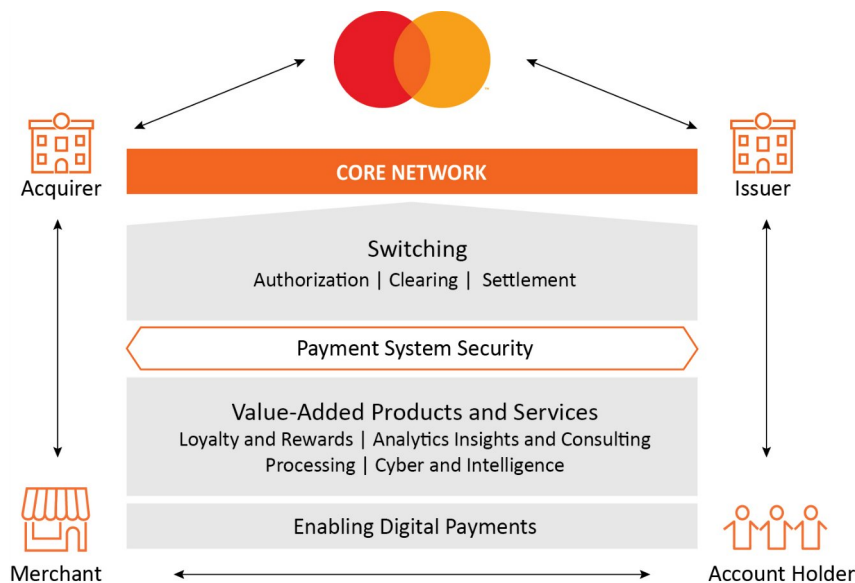
**Talent and Culture.** Our success is driven by the skills, experience, integrity and mindset of the talent we hire. We attract and retain top talent from diverse backgrounds and industries by building a world-class culture based on decency, respect and inclusion in which people have opportunities to do purpose-driven work that impacts customers, communities and co-workers on a global scale. The diversity and skill sets of our people underpin everything we do.

## Our Business

### Our Operations and Network

Our core network links issuers and acquirers around the globe to facilitate the switching of transactions, permitting account holders to use a Mastercard product at millions of acceptance locations worldwide. Our core network facilitates an efficient and secure means for receiving payments, a convenient, quick and secure payment method for consumers to access their funds and a channel for businesses to receive insight through information that is derived from our network. We enable transactions for our customers through our core network in more than 150 currencies and in more than 210 countries and territories. Our range of payment capabilities extend beyond our core network into real-time account-based payments.

**Typical Transaction.** Our core network supports what is often referred to as a “four-party” payments network. The following diagram depicts a typical transaction on our core network, and our role in that transaction:



In a typical transaction, an account holder purchases goods or services from a merchant using one of our payment products. After the transaction is authorized by the issuer, the issuer pays the acquirer an amount equal to the value of the transaction, minus the interchange fee (described below), and then posts the transaction to the account holder’s account. The acquirer pays the amount of the purchase, net of a discount (referred to as the “merchant discount” rate), to the merchant.

- **Interchange Fees.** Interchange fees reflect the value merchants receive from accepting our products and play a key role in balancing the costs and benefits that consumers and merchants derive. We do not earn revenues from interchange fees. Generally, interchange fees are collected from acquirers and paid to issuers to reimburse the issuers for a portion of the costs incurred. These costs are incurred by issuers in providing services that benefit all participants in the system, including acquirers and merchants, whose participation in the network enables increased sales to their existing and new customers, efficiencies in the delivery of existing and new products, guaranteed payments and improved experience for their customers. We (or, alternatively, financial institutions) establish “default interchange fees” that apply when there are no other established settlement terms in place between an issuer and an acquirer. We administer the collection and remittance of interchange fees through the settlement process.
- **Additional Four-Party System Fees.** The merchant discount rate is established by the acquirer to cover its costs of both participating in the four-party system and providing services to merchants. The rate takes into consideration the amount of the interchange fee which the acquirer generally pays to the issuer. Additionally, acquirers may charge merchants processing and related fees in addition to the merchant discount rate, and issuers may also charge account holders fees for the transaction, including, for example, fees for extending revolving credit.



## Switched Transactions

- **Authorization, Clearing and Settlement.** Through our core network, we enable the routing of a transaction to the issuer for its approval, facilitate the exchange of financial transaction information between issuers and acquirers after a successfully conducted transaction, and help to settle the transaction by facilitating the exchange of funds between parties via settlement banks chosen by us and our customers.
- **Cross-Border and Domestic.** Our core network switches transactions throughout the world when the merchant country and country of issuance are different (“cross-border transactions”), providing account holders with the ability to use, and merchants to accept, our products and services across country borders. We also provide switched transaction services to customers where the merchant country and the country of issuance are the same (“domestic transactions”). We switch more than half of all transactions for Mastercard and Maestro-branded cards, including nearly all cross-border transactions. We switch the majority of Mastercard and Maestro-branded domestic transactions in the United States, United Kingdom, Canada, Brazil and a select number of other countries. Outside of these countries, most domestic transactions on our products are switched without our involvement.

**Core Network Architecture.** Our core network features a globally integrated structure that provides scale for our issuers, enabling them to expand into regional and global markets. It is based largely on a distributed (peer-to-peer) architecture with an intelligent edge that enables the network to adapt to the needs of each transaction. Our core network accomplishes this by performing intelligent routing and applying multiple value-added services (such as fraud scoring, tokenization services, etc.) to appropriate transactions in real time. Our core network’s architecture enables us to connect all parties regardless of where or how the transaction is occurring. It has 24-hour a day availability and world-class response time.

**Real-time Account-based Payment Infrastructure and Applications.** Augmenting our core network, we offer real-time account-based payment capabilities, enabling payments between bank accounts in near real-time in countries in which it has been deployed.

**Payments System Security.** Our payment solutions and products are designed to ensure safety and security for the global payments system. The core network and additional platforms incorporate multiple layers of protection, both for continuity purposes and to provide best-in-class security protection. We engage in many efforts to mitigate information security challenges, including maintaining an information security program, a business continuity program and insurance coverage, as well as regularly testing our systems to address potential vulnerabilities.

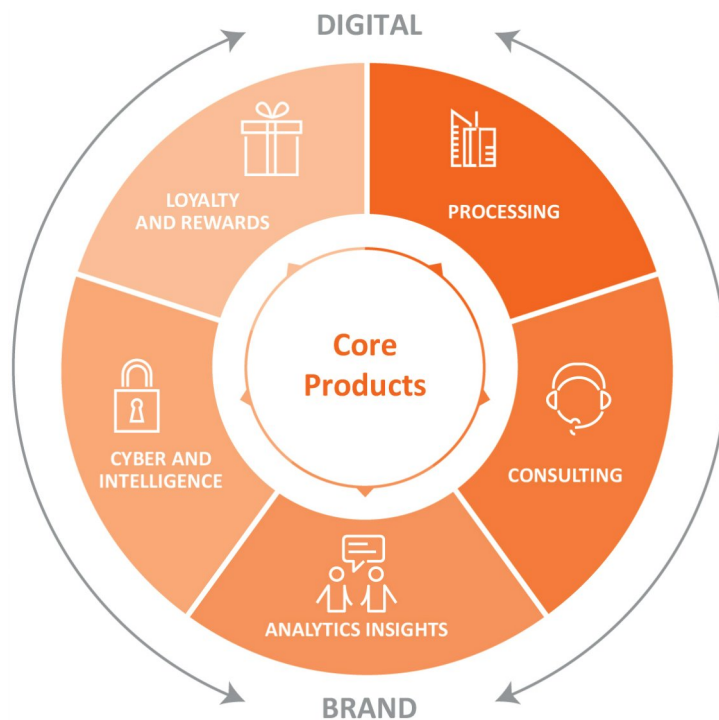
As part of our multi-layered approach to protect the global payments system, we also work with issuers, acquirers, merchants, governments and payments industry associations to help develop and put in place standards (e.g., EMV) for safe and secure transactions.

**Digital Payments.** Our network supports and enables our digital payment platforms, products and solutions, reflecting the growing digital economy where consumers are increasingly seeking to use their payment accounts to pay when, where and how they want.

**Customer Risk.** We guarantee the settlement of many of the transactions from issuers to acquirers to ensure the integrity of our core network. We refer to the amount of this guarantee as our settlement exposure. We do not, however, guarantee payments to merchants by their acquirers, or the availability of unspent prepaid account holder account balances.

## Our Products and Services

We provide a wide variety of integrated products and services that support payment products that customers can offer to their account holders. These offerings facilitate transactions on our core network among account holders, merchants, financial institutions, businesses, governments and other organizations in markets globally.



### Core Products

**Consumer Credit.** We offer a number of programs that enable issuers to provide consumers with credit that allow them to defer payment. These programs are designed to meet the needs of our customers around the world and address standard, premium and affluent consumer segments.

**Consumer Debit.** We support a range of payment products and solutions that allow our customers to provide consumers with convenient access to funds in deposit and other accounts. Our debit and deposit access programs can be used to make purchases and to obtain cash in bank branches, at ATMs and, in some cases, at the point of sale. Our branded debit programs consist of Mastercard (including standard, premium and affluent offerings), Maestro (the only PIN-based solution that operates globally) and Cirrus (our primary global cash access solution).

**Prepaid.** Prepaid accounts are a type of electronic payment that enables consumers to pay in advance whether or not they previously have had a bank account or a credit history. These accounts can be tailored to meet specific program, customer or consumer needs, such as paying bills, sending person-to-person payments or withdrawing cash from an ATM. Our focus ranges from digital accounts (such as fintech and gig economy platforms) to business programs such as employee payroll, health savings accounts and solutions for small business owners. Our prepaid programs also offer opportunities in the private and public sector to drive financial inclusion of previously unbanked individuals through social security payments, unemployment benefits and salary cards.

We also provide prepaid program management services, primarily outside of the United States, that provide processing and end-to-end services on behalf of issuers or distributor partners such as airlines, foreign exchange bureaus and travel agents.

**Commercial.** We offer commercial payment products and solutions that help large corporations, midsize companies, small businesses and government entities. Our solutions streamline procurement and payment processes, manage information and expenses (such as travel and entertainment) and reduce administrative costs. Our card offerings include travel, small business (debit and credit), purchasing and fleet cards. Our SmartData platform provides expense management and reporting capabilities. Our Mastercard In Control™ platform generates virtual account numbers which provide businesses with enhanced controls, more security and better data.

The following chart provides GDV and number of cards featuring our brands in 2019 for select programs and solutions:

	Year Ended December 31, 2019			As of December 31, 2019	
	GDV			Cards	
	(in billions)	Growth (Local)	% of Total GDV	(in millions)	Percentage Increase from December 31, 2018
Mastercard-branded Programs <sup>1,2</sup>					
Consumer Credit	\$ 2,670	10%	41%	882	8%
Consumer Debit and Prepaid	3,059	16%	48%	1,207	9%
Commercial Credit and Debit	732	14%	11%	85	15%

<sup>1</sup> Excludes Maestro and Cirrus cards and volume generated by those cards.

<sup>2</sup> Prepaid includes both consumer and commercial prepaid.

**Additional Platforms.** In addition to the switching capabilities of our core network, we offer additional platforms with payment capabilities that extend to new payment flows:

- We offer commercial payment products and solutions aimed at improving the way businesses pay and get paid by providing a single connection enabling access to multiple payment types, greater control and richer data to optimize B2B transactions for both buyers and suppliers.
- We offer real-time account-based payments for ACH transactions. This platform enables payments between bank accounts in real time and provides enhanced data and messaging capabilities.
- We offer a platform that makes it easier for consumers to view, manage and pay their bills either with cards or real-time and batch ACH payments from their bank accounts.
- We offer a platform that enables consumers, businesses, governments and merchants to send and receive money beyond borders with greater speed and ease.

### Value-Added Products and Services

**Cyber and Intelligence.** We offer integrated products and services to prevent, detect and respond to fraud and cyber-attacks and to ensure the safety of transactions made using Mastercard products. We do this using a multi-layered safety and security strategy:

- The “Prevent” layer protects infrastructure, devices and data from attacks. We have continued to grow global usage of EMV chip and contactless security technology, helping to reduce fraud. Greater usage of this technology has increased the number of EMV cards issued and the transaction volume on EMV cards.
- The “Identify” layer allows us to help banks and merchants verify the authenticity of consumers during the payment process using various biometric technologies, including fingerprint, face and iris scanning technology to verify online purchases on mobile devices, as well as a card with biometric technology built in.
- The “Detect” layer spots fraudulent behavior and cyber-attacks and takes action to stop these activities once detected. Our offerings in this space include alerts when accounts are exposed to data breaches or security incidents, fraud scoring technology that scans billions of dollars of money flows each day while increasing approvals and reducing false declines, and network-level monitoring on a global scale to help identify the occurrence of widespread fraud attacks when the customer (or their processor) may be unable to detect or defend against them.
- The “Experience” layer improves the security experience for our stakeholders in areas from the speed of transactions, enhancing approvals for online and card-on-file payments, to the ability to differentiate legitimate consumers from fraudulent ones. Our offerings in this space include solutions for consumer alerts and controls and a suite of digital token services. We also have acquired an e-commerce fraud and dispute management network that enables merchants to stop delivery when a fraudulent or disputed transaction is identified, and issuers to refund the cardholder to avoid the chargeback process.

We have also worked with our financial institution customers to provide products to consumers globally with increased confidence through the benefit of “zero liability”, or no responsibility for counterfeit or lost card losses in the event of fraud.

**Loyalty and Rewards.** We have built a scalable rewards platform that enables financial institutions to provide consumers with a variety of benefits and services, such as personalized offers and rewards, access to a global airline lounge network, concierge services, insurance services, emergency card replacement, emergency cash advances and a 24-hour account holder service center. For merchants, we provide campaigns with targeted offers and rewards, management services for publishing offers, and accelerated points programs for co-brand and rewards program members. We also have acquired a loyalty platform that enables stronger relationships with retailers,

restaurants, airlines and consumer packaged goods companies by creating experiences that drive loyalty and impactful consumer engagement.

**Processing.** We extend our processing capabilities in the payments value chain in various regions and across the globe with an expanded suite of offerings, including:

- Issuer solutions designed to provide customers with a complete processing solution to help them create differentiated products and services and allow quick deployment of payments portfolios across banking channels.
- Payment gateways that offer a single interface to provide e-commerce merchants with the ability to process secure online and in-app payments and offer value-added solutions, including outsourced electronic payments, fraud prevention and alternative payment options.
- Mobile gateways that facilitate transaction routing and processing for mobile-initiated transactions.

**Data Analytics and Consulting.** We provide proprietary analysis, data-driven consulting and marketing services solutions to help clients optimize, streamline and grow their businesses, as well as deliver value to consumers.

Our capabilities incorporate payments expertise and analytical and executional skills to create end-to-end solutions which are increasingly delivered via platforms embedded in our customers' day-to-day operations. By observing patterns of payments behavior based on billions of transactions switched globally, we leverage anonymized and aggregated information and a consultative approach to help our customers make better business decisions. Our executional skills such as marketing, digital implementation and staff augmentation allow us to assist clients to implement actions based on these insights.

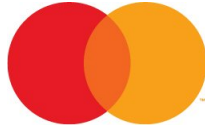
Increasingly, we have been helping financial institutions, retailers and governments innovate. Drawing on rapid prototyping methodologies from our global innovation and development arm, Mastercard Labs, we offer "Launchpad," a five day app prototyping workshop. Through our Applied Predictive Technology business, a software as a service platform, we can help our customers conduct disciplined business experiments for in-market tests.

## Digital Enablement

Our innovation capabilities enable broader reach to scale digital payment services beyond cards to multiple channels, including mobile devices:

- Delivering better digital experiences everywhere. We are using our technologies and security protocols to develop solutions to make digital shopping and selling experiences, such as on smartphones and other connected devices, simpler, faster and safer for both consumers and merchants. We also offer products that make it easier for merchants to accept payments and expand their customer base and are developing products and practices to facilitate acceptance via mobile devices. The successful implementation of our loyalty and reward programs is an important part of enabling these digital purchasing experiences.
- Securing more transactions. We are leveraging tokenization, biometrics and machine learning technologies in our push to secure every transaction. These efforts include driving EMV-level security and benefits through all our payment channels.
- Digitizing personal and business payments. We provide solutions that enable our customers to offer consumers the ability to send and receive money quickly and securely domestically and around the world. These solutions allow our customers to address new payment flows from any funding source, such as cash, card, bank account or mobile money account, to any destination globally, securely and in real time.
- Simplifying access to, and integration of, our digital assets. Our Mastercard Developer platform makes it easy for customers and partners to leverage our many digital assets and services. By providing a single access point with tools and capabilities to find what we believe are some of the best-in-class Application Program Interfaces ("APIs") across a broad range of Mastercard services, we enable easy integration of our services into new and existing solutions.
- Identifying and experimenting with future technologies, start-ups and trends. Through Mastercard Labs, our global innovation and development arm, we continue to bring customers and partners access to thought leadership, innovation methodologies, new technologies and relevant early-stage fintech players.

## Brand



Our family of well-known brands includes Mastercard, Maestro and Cirrus. We manage and promote our brands and brand identities (including our sonic brand identity) through advertising, promotions and sponsorships, as well as digital, mobile and social media initiatives, in order to increase people's preference for our brands and usage of our products. We sponsor a variety of sporting, entertainment and charity-related marketing properties to align with consumer segments important to us and our customers. Our advertising plays an important role in building brand visibility, usage and overall preference among account holders globally. Our "Priceless®" advertising campaign, which has run in 52 languages in 123 countries worldwide, promotes Mastercard usage benefits and acceptance, markets Mastercard payment products and solutions and provides Mastercard with a consistent, recognizable message that supports our brand around the globe.

## Recent Developments



### Consumer

Our products are designed to address needs of consumers with a focus on reducing complexity and delivering on experience. While technology has increasingly changed the way people get information, interact, shop and make purchases, consumers continue to expect a seamless experience where their payment is simple and secure. Our teams are creating innovative solutions that meet the needs of consumers and merchants in a digital environment by applying emerging technologies. In 2019, we:

- delivered "click to pay", our activation of the EMV Secure Remote Commerce industry standard that enables a faster, more secure checkout experience across web and mobile sites, mobile apps and connected devices. This checkout experience is designed to provide consumers the same convenience and security in a digital environment that they have when paying in a store, make it easier for merchants to implement secure digital payments and provide issuers with improved fraud detection and prevention capability.
- reinforced our support for contactless payments across all markets, including launching tap-and-go payments for transit systems in multiple cities globally (including New York City, Miami, Portland and Mexico City), which is creating the foundations for increased adoption of this technology to deliver a faster in-person payment experience.



### Commercial and B2B

Building on our corporate T&E, fleet, purchasing card and small business capabilities, we have been increasingly focused on developing solutions to address other ways that businesses move money. In 2019, we:

- announced Mastercard Track, our B2B payment ecosystem which represents a collection of products and services aimed at improving the way businesses pay and get paid. The Track suite of products aims to introduce Mastercard Track Business Payment Service™, an open-loop commercial service built to simplify and automate payments between suppliers and buyers.
- extended our support for commercial cards by adding new partners to our virtual card program, with a focus on helping to make virtual cards a preferred tool with straight-through (automated) acceptance and processing.



## New payment flows

In order to help grow our business and offer more electronic payment options to consumers, businesses and governments, Mastercard has developed and enhanced solutions beyond the principal switching capabilities available on our core network. We believe this will allow us to capture more payment flows, including B2B, P2P, B2C and government disbursements. In 2019, we:

- signed new agreements to bring our real-time payments infrastructure to more markets, including our relationship with P27 Nordic Payments Platform that will help deliver one real-time and batch payments solution across the Nordic markets. This solution uses the same technology that powers the ability for consumers and businesses in the U.S. to send and receive immediate payments through the Clearing House platform. We were also selected to enhance the InstaPay real-time retail payment system in the Philippines, including operating the infrastructure for and providing anti-money laundering tools to the national clearing switch in the Philippines.
- positioned ourselves to add to our real-time payments solutions, including our pending acquisition of the majority of the Corporate Services business of Nets Denmark A/S. The pending acquisition primarily comprises the clearing and instant payment services, and e-billing solutions of the business.
- enhanced Mastercard Bill Pay Exchange™ with the acquisition of Transactis, a platform that makes it easier for consumers to view, manage and pay their bills either with cards or real-time and batch ACH payments from their bank accounts.
- acquired Transfast, enabling us to continue servicing the growing needs of consumers and businesses, as well as governments and merchants, to send and receive money beyond borders with greater speed and ease. When combined with our proprietary Mastercard Send™ assets, we have greatly extended our network reach.
- drove blockchain initiatives, with an initial focus on the cross-border B2B payments space and proof of provenance solutions for supply chains.



## Services

We provide services including data analytics, consulting, loyalty, cyber and intelligence, and processing that meet evolving requirements and the expectations of our stakeholders. We recently:

- extended our investments in Artificial Intelligence (“AI”) by:
  - launching Mastercard ThreatScan, an AI-powered solution that helps banks proactively identify potential vulnerabilities in their authorization systems. The service works alongside an issuer’s existing fraud tools, imitating known criminal transaction behavior to identify potential weaknesses and prompt action before fraud potentially occurs.
  - scaling Decision Intelligence™, our fraud scoring technology, to score billions of transactions in real time every day while increasing approvals and reducing false declines.
- acquired Ethoca, an e-commerce fraud and dispute management network that enables the sharing of intelligence between merchants and issuers, sending near real-time information to merchants to stop delivery when a fraudulent or disputed transaction is identified, and refund the cardholder to avoid the chargeback process.
- acquired RiskRecon, a provider of AI and data analytics with cyber risk assessment capabilities that are designed to help financial institutions, merchants, corporations and governments secure their digital assets.
- acquired Session M, a loyalty platform that enables stronger relationships with retailers, restaurants, airlines and consumer packaged goods companies by creating experiences that drive loyalty and impactful consumer engagement.
- enhanced the services we are able to offer to customers based on account-to-account flows, including data insights we are providing U.K. and U.S. customers to help them with anti-money laundering compliance and identification and prevention of other financial crimes.



## Other Initiatives

- In 2019, we continued to implement our shift to a symbol brand by dropping our name from our logo, and debuted our sonic brand identity, comprised of a comprehensive sound architecture featuring a distinctive melody that will be employed in physical, digital and voice environments where consumers engage with Mastercard across the globe.

- In 2019, we contributed an additional \$100 million towards initiatives that focus on inclusive growth for a total of \$200 million contributed through December 31, 2019. These contributions are part of our previously announced \$500 million commitment to support inclusive growth efforts, such as financial inclusion, economic development, the future of work and data science for social impact.

## Revenue Sources

We generate revenue primarily from assessing our customers based on GDV on the products that carry our brands, from the fees we charge to our customers for providing transaction processing and from other payment-related products and services. Our net revenues are classified into five categories: domestic assessments, cross-border volume fees, transaction processing, other revenues and rebates and incentives (contra-revenue).

See “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Revenue” in Part II, Item 7 and Note 3, Revenue for more detail about our revenue, GDV, processed transactions and our other payment-related products and services.

## Intellectual Property

We own a number of valuable trademarks that are essential to our business, including Mastercard, Maestro and Cirrus, through one or more affiliates. We also own numerous other trademarks covering various brands, programs and services offered by us to support our payment programs. Trademark and service mark registrations are generally valid indefinitely as long as they are used and/or properly maintained. Through license agreements with our customers, we authorize the use of our trademarks on a royalty-free basis in connection with our customers’ issuing and merchant acquiring businesses. In addition, we own a number of patents and patent applications relating to payment solutions, transaction processing, smart cards, contactless, mobile, biometrics, AI, security systems, blockchain and other matters, many of which are important to our business operations. Patents are of varying duration depending on the jurisdiction and filing date.

## Competition

We compete in the global payments industry against all forms of payment including:

- cash and checks
- card-based payments, including credit, charge, debit, ATM and prepaid products, as well as limited-use products such as private label
- contactless, mobile and e-commerce payments, as well as cryptocurrency
- other electronic payments, including ACH payments and wire transfers

We face a number of competitors both within and outside of the global payments industry:

- **Cash, Check and Legacy ACH.** Cash and checks continue to represent one of the most widely used forms of payment. However, an even larger share of payments on a U.S. dollar volume basis are made via legacy, or “slow,” ACH platforms.
- **General Purpose Payment Networks.** We compete worldwide with payment networks such as Visa, American Express, JCB, China UnionPay and Discover, among others. Some competitors have more market share than we do in certain jurisdictions. Some also have different business models that may provide an advantage in pricing, regulatory compliance burdens or otherwise. In addition, several governments are promoting, or considering promoting, local networks for domestic switching. See “Risk Factors” in Part I, Item 1A for a more detailed discussion of the risks related to payments system regulation and government actions that may prevent us from competing effectively.
- **Debit and Local Networks.** We compete with ATM and point-of-sale debit networks in various countries. In addition, in many countries outside of the United States, local debit brands serve as the main domestic brands, while our brands are used mostly to enable cross-border transactions (typically representing a small portion of overall transaction volume). Certain jurisdictions have also created domestic card schemes focused mostly on debit.
- **Competition for Customer Business.** We compete intensely with other payments companies for customer business. Globally, financial institutions typically issue both Mastercard and Visa-branded payment products, and we compete with Visa for business on the basis of individual portfolios or programs. In addition, a number of our customers issue American Express and/or Discover-branded payment cards in a manner consistent with a four-party system. We continue to face intense competitive pressure on the prices we charge our issuers and acquirers, and we seek to enter into business agreements with them through which we offer incentives and other support to issue and promote our payment products. We also compete for business from merchants, governments and mobile providers.

- **Real-time Account-based Payment Systems.** We face competition in the real-time account-based payment space from other companies that provide these payment solutions. In addition, real-time account-based payments face competition from other payment methods, such as cash and checks, cards, electronic, mobile and e-commerce payment platforms, cryptocurrencies and other payments networks.
- **Alternative Payments Systems and New Entrants.** As the global payments industry becomes more complex, we face increasing competition from alternative payment systems and emerging payment providers. Many of these providers, who in many circumstances can also be our partners or customers, have developed payments systems focused on online activity in e-commerce and mobile channels (in some cases, expanding to other channels), and may process payments using in-house account transfers, real-time account-based payment networks or global or local networks. Examples include digital wallet providers (such as Paytm, PayPal, Alipay and Amazon), mobile operator services, mobile phone-based money transfer and microfinancing services (such as mPesa), handset manufacturers and cryptocurrencies.
- **Value-Added Products and Services.** We face competition from companies that provide alternatives to our value-added products and services, including information services and consulting firms that provide consulting services and insights to financial institutions, as well as companies that compete against us as providers of loyalty and program management solutions. In addition, our integrated products and services offerings face competition and potential displacement from transaction processors throughout the world, which are seeking to enhance their networks that link issuers directly with point-of-sale devices for payment transaction authorization and processing services. Regulatory initiatives could also lead to increased competition in this space.

Our competitive advantages include our:

- globally recognized brands
- highly adaptable global acceptance network built over 50 years which can reach a variety of parties enabling payments
- global payments network with world-class operating performance
- expertise in real-time account-based payments
- adoption of innovative products and digital solutions
- safety and security solutions embedded in our networks
- analytics insights and consulting services dedicated solely to the payments industry
- ability to serve a broad array of participants in global payments due to our expanded on-soil presence in individual markets and a heightened focus on working with governments
- world class talent

## Government Regulation

**General.** Government regulation impacts key aspects of our business. We are subject to regulations that affect the payments industry in the many countries in which our integrated products and services are used. See “Risk Factors” in Part I, Item 1A for more detail and examples.

**Payments Oversight and Regulation.** Central banks and other regulators in several jurisdictions around the world either have, or are seeking to establish, formal oversight over the payments industry, as well as authority to regulate certain aspects of the payment systems in their countries. In addition to oversight and regulation from established regulatory bodies, several jurisdictions have created or granted authority to create new regulatory bodies that either have or would have the authority to regulate payment systems, including the United Kingdom’s PSR (Vocalink and Mastercard are both participants in the payments system and are therefore subject to the PSR’s duties and powers), the National Bank of Belgium, India (which has also designated us as a payments system subject to regulation), and regulators in Brazil, Hong Kong, Mexico and Russia. Such authority has resulted in regulation of various aspects of our business. In the European Union, legislation requires us to separate our scheme activities (brand, products, franchise and licensing) from our switching activities and other processing in terms of how we go to market, make decisions and organize our structure. Mastercard also could be subject to new regulation, supervisions and examination requirements. For example, in the U.K., the Bank of England has expanded its oversight of systemically important payment systems to include service providers.

**Interchange Fees.** Interchange fees associated with four-party payments systems like ours are being reviewed or challenged in various jurisdictions around the world via legislation to regulate interchange fees, competition-related regulatory proceedings, central bank regulation and litigation. Examples include statutes in the United States that cap debit interchange for certain regulated activities, our settlement with the European Commission resolving its investigation into our interregional interchange fees and the European Union legislation capping consumer credit and debit interchange fees on payments issued and acquired within the European Economic Area (the “EEA”). For more detail, see “Risk Factors - Other Regulation” in Part I, Item 1A and Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8.



**Preferential or Protective Government Actions.** Some governments have taken action to provide resources, preferential treatment or other protection to selected domestic payments and processing providers, as well as to create their own national providers. For example, governments in some countries mandate switching of domestic payments either entirely in that country or by only domestic companies. In China, we are currently excluded from domestic switching and are seeking market access, which is uncertain and subject to a number of factors, including receiving regulatory approval. We are in active discussions to explore different solutions.

**Anti-Money Laundering, Counter Terrorist Financing, Economic Sanctions and Anti-Corruption.** We are subject to anti-money laundering (“AML”) and counter financing of terrorism (“CFT”) laws and regulations globally, including the U.S. Bank Secrecy Act and the USA PATRIOT Act, as well as the various economic sanctions programs, including those imposed and administered by the U.S. Office of Foreign Assets Control (“OFAC”). We have implemented a comprehensive AML/CFT program, comprised of policies, procedures and internal controls, including the designation of a compliance officer, which is designed to prevent our payment network from being used to facilitate money laundering and other illicit activity and to address these legal and regulatory requirements and assist in managing money laundering and terrorist financing risks. The economic sanctions programs administered by OFAC restrict financial transactions and other dealings with certain countries and geographies (specifically Crimea, Cuba, Iran, North Korea and Syria) and with persons and entities included in OFAC sanctions lists including its list of Specially Designated Nationals and Blocked Persons (the “SDN List”). We take measures to prevent transactions that do not comply with OFAC and other applicable sanctions, including establishing a risk-based compliance program that has policies, procedures and controls designed to prevent us from having unlawful business dealings with prohibited countries, regions, individuals or entities. As part of this program, we obligate issuers and acquirers to comply with their local sanctions obligations and the U.S. sanctions programs, including requiring the screening of account holders and merchants, respectively, against OFAC sanctions lists (including the SDN List). Iran, Sudan and Syria have been identified by the U.S. State Department as terrorist-sponsoring states, and we have no offices, subsidiaries or affiliated entities located in any of these countries or geographies and do not license entities domiciled there. We are also subject to anti-corruption laws and regulations globally, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, which, among other things, generally prohibit giving or offering payments or anything of value for the purpose of improperly influencing a business decision or to gain an unfair business advantage. We have implemented policies, procedures and internal controls to proactively manage corruption risk.

**Financial Sector Oversight.** We are or may be subject to regulations related to our role in the financial industry and our relationship with our financial institution customers. In addition, we are or may be subject to regulation by a number of agencies charged with oversight of, among other things, consumer protection, financial and banking matters. The regulators have supervisory and independent examination authority as well as enforcement authority that we may be subject to because of the services we provide to financial institutions that issue and acquire our products.

**Issuer Practice Legislation and Regulation.** Our customers are subject to numerous regulations and investigations applicable to banks and other financial institutions in their capacity as issuers and otherwise, impacting us as a consequence. Such regulations and investigations have been related to payment card add-on products, campus cards, bank overdraft practices, fees issuers charge to account holders and the transparency of terms and conditions. Additionally, regulations such as the revised Payment Services Directive (commonly referred to as “PSD2”) in the EEA require financial institutions to provide third-party payment-processors access to consumer payment accounts, enabling them to route transactions away from Mastercard products and provide payment initiation and account information services directly to consumers who use our products. PSD2 also requires a new standard for authentication of transactions, which necessitates additional verification information from consumers to complete transactions. This may increase the number of transactions that consumers abandon if we are unable to ensure a frictionless authentication experience under the new standards.

**Regulation of Internet and Digital Transactions.** Various jurisdictions have enacted or have proposed regulation related to internet transactions. The legislation applies to payments system participants, including us and our U.S. customers, and is implemented through a federal regulation. We may also be impacted by evolving laws surrounding gambling, including fantasy sports. Certain jurisdictions are also considering regulatory initiatives in digital-related areas that could impact us, such as cyber-security and copyright and trademark infringement.

**Privacy, Data and Information Security.** Aspects of our operations or business are subject to increasingly complex privacy and data protection laws in the United States, the European Union and elsewhere around the world. For example, in the United States, we and our customers are respectively subject to Federal Trade Commission and federal banking agency information safeguarding requirements under the Gramm-Leach-Bliley Act that require the maintenance of a written, comprehensive information security program. In the European Union, we are subject to the General Data Protection Regulation (the “GDPR”), which requires a comprehensive privacy and data protection program to protect the personal and sensitive data of EEA residents. A number of regulators and policymakers around the globe are using the GDPR as a reference to adopt new or updated privacy and data protection laws, including in the U.S. (California), Argentina, Brazil, Chile, India, Indonesia and Kenya. Some jurisdictions, such as India, are currently considering adopting or have adopted “data localization” requirements, which mandate the collection, processing, and/or storage of data within their borders. Due to constant changes to the nature of data and the use of emerging technologies such as artificial intelligence, regulations in this area are constantly evolving with regulatory and legislative authorities in numerous parts of the world adopting proposals to protect information. In addition,

the interpretation and application of these privacy and data protection laws are often uncertain and in a state of flux, thus requiring constant monitoring for compliance.

**Additional Regulatory Developments.** Various regulatory agencies also continue to examine a wide variety of issues that could impact us, including evolving laws surrounding marijuana, prepaid payroll cards, virtual currencies, identity theft, account management guidelines, disclosure rules, security and marketing that would impact our customers directly.

## Employees

As of December 31, 2019, we employed approximately 18,600 persons, of whom approximately 11,400 were employed outside of the United States.

## Additional Information

Mastercard Incorporated was incorporated as a Delaware corporation in May 2001. We conduct our business principally through our principal operating subsidiary, Mastercard International Incorporated, a Delaware non-stock (or membership) corporation that was formed in November 1966. For more information about our capital structure, including our Class A common stock (our voting stock) and Class B common stock (our non-voting stock), see Note 16 (Stockholders' Equity) to the consolidated financial statements included in Part II, Item 8.

## Website and SEC Reports

Our internet address is [www.mastercard.com](http://www.mastercard.com). From time to time, we may use our corporate website as a channel of distribution of material company information. Financial and other material information is routinely posted and accessible on the investor relations section of our corporate website. You can also visit "Investor Alerts" in the investor relations section to enroll your email address to automatically receive email alerts and other information about Mastercard.

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports are available for review, without charge, on the investor relations section of our corporate website as soon as reasonably practicable after they are filed with, or furnished to, the U.S. Securities and Exchange Commission (the "SEC"). The information contained on our corporate website is not incorporated by reference into this Report. Our filings are also available electronically from the SEC at [www.sec.gov](http://www.sec.gov).

## Item 1A. Risk factors

RISK HIGHLIGHTS	
<b>Legal and Regulatory</b>	<b>Business and Operations</b>
Payments Industry Regulation	Competition and Technology
Preferential or Protective Government Actions	Information Security and Service Disruptions
Privacy, Data and Security	Stakeholder Relationships
Other Regulation	Settlement and Third-Party Obligations

## Legal and Regulatory

### Payments Industry Regulation

**Global regulatory and legislative activity directly related to the payments industry may have a material adverse impact on our overall business and results of operations.**

Regulators increasingly seek to regulate certain aspects of payments systems such as ours, or establish or expand their authority to do so. Many jurisdictions have enacted such regulations, establishing, and potentially further expanding, obligations or restrictions with respect to the types of products and services that we may offer to financial institutions for consumers, the countries in which our integrated products and services may be used, the way we structure and operate our business and the types of consumers and merchants who can obtain or accept our products or services. New regulations and oversight could also relate to our clearing and settlement activities (including risk management policies and procedures, collateral requirements, participant default policies and procedures, the ability to complete timely switching of financial transactions, and capital and financial resource requirements). Several jurisdictions have also inquired about the network fees we charge to our customers (typically as part of broader market reviews of retail payments). In addition, several central banks or similar regulatory bodies around the world have increased, or are seeking to increase, their formal oversight of the electronic payments industry and, in some cases, are considering designating certain payments networks as “systemically important payment systems” or “critical infrastructure.” These obligations, designations and restrictions may further expand and could conflict with each other as more jurisdictions impose oversight of payment systems. Moreover, as regulators around the world increasingly look to replicate similar regulation of payments and other industries, efforts in any one jurisdiction may influence approaches in other jurisdictions. Similarly, new initiatives within a jurisdiction involving one product may lead to regulation of similar or related products (for example, debit regulations could lead to regulation of credit products). As a result, the risks to our business created by any one new law or regulation are magnified by the potential it has to be replicated in other jurisdictions or involve other products within any particular jurisdiction.

Increased regulation and oversight of payment systems may result in costly compliance burdens or otherwise increase our costs. Such laws or compliance burdens could result in issuers and acquirers being less willing to participate in our payments system, reduce the benefits offered in connection with the use of our products (making our products less desirable to consumers), reduce the volume of domestic and cross-border transactions or other operational metrics, disintermediate us, impact our profitability and limit our ability to innovate or offer differentiated products and services, all of which could materially and adversely impact our financial performance. In addition, any regulation that is enacted related to the type and level of network fees we charge our customers could also materially and adversely impact our results of operations. Regulators could also require us to obtain prior approval for changes to its system rules, procedures or operations, or could require customization with regard to such changes, which could impact market participant risk and therefore risk to us. Such regulatory changes could lead to new or different criteria for participation in and access to our payments system by financial institutions or other customers. Moreover, failure to comply with the laws and regulations to which we are subject could result in fines, sanctions, civil damages or other penalties, which could materially and adversely affect our overall business and results of operations, as well as have an impact on our brand and reputation.

**Increased regulatory, legislative and litigation activity with respect to interchange rates could have an adverse impact on our business.**

Interchange rates are a significant component of the costs that merchants pay in connection with the acceptance of our products. Although we do not earn revenues from interchange, interchange rates can impact the volume of transactions we see on our payment products. If interchange rates are too high, merchants may stop accepting our products or route transactions away from our network. If interchange rates are too low, issuers may stop promoting our integrated products and services, eliminate or reduce loyalty rewards programs or other account holder benefits (e.g., free checking or low interest rates on balances), or charge fees to account holders (e.g., annual fees or late payment fees).

Governments and merchant groups in a number of countries have implemented or are seeking interchange rate reductions through legislation, competition law, central bank regulation and litigation. See “Business - Government Regulation” in Part I, Item 1 and Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for more details.

If issuers cannot collect or we are forced to reduce interchange rates, issuers may be less willing to participate in our four-party payments system, or may reduce the benefits offered in connection with the use of our products, reducing the attractiveness of our products to consumers. In particular, changes to interregional interchange fees as a result of the resolution of the European Commission’s investigation could impact our cross-border transaction activity disproportionately versus competitors that are not subject to similar reductions. These and other impacts could lower transaction volumes, and/or make proprietary three-party networks or other forms of payment more attractive. Issuers could reduce the benefits associated with our products or choose to charge higher fees to consumers to attempt to recoup a portion of the costs incurred for their services. In addition, issuers could seek to decrease the expense of their payment programs by seeking a reduction in the fees that we charge to them, particularly if regulation has a disproportionate impact

on us as compared to our competitors in terms of the fees we can charge. This could make our products less desirable to consumers, reduce the volume of transactions and our profitability, and limit our ability to innovate or offer differentiated products.

We are devoting substantial resources to defending our right to establish interchange rates in regulatory proceedings, litigation and legislative activity. The potential outcome of any of these activities could have a more positive or negative impact on us relative to our competitors. If we are ultimately unsuccessful in defending our ability to establish interchange rates, any resulting legislation, regulation and/or litigation may have a material adverse impact on our overall business and results of operations. In addition, regulatory proceedings and litigation could result (and in some cases has resulted) in us being fined and/or having to pay civil damages, the amount of which could be material.

**Limitations on our ability to restrict merchant surcharging could materially and adversely impact our results of operations.**

We have historically implemented policies, referred to as no-surcharge rules, in certain jurisdictions, including the United States, that prohibit merchants from charging higher prices to consumers who pay using our products instead of other means. Authorities in several jurisdictions have acted to end or limit the application of these no-surcharge rules (or indicated interest in doing so). Additionally, we have modified our no-surcharge rules to permit U.S. merchants to surcharge credit cards, subject to certain limitations. It is possible that over time merchants in some or all merchant categories in these jurisdictions may choose to surcharge as permitted by the rule change. This could result in consumers viewing our products less favorably and/or using alternative means of payment instead of electronic products, which could result in a decrease in our overall transaction volumes, and which in turn could materially and adversely impact our results of operations.

## Preferential or Protective Government Actions

**Preferential and protective government actions related to domestic payment services could adversely affect our ability to maintain or increase our revenues.**

Governments in some countries have acted, or in the future may act, to provide resources, preferential treatment or other protection to selected national payment and switching providers, or have created, or may in the future create, their own national provider. This action may displace us from, prevent us from entering into, or substantially restrict us from participating in, particular geographies, and may prevent us from competing effectively against those providers. For example:

- Governments in some countries are considering, or may consider, regulatory requirements that mandate switching of domestic payments either entirely in that country or by only domestic companies.
- Some jurisdictions are considering requirements to collect, process and/or store data within their borders, as well as prohibitions on the transfer of data abroad, leading to technological and operational implications.
- Geopolitical events and resulting OFAC sanctions, adverse trade policies or other types of government actions could lead jurisdictions affected by those sanctions to take actions in response that could adversely affect our business.
- Regional groups of countries are considering, or may consider, efforts to restrict our participation in the switching of regional transactions.

Such developments prevent us from utilizing our global switching capabilities for domestic or regional customers. Our efforts to effect change in, or work with, these countries may not succeed. This could adversely affect our ability to maintain or increase our revenues and extend our global brand.

Additionally, some jurisdictions have implemented, or may implement, foreign ownership restrictions, which could potentially have the effect of forcing or inducing the transfer of our technology and proprietary information as a condition of access to their markets. Such restrictions could adversely impact our ability to compete in these markets.

## Privacy, Data and Security

**Regulation of privacy, data, security and the digital economy could increase our costs, as well as negatively impact our growth.**

We are subject to increasingly complex regulations related to privacy, data and information security in the jurisdictions in which we do business. These regulations could result in negative impacts to our business. As we continue to develop integrated and personalized products and services to meet the needs of a changing marketplace, as well as acquire new companies, we may expand our information profile through the collection of additional data from additional sources and across multiple channels. This expansion could amplify the impact of these regulations on our business. Regulation of privacy and data and information security often times require monitoring of and changes to our data practices in regard to the collection, use, disclosure, storage, transfer and/or security of personal and sensitive information. We are also subject to enhanced compliance and operational requirements in the European Union, and policymakers around the globe are using these requirements as a reference to adopt new or updated privacy laws that could result in similar or stricter requirements in other jurisdictions. Some jurisdictions are also considering requirements to collect, process and/or store data within

their borders, as well as prohibitions on the transfer of data abroad, leading to technological and operational implications. Other jurisdictions are considering adopting sector-specific regulations for the payments industry, including forced data sharing requirements or additional verification requirements that overlap or conflict with, or diverge from, general privacy rules. Failure to comply with these laws, regulations and requirements could result in fines, sanctions or other penalties, which could materially and adversely affect our results of operations and overall business, as well as have an impact on our reputation.

New requirements or interpretations of existing requirements in these areas, or the development of new regulatory schemes related to the digital economy in general, may also increase our costs and could impact the products and services we offer and other aspects of our business, such as fraud monitoring, the development of information-based products and solutions and technology operations. In addition, these requirements may increase the costs to our customers of issuing payment products, which may, in turn, decrease the number of our payment products that they issue. Moreover, due to account data compromise events and privacy abuses by other companies, as well as the disclosure of monitoring activities by certain governmental agencies in combination with the use of artificial intelligence and new technologies, there has been heightened legislative and regulatory scrutiny around the world that could lead to further regulation and requirements and/or future enforcement. Those developments have also raised public attention on companies' data practices and have changed consumer and societal expectations for enhanced privacy and data protection. Any of these developments could materially and adversely affect our overall business and results of operations.

In addition, fraudulent activity could encourage regulatory intervention, which could damage our reputation and reduce the use and acceptance of our integrated products and services or increase our compliance costs. Criminals are using increasingly sophisticated methods to capture consumer account information to engage in illegal activities such as counterfeiting or other fraud. As outsourcing and specialization become common in the payments industry, there are more third parties involved in processing transactions using our payment products. While we are taking measures to make card and digital payments more secure, increased fraud levels involving our integrated products and services, or misconduct or negligence by third parties switching or otherwise servicing our integrated products and services, could lead to regulatory intervention, such as enhanced security requirements, as well as damage to our reputation.

## Other Regulation

**Regulations that directly or indirectly apply to Mastercard as a result of our participation in the global payments industry may materially and adversely affect our overall business and results of operations.**

We are subject to regulations that affect the payments industry in the many jurisdictions in which our integrated products and services are used. Many of our customers are also subject to regulations applicable to banks and other financial institutions that, at times, consequently affect us. Regulation of the payments industry, including regulations applicable to us and our customers, has increased significantly in the last several years. See "Business - Government Regulation" in Part I, Item 1 for a detailed description of such regulation and related legislation. Examples include:

- **Anti-Money Laundering, Counter Terrorist Financing, Economic Sanctions and Anti-Corruption** - We are subject to AML and CFT laws and regulations globally, including the U.S. Bank Secrecy Act and the USA PATRIOT Act, as well as the various economic sanctions programs, including those imposed and administered by OFAC. The economic sanctions programs administered by OFAC restrict financial transactions and other dealings with certain countries and geographies (specifically Crimea, Cuba, Iran, North Korea and Syria) and with persons and entities included in OFAC sanctions lists including the SDN List. Iran, Sudan and Syria have been identified by the U.S. State Department as terrorist-sponsoring states. We are also subject to anti-corruption laws and regulations globally, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, which, among other things, generally prohibit giving or offering payments or anything of value for the purpose of improperly influencing a business decision or to gain an unfair business advantage. A violation and subsequent judgment or settlement against us, or those with whom we may be associated, under these laws could subject us to substantial monetary penalties, damages, and/or have a significant reputational impact.
- **Account-based Payment Systems** - In the U.K., Her Majesty's Treasury has expanded the Bank of England's oversight of certain payment system providers that are systemically important to U.K.'s payment network. As a result of these changes, aspects of our Vocalink business are now subject to the U.K. payment system oversight regime and are directly overseen by the Bank of England.
- **Issuer Practice Legislation and Regulation** - Our financial institution customers are subject to numerous regulations, which impact us as a consequence. In addition, certain regulations (such as PSD2 in the EEA) may disintermediate issuers. PSD2 may enable third-party payment processors to route transactions away from Mastercard products by offering account information or payment initiation services directly to those who currently use our products. This may also allow these processors to commoditize the data that are included in the transactions. If our customers are disintermediated in their business, we could face diminished demand for our integrated products and services. Other regulations, such as PSD2's strong authentication requirement, could increase the number of transactions that consumers abandon if we are unable to secure a frictionless authentication experience under the new standards. An increase in the rate of abandoned transactions could adversely impact our volumes or other operational metrics.

Increased regulatory focus on us, such as in connection with the matters discussed above, may result in costly compliance burdens and/or may otherwise increase our costs. Similarly, increased regulatory focus on our customers may cause such customers to reduce the volume of transactions processed through our systems, or may otherwise impact the competitiveness of our products. Actions by regulators could influence other organizations around the world to enact or consider adopting similar measures, amplifying any potential compliance burden. Finally, failure to comply with the laws and regulations discussed above to which we are subject could result in fines, sanctions or other penalties. Each may individually or collectively materially and adversely affect our financial performance and/or our overall business and results of operations, as well as have an impact on our reputation.

**We could be subject to adverse changes in tax laws, regulations and interpretations or challenges to our tax positions.**

We are subject to tax laws and regulations of the U.S. federal, state and local governments as well as various non-U.S. jurisdictions. Potential changes in existing tax laws, including future regulatory guidance, may impact our effective income tax rate and tax payments. There can be no assurance that changes in tax laws or regulations, both within the U.S. and the other jurisdictions in which we operate, will not materially and adversely affect our effective income tax rate, tax payments, financial condition and results of operations. Similarly, changes in tax laws and regulations that impact our customers and counterparties or the economy generally may also impact our financial condition and results of operations.

In addition, tax laws and regulations are complex and subject to varying interpretations, and any significant failure to comply with applicable tax laws and regulations in all relevant jurisdictions could give rise to substantial penalties and liabilities. Any changes in enacted tax laws, rules or regulatory or judicial interpretations; any adverse outcome in connection with tax audits in any jurisdiction; or any change in the pronouncements relating to accounting for income taxes could materially and adversely impact our effective income tax rate, tax payments, financial condition and results of operations.

## Litigation

**Liabilities we may incur or limitations on our business related to any litigation or litigation settlements could materially and adversely affect our results of operations.**

We are a defendant on a number of civil litigations and regulatory proceedings and investigations, including among others, those alleging violations of competition and antitrust law and those involving intellectual property claims. See Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for more details regarding the allegations contained in these complaints and the status of these proceedings. In the event we are found liable in any material litigations or proceedings, particularly in the event we may be found liable in a large class-action lawsuit or on the basis of an antitrust claim entitling the plaintiff to treble damages or under which we were jointly and severally liable, we could be subject to significant damages, which could have a material adverse impact on our overall business and results of operations.

Certain limitations have been placed on our business in recent years because of litigation and litigation settlements, such as changes to our no-surcharge rule in the United States. Any future limitations on our business resulting from litigation or litigation settlements could impact our relationships with our customers, including reducing the volume of business that we do with them, which may materially and adversely affect our overall business and results of operations.

## Business and Operations

### Competition and Technology

**Substantial and intense competition worldwide in the global payments industry may materially and adversely affect our overall business and results of operations.**

The global payments industry is highly competitive. Our payment programs compete against all forms of payment, including cash and checks; electronic, mobile and e-commerce payment platforms; cryptocurrencies; ACH payment services; and other payments networks, which can have several competitive impacts on our business:

- Some of our traditional competitors, as well as alternative payment service providers, may have substantially greater financial and other resources than we have, may offer a wider range of programs and services than we offer or may use more effective advertising and marketing strategies to achieve broader brand recognition or merchant acceptance than we have.
- Our ability to compete may also be affected by the outcomes of litigation, competition-related regulatory proceedings, central bank activity and legislative activity.

Certain of our competitors operate three-party payments systems with direct connections to both merchants and consumers and these competitors may derive competitive advantages from their business models. If we continue to attract more regulatory scrutiny than

these competitors because we operate a four-party system, or we are regulated because of the system we operate in a way in which our competitors are not, we could lose business to these competitors. See “Business - Competition” in Part I, Item 1.

If we are not able to differentiate ourselves from our competitors, drive value for our customers and/or effectively align our resources with our goals and objectives, we may not be able to compete effectively against these threats. Our competitors may also more effectively introduce their own innovative programs and services that adversely impact our growth. We also compete against new entrants that have developed alternative payments systems, e-commerce payments systems and payments systems for mobile devices, as well as physical store locations. A number of these new entrants rely principally on the Internet to support their services and may enjoy lower costs than we do, which could put us at a competitive disadvantage. Our failure to compete effectively against any of the foregoing competitive threats could materially and adversely affect our overall business and results of operations.

**Disintermediation from stakeholders both within and outside of the payments value chain could harm our business.**

As the payments industry continues to develop and change, we face disintermediation and related risks, including:

- Parties that process our transactions in certain countries may try to eliminate our position as an intermediary in the payment process. For example, merchants could switch (and in some cases are switching) transactions directly with issuers. Additionally, processors could process transactions directly between issuers and acquirers. Large scale consolidation within processors could result in these processors developing bilateral agreements or in some cases switching the entire transaction on their own network, thereby disintermediating us.
- Regulation in the EEA may disintermediate us by enabling third-party providers opportunities to route payment transactions away from our networks and towards other forms of payment.
- Although we partner with technology companies (such as digital players and mobile providers) that leverage our technology, platforms and networks to deliver their products, they could develop platforms or networks that disintermediate us from digital payments and impact our ability to compete in the digital economy. This risk is heightened when we have relationships with these entities where we share Mastercard data. While we share this data in a controlled manner subject to applicable anonymization and privacy and data standards, without proper oversight we could inadvertently share too much data which could give the partner a competitive advantage.
- Competitors, customers, technology companies, governments and other industry participants may develop products that compete with or replace value-added products and services we currently provide to support our switched transaction and payment offerings. These products could replace our own switching and payments offerings or could force us to change our pricing or practices for these offerings. In addition, governments that develop national payment platforms may promote their platforms in such a way that could put us at a competitive disadvantage in those markets.
- Participants in the payments industry may merge, create joint ventures or form other business combinations that may strengthen their existing business services or create new payment products and services that compete with our services.

Our failure to compete effectively against any of the foregoing competitive threats could materially and adversely affect our overall business and results of operations.

**Continued intense pricing pressure may materially and adversely affect our overall business and results of operations.**

In order to increase transaction volumes, enter new markets and expand our Mastercard-branded cards and enabled products and services, we seek to enter into business agreements with customers through which we offer incentives, pricing discounts and other support that promote our products. In order to stay competitive, we may have to increase the amount of these incentives and pricing discounts. Over the past several years, we have experienced continued pricing pressure. The demand from our customers for better pricing arrangements and greater rebates and incentives moderates our growth. We may not be able to continue our expansion strategy to switch additional transaction volumes or to provide additional services to our customers at levels sufficient to compensate for such lower fees or increased costs in the future, which could materially and adversely affect our overall business and results of operations. In addition, increased pressure on prices increases the importance of cost containment and productivity initiatives in areas other than those relating to customer incentives.

In the future, we may not be able to enter into agreements with our customers if they require terms that we are unable or unwilling to offer, and we may be required to modify existing agreements in order to maintain relationships and to compete with others in the industry. Some of our competitors are larger and have greater financial resources than we do and accordingly may be able to charge lower prices to our customers. In addition, to the extent that we offer discounts or incentives under such agreements, we will need to further increase transaction volumes or the amount of services provided thereunder in order to benefit incrementally from such agreements and to increase revenue and profit, and we may not be successful in doing so, particularly in the current regulatory environment. Our customers also may implement cost reduction initiatives that reduce or eliminate payment product marketing or increase requests for greater incentives or greater cost stability. These factors could have a material adverse impact on our overall business and results of operations.

**Rapid and significant technological developments and changes could negatively impact our overall business and results of operations or limit our future growth.**

The payments industry is subject to rapid and significant technological changes, which can impact our business in several ways:

- Technological changes, including continuing developments of technologies in the areas of smart cards and devices, contactless and mobile payments, e-commerce, cryptocurrency and blockchain technology, machine learning and AI, could result in new technologies that may be superior to, or render obsolete, the technologies we currently use in our programs and services. Moreover, these changes could result in new and innovative payment methods and products that could place us at a competitive disadvantage and that could reduce the use of our products.
- We rely in part on third parties, including some of our competitors and potential competitors, for the development of and access to new technologies. The inability of these companies to keep pace with technological developments, or the acquisition of these companies by competitors, could negatively impact our offerings.
- Our ability to develop and adopt new services and technologies may be inhibited by industry-wide solutions and standards (such as those related to EMV, tokenization or other safety and security technologies), and by resistance from customers or merchants to such changes.
- Our ability to develop evolving systems and products may be inhibited by any difficulty we may experience in attracting and retaining technology experts.
- Our ability to adopt these technologies can also be inhibited by intellectual property rights of third parties. We have received, and we may in the future receive, notices or inquiries from patent holders (for example, other operating companies or non-practicing entities) suggesting that we may be infringing certain patents or that we need to license the use of their patents to avoid infringement. Such notices may, among other things, threaten litigation against us or our customers or demand significant license fees.
- Our ability to develop new technologies and reflect technological changes in our payments offerings will require resources, which may result in additional expenses.
- We work with technology companies (such as digital players and mobile providers) that use our technology to enhance payment safety and security and to deliver their payment-related products and services quickly and efficiently to consumers. Our inability to keep pace technologically could negatively impact the willingness of these customers to work with us, and could encourage them to use their own technology and compete against us.

We cannot predict the effect of technological changes on our business, and our future success will depend, in part, on our ability to anticipate, develop or adapt to technological changes and evolving industry standards. Failure to keep pace with these technological developments or otherwise bring to market products that reflect these technologies could lead to a decline in the use of our products, which could have a material adverse impact on our overall business and results of operations.

**Operating a real-time account-based payment network presents risks that could materially affect our business.**

Our acquisition of Vocalink in 2017 added real-time account-based payment technology to the suite of capabilities we offer. While expansion into this space presents business opportunities, there are also regulatory and operational risks associated with administering a real-time account-based payment network.

British regulators have designated this platform to be “critical national infrastructure” and regulators in other countries may in the future expand their regulatory oversight of real-time account-based payment systems in similar ways. In addition, any prolonged service outage on this network could result in quickly escalating impacts, including potential intervention by the Bank of England and significant reputational risk to Vocalink and us. For a discussion of the regulatory risks related to our real-time account-based payment platform, see our risk factor in “Risk Factors - Payments Industry Regulation” in this Part I, Item 1A. Furthermore, the complexity of this payment technology requires careful management to address security vulnerabilities that are different from those faced on our core network. Operational difficulties, such as the temporary unavailability of our services or products, or security breaches on our real-time account-based payment network could cause a loss of business for these products and services, result in potential liability for us and adversely affect our reputation.

**Working with new customers and end users as we expand our integrated products and services can present operational challenges, be costly and result in reputational damage if the new products or services do not perform as intended.**

The payments markets in which we compete are characterized by rapid technological change, new product introductions, evolving industry standards and changing customer and consumer needs. In order to remain competitive and meet the needs of the payments market, we are continually involved in diversifying our integrated products and services. These efforts carry the risks associated with any diversification initiative, including cost overruns, delays in delivery and performance problems. These projects also carry risks associated with working with different types of customers, for example organizations such as corporations that are not financial



institutions and non-governmental organizations (“NGOs”), and end users other than those we have traditionally worked with. These differences may present new operational challenges in the development and implementation of our new products or services.

Our failure to render these integrated products and services could make our other integrated products and services less desirable to customers, or put us at a competitive disadvantage. In addition, if there is a delay in the implementation of our products or services or if our products or services do not perform as anticipated, we could face additional regulatory scrutiny, fines, sanctions or other penalties, which could materially and adversely affect our overall business and results of operations, as well as negatively impact our brand and reputation.

## Information Security and Service Disruptions

**Information security incidents or account data compromise events could disrupt our business, damage our reputation, increase our costs and cause losses.**

Information security risks for payments and technology companies such as ours have significantly increased in recent years in part because of the proliferation of new technologies, the use of the Internet and telecommunications technologies to conduct financial transactions, and the increased sophistication and activities of organized crime, hackers, terrorists and other external parties. These threats may derive from fraud or malice on the part of our employees or third parties, or may result from human error or accidental technological failure. These threats include cyber-attacks such as computer viruses, malicious code, phishing attacks or information security breaches and could lead to the misappropriation of consumer account and other information and identity theft.

Our operations rely on the secure processing, transmission and storage of confidential, proprietary and other information and technology in our computer systems and networks, as well as the systems of our third-party providers. Our customers and other parties in the payments value chain, as well as account holders, rely on our digital technologies, computer systems, software and networks to conduct their operations. In addition, to access our integrated products and services, our customers and account holders increasingly use personal smartphones, tablet PCs and other mobile devices that may be beyond our control. We, like other financial technology organizations, routinely are subject to cyber-threats and our technologies, systems and networks, as well as the systems of our third-party providers, have been subject to attempted cyber-attacks. Because of our position in the payments value chain, we believe that we are likely to continue to be a target of such threats and attacks. Additionally, geopolitical events and resulting government activity could also lead to information security threats and attacks by affected jurisdictions and their sympathizers.

To date, we have not experienced any material impact relating to cyber-attacks or other information security breaches. However, future attacks or breaches could lead to security breaches of the networks, systems (including third-party provider systems) or devices that our customers use to access our integrated products and services, which in turn could result in the unauthorized disclosure, release, gathering, monitoring, misuse, loss or destruction of confidential, proprietary and other information (including account data information) or data security compromises. Such attacks or breaches could also cause service interruptions, malfunctions or other failures in the physical infrastructure or operations systems that support our businesses and customers (such as the lack of availability of our value-added services), as well as the operations of our customers or other third parties. In addition, they could lead to damage to our reputation with our customers and other parties and the market, additional costs to us (such as repairing systems, adding new personnel or protection technologies or compliance costs), regulatory penalties, financial losses to both us and our customers and partners and the loss of customers and business opportunities. If such attacks are not detected immediately, their effect could be compounded.

Despite various mitigation efforts that we undertake, there can be no assurance that we will be immune to these risks and not suffer material breaches and resulting losses in the future, or that our insurance coverage would be sufficient to cover all losses. Our risk and exposure to these matters remain heightened because of, among other things, the evolving nature of these threats, our prominent size and scale and our role in the global payments and technology industries, our plans to continue to implement our digital and mobile channel strategies and develop additional remote connectivity solutions to serve our customers and account holders when and how they want to be served, our global presence, our extensive use of third-party vendors and future joint venture and merger and acquisition opportunities. As a result, information security and the continued development and enhancement of our controls, processes and practices designed to protect our systems, computers, software, data and networks from attack, damage or unauthorized access remain a priority for us. As cyber-threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities. Any of the risks described above could materially adversely affect our overall business and results of operations.

In addition to information security risks for our systems, we also routinely encounter account data compromise events involving merchants and third-party payment processors that process, store or transmit payment transaction data, which affect millions of Mastercard, Visa, Discover, American Express and other types of account holders. Further events of this type may subject us to reputational damage and/or lawsuits involving payment products carrying our brands. Damage to our reputation or that of our brands resulting from an account data breach of either our systems or the systems of our customers, merchants and other third parties could decrease the use and acceptance of our integrated products and services. Such events could also slow or reverse the trend toward

electronic payments. In addition to reputational concerns, the cumulative impact of multiple account data compromise events could increase the impact of the fraud resulting from such events by, among other things, making it more difficult to identify consumers. Moreover, while most of the lawsuits resulting from account data breaches do not involve direct claims against us and while we have releases from many issuers and acquirers, we could still face damage claims, which, if upheld, could materially and adversely affect our results of operations. Such events could have a material adverse impact on our transaction volumes, results of operations and prospects for future growth, or increase our costs by leading to additional regulatory burdens being imposed on us.

**Service disruptions that cause us to be unable to process transactions or service our customers could materially affect our overall business and results of operations.**

Our transaction switching systems and other offerings have experienced in limited instances and may continue to experience interruptions as a result of technology malfunctions, fire, weather events, power outages, telecommunications disruptions, terrorism, workplace violence, accidents or other catastrophic events. Our visibility in the global payments industry may also put us at greater risk of attack by terrorists, activists, or hackers who intend to disrupt our facilities and/or systems. Additionally, we rely on third-party service providers for the timely transmission of information across our global data network. Inadequate infrastructure in lesser-developed markets could also result in service disruptions, which could impact our ability to do business in those markets. If one of our service providers fails to provide the communications capacity or services we require, as a result of natural disaster, operational disruptions, terrorism, hacking or any other reason, the failure could interrupt our services. Although we maintain a business continuity program to analyze risk, assess potential impacts, and develop effective response strategies, we cannot ensure that our business would be immune to these risks, because of the intrinsic importance of our switching systems to our business, any interruption or degradation could adversely affect the perception of the reliability of products carrying our brands and materially adversely affect our overall business and our results of operations.

## Stakeholder Relationships

**Losing a significant portion of business from one or more of our largest financial institution customers could lead to significant revenue decreases in the longer term, which could have a material adverse impact on our business and our results of operations.**

Most of our financial institution customer relationships are not exclusive and may be terminated by our customers. Our customers can reassess their commitments to us at any time in the future and/or develop their own competitive services. Accordingly, our business agreements with these customers may not reduce the risk inherent in our business that customers may terminate their relationships with us in favor of relationships with our competitors, or for other reasons, or might not meet their contractual obligations to us.

In addition, a significant portion of our revenue is concentrated among our five largest financial institution customers. Loss of business from any of our large customers could have a material adverse impact on our overall business and results of operations.

**Exclusive/near exclusive relationships certain customers have with our competitors may have a material adverse impact on our business.**

Certain customers have exclusive, or nearly-exclusive, relationships with our competitors to issue payment products, and these relationships may make it difficult or cost-prohibitive for us to do significant amounts of business with them to increase our revenues. In addition, these customers may be more successful and may grow faster than the customers that primarily issue our payment products, which could put us at a competitive disadvantage. Furthermore, we earn substantial revenue from customers with nearly-exclusive relationships with our competitors. Such relationships could provide advantages to the customers to shift business from us to the competitors with which they are principally aligned. A significant loss of our existing revenue or transaction volumes from these customers could have a material adverse impact on our business.

**Consolidation in the banking industry could materially and adversely affect our overall business and results of operations.**

The banking industry has undergone substantial, accelerated consolidation in the past. Consolidations have included customers with a substantial Mastercard portfolio being acquired by institutions with a strong relationship with a competitor. If significant consolidation among customers were to continue, it could result in the substantial loss of business for us, which could have a material adverse impact on our business and prospects. In addition, one or more of our customers could seek to merge with, or acquire, one of our competitors, and any such transaction could also have a material adverse impact on our overall business. Consolidation could also produce a smaller number of large customers, which could increase their bargaining power and lead to lower prices and/or more favorable terms for our customers. These developments could materially and adversely affect our results of operations.

**Our business significantly depends on the continued success and competitiveness of our issuing and acquiring customers and, in many jurisdictions, their ability to effectively manage or help manage our brands.**

While we work directly with many stakeholders in the payments system, including merchants, governments and large digital companies and other technology companies, we are, and will continue to be, significantly dependent on our relationships with our issuers and acquirers and their respective relationships with account holders and merchants to support our programs and services. Furthermore, we depend on our issuing partners and acquirers to continue to innovate to maintain competitiveness in the market. We do not issue cards or other payment devices, extend credit to account holders or determine the interest rates or other fees charged to account holders. Each issuer determines these and most other competitive payment program features. In addition, we do not establish the discount rate that merchants are charged for acceptance, which is the responsibility of our acquiring customers. As a result, our business significantly depends on the continued success and competitiveness of our issuing and acquiring customers and the strength of our relationships with them. In turn, our customers' success depends on a variety of factors over which we have little or no influence, including economic conditions in global financial markets or their disintermediation by competitors or emerging technologies, as well as regulation. If our customers become financially unstable, we may lose revenue or we may be exposed to settlement risk. See our risk factor in "Risk Factors - Settlement and Third-Party Obligations" in this Part I, Item 1A with respect to how we guarantee certain third-party obligations for further discussion.

With the exception of the United States and a select number of other jurisdictions, most in-country (as opposed to cross-border) transactions conducted using Mastercard, Maestro and Cirrus cards are authorized, cleared and settled by our customers or other processors. Because we do not provide domestic switching services in these countries and do not, as described above, have direct relationships with account holders, we depend on our close working relationships with our customers to effectively manage our brands, and the perception of our payments system, among consumers in these countries. We also rely on these customers to help manage our brands and perception among regulators and merchants in these countries, alongside our own relationships with them. From time to time, our customers may take actions that we do not believe to be in the best interests of our payments system overall, which may materially and adversely impact our business.

**Merchants' continued focus on acceptance costs may lead to additional litigation and regulatory proceedings and increase our incentive program costs, which could materially and adversely affect our profitability.**

Merchants are important constituents in our payments system. We rely on both our relationships with them, as well as their relationships with our issuer and acquirer customers, to continue to expand the acceptance of our integrated products and services. We also work with merchants to help them enable new sales channels, create better purchase experiences, improve efficiencies, increase revenues and fight fraud. In the retail industry, there is a set of larger merchants with increasingly global scope and influence. We believe that these merchants are having a significant impact on all participants in the global payments industry, including Mastercard. Some large merchants have supported the legal, regulatory and legislative challenges to interchange fees that Mastercard has been defending, including the U.S. merchant litigations. See our risk factor in "Risk Factors – Other Regulation" in this Part I, Item 1A with respect to payments industry regulation, including interchange fees. The continued focus of merchants on the costs of accepting various forms of payment, including in connection with the growth of digital payments, may lead to additional litigation and regulatory proceedings.

Certain larger merchants are also able to negotiate incentives from us and pricing concessions from our issuer and acquirer customers as a condition to accepting our products. We also make payments to certain merchants to incentivize them to create co-branded payment programs with us. As merchants consolidate and become even larger, we may have to increase the amount of incentives that we provide to certain merchants, which could materially and adversely affect our results of operations. Competitive and regulatory pressures on pricing could make it difficult to offset the costs of these incentives. Additionally, if the rate of merchant acceptance growth slows our business could suffer.

**Our work with governments exposes us to unique risks that could have a material impact on our business and results of operations.**

As we increase our work with national, state and local governments, both indirectly through financial institutions and with them directly as our customers, we may face various risks inherent in associating or contracting directly with governments. These risks include, but are not limited to, the following:

- Governmental entities typically fund projects through appropriated monies. Changes in governmental priorities or other political developments, including disruptions in governmental operations, could impact approved funding and result in changes in the scope, or lead to the termination of, the arrangements or contracts we or financial institutions enter into with respect to our payment products and services.
- Our work with governments subjects us to U.S. and international anti-corruption laws, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. A violation and subsequent judgment or settlement under these laws could subject us to substantial monetary penalties and damages and have a significant reputational impact.

- Working or contracting with governments, either directly or via our financial institution customers, can subject us to heightened reputational risks, including extensive scrutiny and publicity, as well as a potential association with the policies of a government as a result of a business arrangement with that government. Any negative publicity or negative association with a government entity, regardless of its accuracy, may adversely affect our reputation.

### Settlement and Third-Party Obligations

#### **Our role as guarantor, as well as other contractual obligations, expose us to risk of loss or illiquidity.**

We are a guarantor of certain third-party obligations, including those of certain of our customers. In this capacity, we are exposed to credit and liquidity risk from these customers and certain service providers. We may incur significant losses in connection with transaction settlements if a customer fails to fund its daily settlement obligations due to technical problems, liquidity shortfalls, insolvency or other reasons. Concurrent settlement failures of more than one of our larger customers or of several of our smaller customers either on a given day or over a condensed period of time may exceed our available resources and could materially and adversely affect our results of operations.

We have significant contractual indemnification obligations with certain customers. Should an event occur that triggers these obligations, such an event could materially and adversely affect our overall business and result of operations.

### Global Economic and Political Environment

#### **Global economic, political, financial and societal events or conditions could result in a material and adverse impact on our overall business and results of operations.**

Adverse economic trends in key countries in which we operate may adversely affect our financial performance. Such impact may include, but is not limited to, the following:

- Customers mitigating their economic exposure by limiting the issuance of new Mastercard products and requesting greater incentive or greater cost stability from us
- Consumers and businesses lowering spending, which could impact domestic and cross-border spend
- Government intervention (including the effect of laws, regulations and/or government investments on or in our financial institution customers), as well as uncertainty due to changing political regimes in executive, legislative and/or judicial branches of government, that may have potential negative effects on our business and our relationships with customers or otherwise alter their strategic direction away from our products
- Tightening of credit availability that could impact the ability of participating financial institutions to lend to us under the terms of our credit facility

Additionally, we switch substantially all cross-border transactions using Mastercard, Maestro and Cirrus-branded cards and generate a significant amount of revenue from cross-border volume fees and fees related to switched transactions. Revenue from switching cross-border and currency conversion transactions for our customers fluctuates with the levels and destinations of cross-border travel and our customers' need for transactions to be converted into their base currency. Cross-border activity may be adversely affected by world geopolitical, economic, weather and other conditions. These include the threat of terrorism and outbreaks of flu, viruses and other diseases, as well as major environmental events (including those related to climate change). The uncertainty that could result from such events could decrease cross-border activity. Additionally, any regulation of interregional interchange fees could also negatively impact our cross-border activity. In each case, decreased cross-border activity could decrease the revenue we receive.

Our operations as a global payments network rely in part on global interoperable standards to help facilitate safe and simple payments. To the extent geopolitical events result in jurisdictions no longer participating in the creation or adoption of these standards, or the creation of competing standards, the products and services we offer could be negatively impacted.

Any of these developments could have a material adverse impact on our overall business and results of operations.

#### **Adverse currency fluctuations and foreign exchange controls could negatively impact our results of operations.**

During 2019, approximately 68% of our revenue was generated from activities outside the United States. This revenue (and the related expense) could be transacted in a non-functional currency or valued based on a currency other than the functional currency of the entity generating the revenues. Resulting exchange gains and losses are included in our net income. Our risk management activities provide protection with respect to adverse changes in the value of only a limited number of currencies and are based on estimates of exposures to these currencies.

In addition, some of the revenue we generate outside the United States is subject to unpredictable currency fluctuations including devaluation of currencies where the values of other currencies change relative to the U.S. dollar. If the U.S. dollar strengthens compared

to currencies in which we generate revenue, this revenue may be translated at a materially lower amount than expected. Furthermore, we may become subject to exchange control regulations that might restrict or prohibit the conversion of our other revenue currencies into U.S. dollars, such as what we have experienced in Venezuela.

The occurrence of currency fluctuations or exchange controls could have a material adverse impact on our results of operations.

**The United Kingdom’s proposed withdrawal from the European Union could harm our business and financial results.**

In June 2016, voters in the United Kingdom approved the withdrawal of the U.K. from the E.U. (commonly referred to as “Brexit”). The U.K. government triggered Article 50 of the Lisbon Treaty on March 29, 2017, which commenced the official E.U. withdrawal process. In January 2020, Parliament and the E.U. approved of an agreement between the U.K. and the E.U., and the U.K. officially departed from the E.U. On February 1, 2020, the U.K. entered into a transition/implementation period, during which all E.U. laws regulations, court decisions, trading agreements and other obligations continue to apply to the U.K. During this period, which is set to expire on December 31, 2020, the U.K. and E.U. will negotiate additional terms. Uncertainty over these terms could cause political and economic uncertainty in the U.K. and the rest of Europe, which could harm our business and financial results.

Subsequent to the end of the transition/implementation period on December 31, 2020, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations in the U.K. and E.U. We, as well as our customers who have significant operations in the U.K., may incur additional costs and expenses as we adapt to potentially divergent regulatory frameworks from the rest of the E.U. We may also face additional complexity with regard to immigration and travel rights for our employees located in the U.K. and the E.U. These factors may impact our ability to operate in the E.U. and U.K. seamlessly. Any of these effects of Brexit, among others, could harm our business and financial results.

## **Brand and Reputational Impact**

**Negative brand perception may materially and adversely affect our overall business.**

Our brands and their attributes are key assets of our business. The ability to attract consumers to our branded products and retain them depends upon the external perception of us and our industry. Our business may be affected by actions taken by our customers, merchants or other organizations that impact the perception of our brands or the payments industry in general. From time to time, our customers may take actions that we do not believe to be in the best interests of our brands, such as creditor practices that may be viewed as “predatory”. Moreover, adverse developments with respect to our industry or the industries of our customers or other companies and organizations with which we work may also, by association, impair our reputation, or result in greater regulatory or legislative scrutiny. We have also been pursuing the use of social media channels at an increasingly rapid pace. Under some circumstances, our use of social media, or the use of social media by others as a channel for criticism or other purposes, could also cause rapid, widespread reputational harm to our brands by disseminating rapidly and globally actual or perceived damaging information about us, our products or merchants or other end users who utilize our products. To the extent any of our published sustainability metrics are subsequently viewed as inaccurate or we are unable to execute on our sustainability initiatives, we may be viewed negatively by consumers, investors and other stakeholders concerned about these matters. Also, as we are headquartered in the United States, a negative perception of the United States could impact the perception of our company, which could adversely affect our business. Any of the above issues could have a material and adverse effect to our overall business.

**Lack of visibility of our brand in our products and services, or in the products and services of our partners who use our technology, may materially and adversely affect our business.**

As more players enter the global payments system, the layers between our brand and consumers and merchants increase. In order to compete with other powerful consumer brands that are also becoming part of the consumer payment experience, we often partner with those brands on payment solutions. These brands include large digital companies and other technology companies who are our customers and use our networks to build their own acceptance brands. In some cases, our brand may not be featured in the payment solution or may be secondary to other brands. Additionally, as part of our relationships with some issuers, our payment brand is only included on the back of the card. As a result, our brand may either be invisible to consumers or may not be the primary brand with which consumers associate the payment experience. This brand invisibility, or any consumer confusion as to our role in the consumer payment experience, could decrease the value of our brand, which could adversely affect our business.

## Talent and Culture

**We may not be able to attract, hire and retain a highly qualified and diverse workforce, or maintain our corporate culture, which could impact our ability to grow effectively.**

Our performance largely depends on the talents and efforts of our employees, particularly our key personnel and senior management. We may be unable to retain or to attract highly qualified employees. The market for key personnel is highly competitive, particularly in technology and other skill areas significant to our business. Additionally, changes in immigration and work permit laws and regulations and related enforcement have made it difficult for employees to work in, or transfer among, jurisdictions in which we have operations and could impair our ability to attract and retain qualified employees. Failure to attract, hire, develop, motivate and retain highly qualified and diverse employee talent, or to maintain a corporate culture that fosters innovation, creativity and teamwork could harm our overall business and results of operations.

We rely on key personnel to lead with integrity. To the extent our leaders behave in a manner that is not consistent with our values, we could experience significant impact to our brand and reputation, as well as to our corporate culture.

## Acquisitions

**Acquisitions, strategic investments or entry into new businesses could disrupt our business and harm our results of operations or reputation.**

Although we may continue to evaluate and/or make strategic acquisitions of, or acquire interests in joint ventures or other entities related to, complementary businesses, products or technologies, we may not be able to successfully partner with or integrate them, despite original intentions and focused efforts. In addition, such an integration may divert management's time and resources from our core business and disrupt our operations. Moreover, we may spend time and money on acquisitions or projects that do not meet our expectations or increase our revenue. To the extent we pay the purchase price of any acquisition in cash, it would reduce our cash reserves available to us for other uses, and to the extent the purchase price is paid with our stock, it could be dilutive to our stockholders. Furthermore, we may not be able to successfully finance the business following the acquisition as a result of costs of operations, including any litigation risk which may be inherited from the acquisition.

Any acquisition or entry into a new business could subject us to new regulations with which we would need to comply. This compliance could increase our costs, and we could be subject to liability or reputational harm to the extent we cannot meet any such compliance requirements. Our expansion into new businesses could also result in unanticipated issues which may be difficult to manage.

## Class A Common Stock and Governance Structure

**Provisions in our organizational documents and Delaware law could be considered anti-takeover provisions and have an impact on change-in-control.**

Provisions contained in our amended and restated certificate of incorporation and bylaws and Delaware law could be considered anti-takeover provisions, including provisions that could delay or prevent entirely a merger or acquisition that our stockholders consider favorable. These provisions may also discourage acquisition proposals or have the effect of delaying or preventing entirely a change in control, which could harm our stock price. For example, subject to limited exceptions, our amended and restated certificate of incorporation prohibits any person from beneficially owning more than 15% of any of the Class A common stock or any other class or series of our stock with general voting power, or more than 15% of our total voting power. In addition:

- our stockholders are not entitled to the right to cumulate votes in the election of directors
- our stockholders are not entitled to act by written consent
- a vote of 80% or more of all of the outstanding shares of our stock then entitled to vote is required for stockholders to amend any provision of our bylaws
- any representative of a competitor of Mastercard or of Mastercard Foundation is disqualified from service on our board of directors

**Mastercard Foundation's substantial stock ownership, and restrictions on its sales, may impact corporate actions or acquisition proposals favorable to, or favored by, the other public stockholders.**

As of February 11, 2020, Mastercard Foundation owned 111,101,204 shares of Class A common stock, representing approximately 11.2% of our general voting power. Mastercard Foundation may not sell or otherwise transfer its shares of Class A common stock prior to May 1, 2027, except to the extent necessary to satisfy its charitable disbursement requirements, for which purpose earlier sales are permitted and have occurred. Mastercard Foundation is permitted to sell all of its remaining shares after May 1, 2027, subject to certain conditions. The directors of Mastercard Foundation are required to be independent of us and our customers. The ownership of Class A common stock by Mastercard Foundation, together with the restrictions on transfer, could discourage or make more difficult acquisition proposals favored by the other holders of the Class A common stock. In addition, because Mastercard Foundation is restricted from selling its shares for an extended period of time, it may not have the same interest in short or medium-term movements in our stock price as, or incentive to approve a corporate action that may be favorable to, our other stockholders.

## Item 1B. Unresolved staff comments

Not applicable.

## Item 2. Properties

We own our corporate headquarters, located in Purchase, New York, and our principal technology and operations center, located in O'Fallon, Missouri. As of December 31, 2019, Mastercard and its subsidiaries owned or leased commercial properties throughout the U.S. and other countries around the world, consisting of corporate and regional offices, as well as our operations centers.

We believe that our facilities are suitable and adequate for the business that we currently conduct. However, we periodically review our space requirements and may acquire or lease new space to meet the needs of our business, or consolidate and dispose of facilities that are no longer required.

## Item 3. Legal proceedings

Refer to Note 13 (Accrued Expenses and Accrued Litigation) and Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8.

## Item 4. Mine Safety Disclosures

Not applicable.

## Information about our executive officers

(as of February 14, 2020)

<b>Name Current Position</b>	<b>Age</b>	<b>Previous Mastercard Experience</b>	<b>Previous Business Experience</b>
<b>Ajay Banga</b> <i>President &amp; Chief Executive Officer</i> since July 2010	60	President and COO (2009-2010)	Executive positions at Citigroup (1996-2009), including CEO, Asia Pacific region; Chairman and CEO, International Global Consumer Group; Executive Vice President, Global Consumer Group; President, Retail Banking, North America; and business head for CitiFinancial and the U.S. Consumer Assets Division  Previous experience at Nestlé India and PepsiCo totaling 15 years, in roles of increasing responsibility
<b>Ajay Bhalla</b> <i>President, Cyber and Intelligence Solutions</i> since November 2018	54	President, Enterprise Security Solutions (2014- 2018)  President, Digital Gateway Services (2011-2013)  President, South Asia and Southeast Asia (2008-2011)  President, Southeast Asia (2002-2007)  Country Manager, Singapore and Head of Marketing, Southeast Asia (1997-2002)  Vice President (1993-1997)	Various leadership positions at HSBC and Xerox Corporation (1988-1993)
<b>Ann Cairns</b> <i>Vice Chairman</i> since June 2018	63	President, International (2011-2018)	Managing director, Alvarez & Marsal (led the European team managing the estate of Lehman Brothers Holdings International through the Chapter 11 process in Europe) (2002-2008)  CEO, ABN AMRO  Senior corporate and investment banking roles at Citigroup  Research scientist and engineer for British Gas
<b>Gilberto Caldart</b> <i>President, International</i> since June 2018	60	President, Latin America and Caribbean region (2013-2018)  Division President, South Latin America/ Brazil (2008-2013)	Various leadership positions at Citigroup, including Country Business Manager, Brazil (2002-2008)
<b>Michael Fraccaro</b> <i>Chief People Officer</i> since July 2016	54	Executive Vice President, Human Resources, Global Products and Solutions (2014-2016)  Senior Vice President, Human Resources, Global Products and Solutions (2012-2014)	Various executive-level human resources positions at HSBC Group, Hong Kong, a banking and financial services firm (2000-2012)  Prior senior human resources positions in banking and financial services in Australia and the Middle East



<b>Name</b> <b>Current Position</b>	<b>Age</b>	<b>Previous Mastercard Experience</b>	<b>Previous Business Experience</b>
<b>Michael Froman</b> <i>Vice Chairman and President, Strategic Growth</i> since April 2018	57	Mr. Froman joined the Company in April 2018 in his current role	U.S. Trade Representative in the Executive Office of President Obama (2013-2017)  Assistant to the President and Deputy National Security Advisor for International Economic Policy (2009-2013)  Various executive positions at Citigroup (1999-2009), including CEO, CitilInsurance and COO of Citigroup's alternative investments business
<b>Edward McLaughlin</b> <i>President, Operations and Technology</i> since May 2017	54	Chief Information Officer (2016-2017)  Chief Emerging Payments Officer (2010-2015)  Chief Franchise Development Officer (2009-2010)  Senior Vice President, Bill Payment and Healthcare (2005-2009)	Group Vice President, Product and Strategy, Metavante Corporation (financial services technology company) (2002-2005)  Co-Founder and CEO, Paytrust, Inc. (online payments company acquired by Metavante Corporation in 2002) (1998-2002)
<b>Sachin Mehra</b> <i>Chief Financial Officer</i> since April 2019	49	Chief Financial Operations Officer (2018-2019)  Executive Vice President, Commercial Products (2015-2018)  Executive Vice President and Business Financial Officer, North America (2013-2015)  Corporate Treasurer (2010-2013)	Vice President and Treasurer, Hess Corporation (2008-2010)  Vice President and Deputy Treasurer, Hess Corporation (2007-2008)  Various treasury and finance positions of increasing responsibility, General Motors Corporation and GMAC (1996-2007)
<b>Michael Miebach</b> <i>Chief Product Officer</i> since January 2016	52	President, Middle East and Africa (2010-2015)	Managing Director, Middle East and North Africa, Barclays Bank PLC (2008-2010)  Managing Director, Sub-Saharan Africa, Barclays Bank PLC (2007-2008)  Various executive positions at Citigroup in Germany, Austria, U.K. and Turkey (1994-2007)
<b>Tim Murphy</b> <i>General Counsel</i> since April 2014	52	Chief Product Officer (2009-2014)  President, U.S. Region (2007-2009)  Executive Vice President, Customer Business Planning and Analysis (2006-2007)  Senior Vice President and Associate General Counsel (2002-2006)	Associate, Cleary, Gottlieb, Steen and Hamilton, New York and London
<b>Raja Rajamannar</b> <i>Chief Marketing and Communications Officer and President, Healthcare</i> since January 2016	58	Chief Marketing Officer (2013-2015)	Executive Vice President-Senior Business and Chief Transformation Officer, Anthem (formerly, WellPoint, Inc.) (2012- 2013)  Senior Vice President and Chief Innovation and Marketing Officer, Humana Inc. (2009-2012)  Various management positions at Citigroup (1994-2009), including Executive Vice President and Chief Marketing Officer-Citi Global Cards (2008-2009)

Name Current Position	Age	Previous Mastercard Experience	Previous Business Experience
<b>Raj Seshadri</b> <i>President, Data and Services</i> since January 2020	54	President, U.S. Issuers (2016-2019)	Managing Director, Head of iShares U.S. Wealth Advisory business, BlackRock (2014-2016)
<b>Kevin Stanton</b> <i>Chief Transformation Officer</i> since January 2020	58	Chief Services Officer (2018-2019) President, Mastercard Advisors (2010-2017) President, Canada (2004-2010) Senior Vice President, Strategy and Market Development (2002-2004) Vice President, Senior Counsel and North America Region Counsel (1995-2002)	
<b>Craig Vosburg</b> <i>President, North America</i> since January 2016	52	Chief Product Officer (2014-2015) Executive Vice President, U.S. Market Development (2010-2014) Head of Mastercard Advisors, U.S. and Canada (2008-2010) Head of Mastercard Advisors, Southeast Asia, Greater China and South Asia/Middle East/Africa (2006-2008)	Senior member-financial services practice, Bain & Company (2002-2006) and A.T. Kearney (1997-2002) Vice president, CoreStates Financial Corporation (1989-1995)

# PART II

**Item 5. Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities**

**Item 6. Selected financial data**

**Item 7. Management's discussion and analysis of financial condition and results of operations**

**Item 7A. Quantitative and qualitative disclosures about market risk**

**Item 8. Financial statements and supplementary data**

**Item 9. Changes in and disagreements with accountants on accounting and financial disclosure**

**Item 9A. Controls and procedures**

**Item 9B. Other information**

## Item 5. Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities

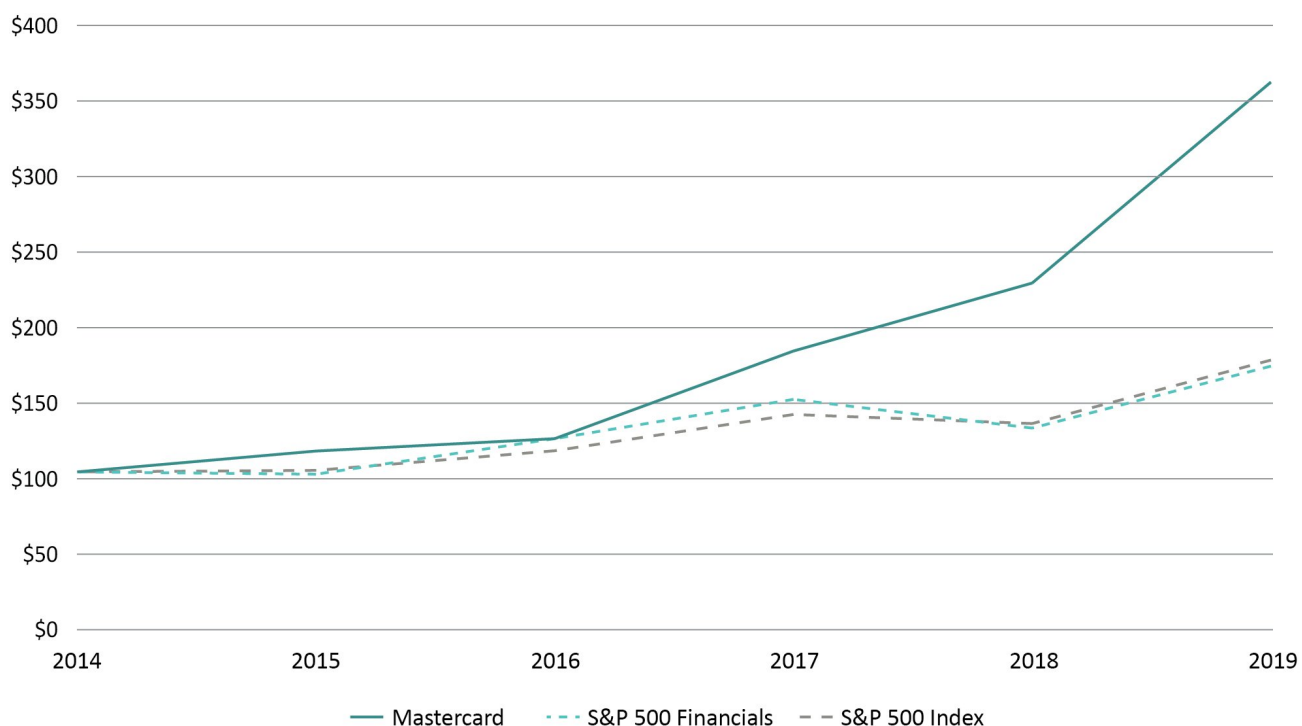
Our Class A common stock trades on the New York Stock Exchange under the symbol "MA". At February 11, 2020, we had 68 stockholders of record for our Class A common stock. We believe that the number of beneficial owners is substantially greater than the number of record holders because a large portion of our Class A common stock is held in "street name" by brokers.

There is currently no established public trading market for our Class B common stock. There were approximately 271 holders of record of our non-voting Class B common stock as of February 11, 2020, constituting approximately 1.1% of our total outstanding equity.

### Stock Performance Graph

The graph and table below compare the cumulative total stockholder return of Mastercard's Class A common stock, the S&P 500 Financials and the S&P 500 Index for the five-year period ended December 31, 2019. The graph assumes a \$100 investment in our Class A common stock and both of the indices and the reinvestment of dividends. Mastercard's Class B common stock is not publicly traded or listed on any exchange or dealer quotation system.

#### Comparison of cumulative five-year total return



Total returns to stockholders for each of the years presented were as follows:

Company/Index	Base period	Indexed Returns				
		For the Years Ended December 31,				
	2014	2015	2016	2017	2018	2019
Mastercard	\$ 100.00	\$ 113.80	\$ 121.67	\$ 179.67	\$ 225.17	\$ 358.38
S&P 500 Financials	100.00	98.47	120.92	147.75	128.50	169.78
S&P 500 Index	100.00	101.38	113.51	138.29	132.23	173.86

## Dividend Declaration and Policy

On December 3, 2019, our Board of Directors declared a quarterly cash dividend of \$0.40 per share paid on February 7, 2020 to holders of record on January 9, 2020 of our Class A common stock and Class B common stock. On February 4, 2020, our Board of Directors declared a quarterly cash dividend of \$0.40 per share payable on May 8, 2020 to holders of record on April 9, 2020 of our Class A common stock and Class B common stock.

Subject to legally available funds, we intend to continue to pay a quarterly cash dividend on our outstanding Class A common stock and Class B common stock. However, the declaration and payment of future dividends is at the sole discretion of our Board of Directors after taking into account various factors, including our financial condition, operating results, available cash and current and anticipated cash needs.

## Issuer Purchases of Equity Securities

On December 4, 2018, our Board of Directors approved a share repurchase program authorizing us to repurchase up to \$6.5 billion of our Class A common stock (the "2018 Share Repurchase Program"). This program became effective in January 2019. On December 3, 2019, our Board of Directors approved a share repurchase program authorizing us to repurchase up to \$8.0 billion of our Class A common stock (the "2019 Share Repurchase Program"). This program became effective in January 2020.

During the fourth quarter of 2019, we repurchased a total of approximately 3.6 million shares for \$994 million at an average price of \$275.00 per share of Class A common stock. Our repurchase activity during the fourth quarter of 2019 consisted of open market share repurchases and is summarized in the following table:

Period	Total Number of Shares Purchased	Average Price Paid per Share (including commission cost)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Dollar Value of Shares that may yet be Purchased under the Plans or Programs <sup>1</sup>
October 1 – 31	2,128,776	\$ 271.55	2,128,776	\$ 719,951,874
November 1 – 30	1,363,616	278.93	1,363,616	339,605,253
December 1 – 31	121,837	291.38	121,837	8,304,104,890
<b>Total</b>	<b>3,614,229</b>	<b>275.00</b>	<b>3,614,229</b>	

<sup>1</sup> Dollar value of shares that may yet be purchased under the 2018 Share Repurchase Program and the 2019 Share Repurchase Program are as of the end of each period presented.

## Item 6. Selected financial data

The statement of operations data and the cash dividends declared per share presented below for the years ended December 31, 2019, 2018 and 2017, and the balance sheet data as of December 31, 2019 and 2018, were derived from the audited consolidated financial statements of Mastercard Incorporated included in Part II, Item 8. The statement of operations data and the cash dividends declared per share presented below for the years ended December 31, 2016 and 2015, and the balance sheet data as of December 31, 2017, 2016 and 2015, were derived from audited consolidated financial statements not included in this Report. The data set forth below should be read in conjunction with, and are qualified by reference to, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 and our consolidated financial statements and notes thereto included in Part II, Item 8.

	Years Ended December 31,				
	2019	2018	2017	2016	2015
	(in millions, except per share data)				
<b>Statement of Operations Data:</b>					
Net revenue	\$ 16,883	\$ 14,950	\$ 12,497	\$ 10,776	\$ 9,667
Operating expenses	7,219	7,668	5,875	5,015	4,589
Operating income	9,664	7,282	6,622	5,761	5,078
Net income	8,118	5,859	3,915	4,059	3,808
Basic earnings per share	7.98	5.63	3.67	3.70	3.36
Diluted earnings per share	7.94	5.60	3.65	3.69	3.35
<b>Balance Sheet Data:</b>					
Total assets	\$ 29,236	\$ 24,860	\$ 21,329	\$ 18,675	\$ 16,250
Long-term debt	8,527	5,834	5,424	5,180	3,268
Total equity	5,917	5,418	5,497	5,684	6,062
<b>Cash dividends declared per share</b>	\$ 1.39	\$ 1.08	\$ 0.91	\$ 0.79	\$ 0.67

## Item 7. Management's discussion and analysis of financial condition and results of operations

The following discussion should be read in conjunction with the consolidated financial statements and notes of Mastercard Incorporated and its consolidated subsidiaries, including Mastercard International Incorporated ("Mastercard International") (together, "Mastercard" or the "Company"), included elsewhere in this Report. Percentage changes provided throughout "Management's Discussion and Analysis of Financial Condition and Results of Operations" were calculated on amounts rounded to the nearest thousand. For discussion related to the results of operations for the year ended December 31, 2018 compared to the year ended December 31, 2017, please see Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2018.

### Business Overview

Mastercard is a technology company in the global payments industry that connects consumers, financial institutions, merchants, governments, digital partners, businesses and other organizations worldwide, enabling them to use electronic forms of payment instead of cash and checks. We make payments easier and more efficient by providing a wide range of payment solutions and services using our family of well-known brands, including Mastercard®, Maestro® and Cirrus®. We are a multi-rail network that offers customers one partner to turn to for their domestic and cross-border payment needs. Through our unique and proprietary global payments network, which we refer to as our core network, we switch (authorize, clear and settle) payment transactions and deliver related products and services. We have additional payment capabilities that include automated clearing house ("ACH") transactions (both batch and real-time account-based payments). We also provide integrated value-added offerings such as cyber and intelligence products, information and analytics services, consulting, loyalty and reward programs and processing. Our payment solutions offer customers choice and flexibility and are designed to ensure safety and security for the global payments system.

A typical transaction on our core network involves four participants in addition to us: account holder (a person or entity who holds a card or uses another device enabled for payment), issuer (the account holder's financial institution), merchant and acquirer (the merchant's financial institution). We do not issue cards, extend credit, determine or receive revenue from interest rates or other fees charged to account holders by issuers, or establish the rates charged by acquirers in connection with merchants' acceptance of our products. In most cases, account holder relationships belong to, and are managed by, our financial institution customers.

### Financial Results Overview

The following table provides a summary of our key GAAP operating results, as reported:

	Year ended December 31,			2019 Increase/ (Decrease)	2018 Increase/ (Decrease)
	2019	2018	2017		
	(\$ in millions, except per share data)				
Net revenue	\$16,883	\$14,950	\$12,497	13%	20%
Operating expenses	\$ 7,219	\$ 7,668	\$ 5,875	(6)%	31%
Operating income	\$ 9,664	\$ 7,282	\$ 6,622	33%	10%
Operating margin	57.2%	48.7%	53.0%	8.5 ppt	(4.3) ppt
Income tax expense	\$ 1,613	\$ 1,345	\$ 2,607	20%	(48)%
Effective income tax rate	16.6%	18.7%	40.0%	(2.1) ppt	(21.3) ppt
Net income	\$ 8,118	\$ 5,859	\$ 3,915	39%	50%
Diluted earnings per share	\$ 7.94	\$ 5.60	\$ 3.65	42%	53%
Diluted weighted-average shares outstanding	1,022	1,047	1,072	(2)%	(2)%

The following table provides a summary of key non-GAAP operating results<sup>1, 2</sup>, adjusted to exclude the impact of gains and losses on our equity investments, special items (which represent litigation judgments and settlements and certain one-time items) and the related tax impacts on our non-GAAP adjustments. In addition, we have presented growth rates, adjusted for the impact of currency:

	Year ended December 31,			2019 Increase/(Decrease)		2018 Increase/(Decrease)	
	2019	2018	2017	As adjusted	Currency- neutral	As adjusted	Currency- neutral
	(\$ in millions, except per share data)						
Net revenue	\$16,883	\$14,950	\$12,497	13%	16%	20%	20%
Adjusted operating expenses	\$ 7,219	\$ 6,540	\$ 5,693	10%	12%	15%	15%
Adjusted operating margin	57.2%	56.2%	54.4%	1.0 ppt	1.3 ppt	1.8 ppt	1.8 ppt
Adjusted effective income tax rate <sup>2</sup>	17.0%	18.5%	26.8%	(1.5) ppt	(1.3) ppt	(8.3) ppt	(8.2) ppt
Adjusted net income <sup>2</sup>	\$ 7,937	\$ 6,792	\$ 4,906	17%	20%	38%	38%
Adjusted diluted earnings per share <sup>2</sup>	\$ 7.77	\$ 6.49	\$ 4.58	20%	23%	42%	41%

Note: Tables may not sum due to rounding.

<sup>1</sup> See "Non-GAAP Financial Information" for further information on our non-GAAP adjustments and the reconciliation to GAAP reported amounts.

<sup>2</sup> For 2019 we updated our non-GAAP methodology to exclude the impact of gains and losses on our equity investments. Prior year periods were not restated as the impact of the change was immaterial in relation to our non-GAAP results.

Key highlights for 2019 as compared to 2018 were as follows:

Net revenue		
GAAP	Non-GAAP (currency-neutral)	
up 13%	up 16%	Net revenue increased 16% on a currency-neutral basis, which included growth of approximately 1 percentage point from acquisitions. The primary drivers of our net revenue growth were <sup>1</sup> :
		- Gross dollar volume growth of 13% on a local currency basis
		- Cross-border growth of 16% on a local currency basis
		- Switched transaction growth of 19%
		- Other revenues growth of 23%, or 24% on a currency-neutral basis. This includes 2 percentage points of growth due to acquisitions. The remaining growth was primarily driven by our Cyber & Intelligence and Data & Services solutions.
		- These increases were partially offset by higher rebates and incentives, which increased 18%, or 20% on a currency-neutral basis, primarily due to the impact from new and renewed agreements and increased volumes.

<sup>1</sup> The cross-border volume and switched transactions growth rates have been normalized to eliminate the effects of differing switching and carryover days between periods. Carryover days are those where transactions and volumes from days where the company does not clear and settle are processed.



Operating expenses	Adjusted operating expenses	
GAAP	Non-GAAP (currency-neutral)	Adjusted operating expenses on a currency-neutral basis included growth of approximately 2 percentage points from acquisitions and 1 percentage point related to the differential in hedging gains and losses versus the year-ago period. The remaining 9 percentage points of growth was primarily related to our continued investment in strategic initiatives.
down 6%	up 12%	

Effective income tax rate	Adjusted effective income tax rate	
GAAP	Non-GAAP (currency-neutral)	Adjusted effective income tax rate of 17.0% primarily attributable to a more favorable geographic mix of earnings and discrete tax benefits including a favorable court ruling in the current period.
16.6%	17.0%	

Other 2019 financial highlights were as follows:

- We generated net cash flows from operations of \$8.2 billion.
- We completed the acquisitions of businesses for total consideration of \$1.5 billion.
- We repurchased 26 million shares of our common stock for \$6.5 billion and paid dividends of \$1.3 billion
- We completed debt offerings for an aggregate principal amount of \$2.8 billion and separately repaid \$500 million of principal that matured related to our 2014 USD Notes.

### Non-GAAP Financial Information

Non-GAAP financial information is defined as a numerical measure of a company's performance that excludes or includes amounts so as to be different than the most comparable measure calculated and presented in accordance with accounting principles generally accepted in the United States ("GAAP"). Our non-GAAP financial measures exclude the impact of special items, where applicable, which represent litigation judgments and settlements and certain one-time items, as well as the related tax impacts ("Special Items"). For 2019, our non-GAAP financial measures also exclude the impact of gains and losses on our equity investments which includes mark-to-market fair value adjustments, impairments and gains and losses upon disposition and the related tax impacts. Prior year periods were not restated as the impact of the change was immaterial in relation to our non-GAAP results. Our non-GAAP financial measures for the comparable periods exclude the impact of the following:

#### Gains and Losses on Equity Investments

- During 2019, we recorded net gains of \$167 million (\$124 million after tax, or \$0.12 per diluted share), primarily related to unrealized fair market value adjustments on marketable and non-marketable equity securities.

#### Special Items

##### Tax act

- During 2019, we recorded a \$57 million net tax benefit (\$0.06 per diluted share) which included a \$30 million benefit related to a reduction to the 2017 one-time deemed repatriation tax on accumulated foreign earnings (the "Transition Tax") resulting from final tax regulations issued in 2019 and a \$27 million benefit related to additional foreign tax credits which can be carried back under transition rules.
- During 2018, we recorded a \$75 million net tax benefit (\$0.07 per diluted share) which included a \$90 million benefit related to the carryback of foreign tax credits due to transition rules, offset by a net \$15 million expense primarily related to an increase to our Transition Tax.
- During 2017, we recorded additional tax expense of \$873 million (\$0.81 per diluted share) which included \$825 million of provisional charges attributable to the Transition Tax, the remeasurement of our net deferred tax asset in the U.S. and the recognition of a deferred tax liability related to a change in assertion regarding reinvestment of foreign earnings, as well as \$48 million additional tax expense related to a foregone foreign tax credit benefit on 2017 repatriations.

##### Litigation provisions

- During 2018, we recorded pre-tax charges of \$1,128 million (\$1,008 million after tax, or \$0.96 per diluted share) related to litigation provisions which included pre-tax charges of:
  - \$654 million related to a fine issued by the European Commission

- \$237 million related to both the U.S. merchant class litigation and the filed and anticipated opt-out U.S. merchant cases
- \$237 million related to litigation settlements with U.K. and Pan-European merchants.
- During 2017, we recorded pre-tax charges of \$15 million (\$10 million after tax, or \$0.01 per diluted share) related to a litigation settlement with Canadian merchants.

*Venezuela charge*

- During 2017, we recorded a pre-tax charge of \$167 million (\$108 million after tax, or \$0.10 per diluted share) in general and administrative expenses related to the deconsolidation of our Venezuelan subsidiaries.

See Note 1 (Summary of Significant Accounting Policies), Note 7 (Investments), Note 20 (Income Taxes) and Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for further discussion. We excluded these items because management evaluates the underlying operations and performance of the Company separately from these recurring and nonrecurring items.

We believe that the non-GAAP financial measures presented facilitate an understanding of our operating performance and provide a meaningful comparison of our results between periods. We use non-GAAP financial measures to, among other things, evaluate our ongoing operations in relation to historical results, for internal planning and forecasting purposes and in the calculation of performance-based compensation.

In addition, we present growth rates adjusted for the impact of currency, which is a non-GAAP financial measure. Currency-neutral growth rates are calculated by remeasuring the prior period's results using the current period's exchange rates for both the translational and transactional impacts on operating results. The impact of currency translation represents the effect of translating operating results where the functional currency is different than our U.S. dollar reporting currency. The impact of the transactional currency represents the effect of converting revenue and expenses occurring in a currency other than the functional currency. We believe the presentation of currency-neutral growth rates provides relevant information to facilitate an understanding of our operating results.

Net revenue, operating expenses, operating margin, other income (expense), effective income tax rate, net income and diluted earnings per share adjusted for the impact of gains and losses on our equity investments, Special Items and/or the impact of currency, are non-GAAP financial measures and should not be relied upon as substitutes for measures calculated in accordance with GAAP.

The following tables reconcile our reported financial measures calculated in accordance with GAAP to the respective non-GAAP adjusted financial measures:

	Year ended December 31, 2019					
	Operating expenses	Operating margin	Other income (expense)	Effective income tax rate	Net income	Diluted earnings per share
	(\$ in millions, except per share data)					
Reported - GAAP	\$ 7,219	57.2%	\$ 67	16.6 %	\$ 8,118	\$ 7.94
(Gains) losses on equity investments	**	**	(167)	(0.2)%	(124)	(0.12)
Tax act	**	**	**	0.6 %	(57)	(0.06)
Non-GAAP	\$ 7,219	57.2%	\$ (100)	17.0 %	\$ 7,937	\$ 7.77

	Year ended December 31, 2018					
	Operating expenses	Operating margin	Other income (expense)	Effective income tax rate	Net income	Diluted earnings per share
	(\$ in millions, except per share data)					
Reported - GAAP	\$ 7,668	48.7%	\$ (78)	18.7 %	\$ 5,859	\$ 5.60
Litigation provisions	(1,128)	7.5%	**	(1.1)%	1,008	0.96
Tax act	**	**	**	0.9 %	(75)	(0.07)
Non-GAAP	\$ 6,540	56.2%	\$ (78)	18.5 %	\$ 6,792	\$ 6.49

	Year ended December 31, 2017					
	Operating expenses	Operating margin	Other income (expense)	Effective income tax rate	Net income	Diluted earnings per share
	(\$ in millions, except per share data)					
Reported - GAAP	\$ 5,875	53.0%	\$ (100)	40.0 %	\$ 3,915	\$ 3.65
Tax act	**	**	**	(13.4)%	873	0.81
Venezuela charge	(167)	1.3%	**	0.2 %	108	0.10
Litigation provisions	(15)	0.1%	**	— %	10	0.01
Non-GAAP	\$ 5,693	54.4%	\$ (100)	26.8 %	\$ 4,906	\$ 4.58

Note: Tables may not sum due to rounding.

\*\* Not applicable

The following tables represent the reconciliation of our growth rates reported under GAAP to our non-GAAP growth rates:

	Year Ended December 31, 2019 as compared to the Year Ended December 31, 2018					
	Increase/(Decrease)					
	Net revenue	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
Reported - GAAP	13%	(6)%	8.5 ppt	(2.1) ppt	39 %	42 %
(Gains) losses on equity investments <sup>1</sup>	**	**	**	(0.2) ppt	(2)%	(2)%
Tax act	**	**	**	(0.3) ppt	1 %	1 %
Litigation provisions	**	16 %	(7.5) ppt	1.1 ppt	(20)%	(21)%
Non-GAAP	13%	10 %	1.0 ppt	(1.5) ppt	17 %	20 %
Currency impact <sup>2</sup>	3%	2 %	0.3 ppt	0.2 ppt	3 %	3 %
Non-GAAP - currency-neutral	16%	12 %	1.3 ppt	(1.3) ppt	20 %	23 %

	Year Ended December 31, 2018 as compared to the Year Ended December 31, 2017					
	Increase/(Decrease)					
	Net revenue	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
Reported - GAAP	20 %	31 %	(4.3) ppt	(21.3) ppt	50 %	53 %
Litigation provisions	**	(19)%	7.4 ppt	(1.0) ppt	25 %	26 %
Tax act	**	**	**	14.2 ppt	(33)%	(34)%
Venezuela charge	**	3 %	(1.3) ppt	(0.2) ppt	(3)%	(3)%
Non-GAAP	20 %	15 %	1.8 ppt	(8.3) ppt	38 %	42 %
Currency impact <sup>2</sup>	— %	— %	— ppt	0.1 ppt	— %	— %
Non-GAAP - currency-neutral	20 %	15 %	1.8 ppt	(8.2) ppt	38 %	41 %

Note: Tables may not sum due to rounding.

\*\* Not applicable

<sup>1</sup> For 2019 we updated our non-GAAP methodology to exclude the impact of gains and losses on our equity investments. Prior year periods were not restated as the impact of the change was immaterial in relation to our non-GAAP results.

<sup>2</sup> Represents the currency translational and transactional impact.

## Foreign Currency

### Currency Impact (Translation and Transactional)

Our primary revenue functional currencies are the U.S. dollar, euro, Brazilian real and the British pound. Our overall operating results are impacted by currency translation, which represents the effect of translating operating results where the functional currency is different than our U.S. dollar reporting currency.

Our operating results can also be impacted by transactional currency. The impact of the transactional currency represents the effect of converting revenue and expense transactions occurring in a currency other than the functional currency. Changes in currency exchange rates directly impact the calculation of gross dollar volume ("GDV") and gross euro volume ("GEV"), which are used in the calculation of our domestic assessments, cross-border volume fees and volume-related rebates and incentives. In most non-European regions, GDV is calculated based on local currency spending volume converted to U.S. dollars using average exchange rates for the period. In Europe, GEV is calculated based on local currency spending volume converted to euros using average exchange rates for the period. As a result, our domestic assessments, cross-border volume fees and volume-related rebates and incentives are impacted by the strengthening or weakening of the U.S. dollar versus non-European local currencies and the strengthening or weakening of the euro versus other European local currencies. For example, our billing in Australia is in the U.S. dollar, however, consumer spend in Australia is in the Australian dollar. The currency transactional impact of converting Australian dollars to our U.S. dollar billing currency will have an impact on the revenue generated. The strengthening or weakening of the U.S. dollar is evident when GDV growth on a U.S. dollar-converted basis is compared to GDV growth on a local currency basis. In 2019, GDV on a U.S. dollar-converted basis increased 9.6%, while GDV on a local currency basis increased 13.0% versus 2018. In 2018, GDV on a U.S. dollar-converted basis increased 12.8%, while GDV on a local currency basis increased 13.8% versus 2017. Further, the impact from transactional currency occurs in transaction processing revenue, other revenue and operating expenses when the local currency of these items are different than the functional currency.

The translational and transactional impact of currency ("Currency impact") has been identified in our growth impact tables and has been excluded from our currency neutral growth rates, which are non-GAAP financial measures. See "Non-GAAP Financial Information" for further information on our non-GAAP adjustments.

### Foreign Exchange Activity

We incur foreign currency gains and losses from remeasuring monetary assets and liabilities that are in a currency other than the functional currency and from remeasuring foreign exchange derivative contracts ("Foreign Exchange Activity"). The impact of Foreign Exchange Activity has not been eliminated in our currency-neutral results (see "Non-GAAP Financial Information") and is recorded in general and administrative expenses on the consolidated statement of operations. We manage foreign currency balance sheet remeasurement and transactional currency exposure through our foreign exchange risk management activities, which are discussed further in Note 23 (Derivative and Hedging Instruments) to the consolidated financial statements included in Part II, Item 8. Since we do not designate foreign exchange derivatives as hedging instruments pursuant to the accounting standards for derivative instruments and hedging activities, we record gains and losses on foreign exchange derivatives immediately in current-period earnings, with the related hedged item being recognized as the exposures materialize.

### Risk of Currency Devaluation

We are exposed to currency devaluation in certain countries. In addition, we are subject to exchange control regulations that restrict the conversion of financial assets into U.S. dollars. While these revenues and assets are not material to us on a consolidated basis, we can be negatively impacted should there be a continued and sustained devaluation of local currencies relative to the U.S. dollar and/or a continued and sustained deterioration of economic conditions in these countries. Specifically, in 2017, due to foreign exchange regulations which were restricting access to U.S. dollars in Venezuela, an other-than-temporary lack of exchangeability between the Venezuela bolivar and the U.S. dollar impacted our ability to manage risk, process cross-border transactions and satisfy U.S. dollar denominated liabilities related to our Venezuelan operations. As a result of these factors, we concluded that, effective December 31, 2017, we did not meet the accounting criteria for consolidation of these subsidiaries, and therefore we transitioned to the cost method of accounting. This accounting change resulted in a pre-tax charge of \$167 million (\$108 million after tax, or \$0.10 per diluted share) in 2017. We continue to operate and serve our Venezuelan issuers, acquirers, merchants and account holders with our products and services. See Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8 for further discussion.

## Financial Results

### Revenue

Gross revenue increased 14%, or 17% on a currency-neutral basis in 2019 versus the prior year, primarily due to an increase in transactions, dollar volume of activity on cards carrying our brands for both domestic and cross-border transactions and other payment-related products and services.

Rebates and incentives increased 18%, or 20% on a currency-neutral basis in 2019 versus the prior year, primarily due to the impact from new and renewed agreements and increased volumes.

Our net revenue increased 13%, or 16% on a currency-neutral basis in 2019 versus the prior year, including growth of 1 percentage point from our acquisitions.

See Note 3 (Revenue) to the consolidated financial statements included in Part II, Item 8 for a further discussion of how we recognize revenue.

The components of net revenue were as follows:

	For the Years Ended December 31,			Increase (Decrease)	
	2019	2018	2017	2019	2018
	(\$ in millions)				
Domestic assessments	\$ 6,781	\$ 6,138	\$ 5,130	10%	20%
Cross-border volume fees	5,606	4,954	4,174	13%	19%
Transaction processing	8,469	7,391	6,188	15%	19%
Other revenues	4,124	3,348	2,853	23%	17%
Gross revenue	24,980	21,831	18,345	14%	19%
Rebates and incentives (contra-revenue)	(8,097)	(6,881)	(5,848)	18%	18%
Net revenue	\$ 16,883	\$ 14,950	\$ 12,497	13%	20%

The following table summarizes the drivers of net revenue growth:

	For the Years Ended December 31,											
	Volume		Acquisitions		Revenue Standard <sup>1</sup>		Currency Impact <sup>2</sup>		Other <sup>3</sup>		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Domestic assessments	13%	14%	—%	—%	**	6%	(3)%	(1)%	1% <sup>4</sup>	2% <sup>4</sup>	10%	20%
Cross-border volume fees	14%	17%	—%	—%	**	1%	(3)%	1%	2%	—%	13%	19%
Transaction processing	14%	14%	—%	—%	**	—%	(2)%	—%	3%	5%	15%	19%
Other revenues	**	**	2%	2%	**	—%	(1)%	(1)%	22% <sup>5</sup>	16% <sup>5</sup>	23%	17%
Rebates and incentives	9%	10%	—%	—%	**	(2)%	(3)%	(1)%	11% <sup>6</sup>	11% <sup>6</sup>	18%	18%
Net revenue	13%	14%	1%	0.5%	**	4%	(3)%	—%	2%	2%	13%	20%

Note: Table may not sum due to rounding

\*\* Not applicable

<sup>1</sup> Represents the impact of our adoption of the revenue guidance in 2018. For a more detailed discussion on the impact of the revenue guidance, refer to Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8.

<sup>2</sup> Represents the currency translational and transactional impact.

<sup>3</sup> Includes impact from pricing and other non-volume based fees.

<sup>4</sup> Includes impact of the allocation of revenue to service deliverables, which are primarily recorded in other revenue when services are performed.

<sup>5</sup> Includes impacts from cyber and intelligence fees, data analytics and consulting fees and other payment-related products and services.

<sup>6</sup> Includes the impact of new, renewed and expired agreements.

The following tables provide a summary of the trend in volume and transaction growth. The cross-border volume and switched transactions growth rates have been normalized to eliminate the effects of differing switching and carryover days between periods. Carryover days are those where transactions and volumes from days where the company does not clear and settle are processed. Additionally, we adjusted the switched transactions growth rate in the prior period for the deconsolidation of our Venezuelan subsidiaries in 2017. For a more detailed discussion of the deconsolidation of our Venezuelan subsidiaries, refer to Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8.

	For the Years Ended December 31,			
	2019		2018	
	Growth (USD)	Growth (Local)	Growth (USD)	Growth (Local)
Mastercard-branded GDV <sup>1</sup>	10%	13%	13%	14%
Asia Pacific/Middle East/Africa	8%	12%	13%	13%
Canada	4%	7%	10%	10%
Europe	12%	18%	18%	19%
Latin America	9%	15%	8%	17%
United States	10%	10%	10%	10%
Cross-border volume <sup>1</sup>		16%		18%

<sup>1</sup> Excludes volume generated by Maestro and Cirrus cards.

	For the Years Ended December 31,	
	2019	2018
	Switched transactions	19%

No individual country, other than the United States, generated more than 10% of net revenue in any such period. A significant portion of our net revenue is concentrated among our five largest customers. In 2019, the net revenue from these customers was approximately \$3.5 billion, or 21%, of total net revenue. The loss of any of these customers or their significant card programs could adversely impact our revenue.

## Operating Expenses

Operating expenses decreased 6% in 2019 versus the prior year. Adjusted operating expenses increased 10%, or 12% on a currency-neutral basis in 2019 versus the prior year. Current year results include growth of approximately 2 percentage points from acquisitions and 1 percentage point primarily from foreign exchange derivative contracts.

The components of operating expenses were as follows:

	For the Years Ended December 31,			Increase (Decrease)	
	2019	2018	2017	2019	2018
	(\$ in millions)				
General and administrative	\$ 5,763	\$ 5,174	\$ 4,653	11 %	11%
Advertising and marketing	934	907	771	3 %	18%
Depreciation and amortization	522	459	436	14 %	5%
Provision for litigation	—	1,128	15	**	**
Total operating expenses	7,219	7,668	5,875	(6)%	31%
Special Items <sup>1</sup>	—	(1,128)	(182)	**	**
Adjusted operating expenses (excluding Special Items <sup>1</sup> )	\$ 7,219	\$ 6,540	\$ 5,693	10 %	15%

Note: Table may not sum due to rounding.

\*\* Not meaningful

<sup>1</sup> See "Non-GAAP Financial Information" for further information on our non-GAAP adjustments and the reconciliation to GAAP reported amounts.

The following table summarizes the drivers of changes in operating expenses:

	For the Years Ended December 31,											
	Operational		Special Items <sup>2</sup>		Acquisitions		Revenue Standard <sup>3</sup>		Currency Impact <sup>4</sup>		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
General and administrative	11%	14 % <sup>1</sup>	**	(4)%	2%	1%	**	—%	(2)%	—%	11 %	11%
Advertising and marketing	5%	(4)%	**	**	—%	—%	**	21%	(2)%	—%	3 %	18%
Depreciation and amortization	9%	(5)%	**	**	7%	10%	**	—%	(2)%	—%	14 %	5%
Provision for litigation	**	**	**	**	**	**	**	**	**	**	**	**
Total operating expenses	10%	10 % <sup>1</sup>	(16)%	16 %	2%	2%	**	3%	(2)%	—%	(6)%	31%

Note: Table may not sum due to rounding.

\*\* Not meaningful

<sup>1</sup> Includes a 2 percentage point impact to general and administrative and total operating expenses growth due to contributions made in 2018 to support inclusive growth efforts. Contributions made in 2019 were comparable to the prior year.

<sup>2</sup> See "Non-GAAP Financial Information" for further information on our non-GAAP adjustments and the reconciliation to GAAP reported amounts.

<sup>3</sup> Represents the impact of our adoption of the revenue guidance in 2018. For a more detailed discussion on the impact of the revenue guidance, refer to Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8.

<sup>4</sup> Represents the currency translational and transactional impact.

### General and Administrative

General and administrative expenses increased 11%, or 13% on a currency-neutral basis in 2019 versus the prior year. Current year results include growth of approximately 2 percentage points from acquisitions and 1 percentage point primarily from foreign exchange derivative contracts. The remaining increase was primarily driven by an increase in personnel to support our continued investment in our strategic initiatives.

The components of general and administrative expenses were as follows:

	For the Years Ended December 31,			Increase (Decrease)	
	2019	2018	2017	2019	2018
	(\$ in millions)				
Personnel	\$ 3,537	\$ 3,214	\$ 2,687	10%	20%
Professional fees	447	377	355	19%	6%
Data processing and telecommunications	666	600	504	11%	19%
Foreign exchange activity <sup>1</sup>	32	(36)	106	**	**
Other	1,081	1,019	1,001	6%	2%
Total general and administrative expenses	5,763	5,174	4,653	11%	11%
Special Items <sup>2</sup>	—	—	(167)	**	**
Adjusted general and administrative expenses (excluding Special Items <sup>2</sup> )	\$ 5,763	\$ 5,174	\$ 4,486	11%	15%

Note: Table may not sum due to rounding.

\*\* Not meaningful

<sup>1</sup> Foreign exchange activity includes gains and losses on foreign exchange derivative contracts and the impact of remeasurement of assets and liabilities denominated in foreign currencies. See Note 23 (Derivative and Hedging Instruments) to the consolidated financial statements included in Part II, Item 8 for further discussion.

<sup>2</sup> See "Non-GAAP Financial Information" for further information on our non-GAAP adjustments and the reconciliation to GAAP reported amounts.

### Advertising and Marketing

Advertising and marketing expenses increased 3%, or 5% on a currency-neutral basis in 2019 versus the prior year, primarily due to higher spending on certain sponsorship initiatives.



## Depreciation and Amortization

Depreciation and amortization expenses increased 14% , or 15% on a currency-neutral basis in 2019 versus the prior year. Current year results include growth of approximately 7 percentage points from acquisitions with the remaining increase primarily driven by amortization of certain intangible assets and depreciation on data center assets.

## Provision for Litigation

Provision for litigation decreased in 2019 versus the prior year as there were no litigation charges in the current year. See Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for further discussion.

## Other Income (Expense)

Other income (expense) increased in 2019 versus the prior year primarily due to net gains of \$167 million which were related to unrealized fair market value adjustments on marketable and non-marketable equity securities in the current period.

The components of other income (expense) were as follows:

	For the Years Ended December 31,			Increase (Decrease)	
	2019	2018	2017	2019	2018
	(\$ in millions)				
Investment Income	\$ 97	\$ 122	\$ 56	(21)%	**
Gains (losses) on equity investments, net	167	—	—	**	**
Interest expense	(224)	(186)	(154)	20 %	21 %
Other income (expense), net	27	(14)	(2)	**	**
Total other income (expense)	67	(78)	(100)	**	(22)%

Note: Table may not sum due to rounding.

\*\* Not meaningful

## Income Taxes

The effective income tax rates for the years ended December 31, 2019 and 2018 were 16.6% and 18.7%, respectively. The effective income tax rate for 2019 was lower than the effective income tax rate for 2018, primarily due to the nondeductible nature of the fine issued by the European Commission in 2018 and a discrete tax benefit related to a favorable court ruling in 2019. These 2019 benefits were partially offset by discrete tax benefits in 2018 primarily related to foreign tax credits generated in 2018 as a result of U.S. tax reform, which can be carried back and utilized in 2017 under transition rules issued by the Department of the Treasury and the Internal Revenue Service.

The adjusted effective income tax rates for the years ended December 31, 2019 and 2018 were 17.0% and 18.5%, respectively. The adjusted effective income tax rate was lower than the prior year primarily due to a more favorable geographic mix of earnings and discrete tax benefits including a favorable court ruling in 2019.

See Note 20 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion.

## Liquidity and Capital Resources

We rely on existing liquidity, cash generated from operations and access to capital to fund our global operations, credit and settlement exposure, capital expenditures, investments in our business and current and potential obligations. The following table summarizes the cash, cash equivalents, investments and credit available to us at December 31:

	2019		2018	
	(in billions)			
Cash, cash equivalents and investments <sup>1</sup>	\$	7.7	\$	8.4
Unused line of credit		6.0		4.5

<sup>1</sup> Investments include available-for-sale securities and held-to-maturity securities. This amount excludes restricted cash and restricted cash equivalents of \$2.0 billion and \$1.7 billion at December 31, 2019 and 2018, respectively.

We believe that our existing cash, cash equivalents and investment securities balances, our cash flow generating capabilities, and our access to capital resources are sufficient to satisfy our future operating cash needs, capital asset purchases, outstanding commitments and other liquidity requirements associated with our existing operations and potential obligations.

Our liquidity and access to capital could be negatively impacted by global credit market conditions. We guarantee the settlement of many of the transactions between our customers. Historically, payments under these guarantees have not been significant; however, historical trends may not be an indication of potential future losses. The risk of loss on these guarantees is specific to individual customers, but may also be driven by regional or global economic conditions, including, but not limited to the health of the financial institutions in a country or region. See Note 22 (Settlement and Other Risk Management) to the consolidated financial statements in Part II, Item 8 for a description of these guarantees.

Our liquidity and access to capital could also be negatively impacted by the outcome of any of the legal or regulatory proceedings to which we are a party. For additional discussion of these and other risks facing our business, see Part I, Item 1A - Risk Factors - Legal and Regulatory Risks and Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8; and Part II, Item 7 (Business Environment).

## Cash Flow

The table below shows a summary of the cash flows from operating, investing and financing activities for the years ended December 31:

	2019	2018	2017
	(in millions)		
Net cash provided by operating activities	\$ 8,183	\$ 6,223	\$ 5,664
Net cash used in investing activities	(1,640)	(506)	(1,781)
Net cash used in financing activities	(5,867)	(4,966)	(4,764)

Net cash provided by operating activities increased \$2.0 billion in 2019 versus the prior year, primarily due to higher net income as adjusted for non-cash items.

Net cash used in investing activities increased \$1.1 billion in 2019 versus the prior year, primarily due to acquisitions and purchases of equity investments, partially offset by higher net proceeds from our investments in available-for-sale and held-to-maturity securities.

Net cash used in financing activities increased \$901 million in 2019 versus the prior year, primarily due to higher repurchases of our Class A common stock, higher dividends paid and the settlement of the contingent consideration attributable to our 2017 acquisitions, partially offset by higher net debt proceeds in the current period.

## Debt and Credit Availability

In May 2019, we issued \$1.0 billion principal amount of notes due June 2029 and \$1.0 billion principal amount of notes due June 2049 and in December 2019, we issued \$750 million principal amount of notes due March 2025. Additionally, during 2019, \$500 million of principal related to the 2014 USD Notes matured and was paid. Our total debt outstanding was \$8.5 billion at December 31, 2019, with the earliest maturity of \$650 million of principal occurring in November 2021.

As of December 31, 2019, we have a commercial paper program (the "Commercial Paper Program"), under which we are authorized to issue up to \$6 billion in outstanding notes, with maturities up to 397 days from the date of issuance. In conjunction with the Commercial Paper Program, we have a committed unsecured \$6 billion revolving credit facility (the "Credit Facility") which expires in November 2024.

Borrowings under the Commercial Paper Program and the Credit Facility are to provide liquidity for general corporate purposes, including providing liquidity in the event of one or more settlement failures by our customers. In addition, we may borrow and repay amounts under these facilities for business continuity purposes. We had no borrowings outstanding under the Commercial Paper Program or the Credit Facility at December 31, 2019.

See Note 15 (Debt) to the consolidated financial statements included in Part II, Item 8 for further discussion on our debt, the Commercial Paper Program and the Credit Facility.

## Dividends and Share Repurchases

We have historically paid quarterly dividends on our outstanding Class A common stock and Class B common stock. Subject to legally available funds, we intend to continue to pay a quarterly cash dividend. However, the declaration and payment of future dividends is at the sole discretion of our Board of Directors after taking into account various factors, including our financial condition, operating

results, available cash and current and anticipated cash needs. The following table summarizes the annual, per share dividends paid in the years reflected:

	For the Years Ended December 31,		
	2019	2018	2017
	(in millions, except per share data)		
Cash dividend, per share	\$ 1.32	\$ 1.00	\$ 0.88
Cash dividends paid	\$ 1,345	\$ 1,044	\$ 942

On December 4, 2019, our Board of Directors declared a quarterly cash dividend of \$0.40 per share paid on February 7, 2020 to holders of record on January 9, 2020 of our Class A common stock and Class B common stock. The aggregate amount of this dividend was \$403 million.

On February 4, 2020, our Board of Directors declared a quarterly cash dividend of \$0.40 per share payable on May 8, 2020 to holders of record on April 9, 2020 of our Class A common stock and Class B common stock. The aggregate amount of this dividend is estimated to be \$402 million.

Repurchased shares of our common stock are considered treasury stock. The timing and actual number of additional shares repurchased will depend on a variety of factors, including the operating needs of the business, legal requirements, price and economic and market conditions. In December 2019, 2018 and 2017, our Board of Directors approved share repurchase programs authorizing us to repurchase up to \$8.0 billion, \$6.5 billion and \$4.0 billion, respectively, of our Class A common stock. The program approved in 2019 became effective in January 2020 after completion of the share repurchase program authorized in 2018. The following table summarizes our share repurchase authorizations of our Class A common stock through December 31, 2019, under the plans approved in 2018 and 2017:

	(in millions, except per share data)	
Remaining authorization at December 31, 2018	\$	6,801
Dollar-value of shares repurchased in 2019	\$	6,497
Remaining authorization at December 31, 2019	\$	8,304
Shares repurchased in 2019		26.4
Average price paid per share in 2019	\$	245.89

See Note 16 (Stockholders' Equity) to the consolidated financial statements included in Part II, Item 8 for further discussion.

### Off-Balance Sheet Arrangements

We have no off-balance sheet debt, other than the commitments presented in the Future Obligations table that follows.

## Future Obligations

The following table summarizes our obligations as of December 31, 2019 that are expected to impact liquidity and cash flow in future periods. We believe we will be able to fund these obligations through cash generated from operations and our cash balances.

	Payments Due by Period					Total
	2020	2021 - 2022	2023 - 2024	2025 and thereafter		
	(in millions)					
Debt	\$ —	\$ 1,435	\$ 1,000	\$ 6,165	\$ 8,600	
Interest on debt	242	470	423	2,235	3,370	
Operating leases <sup>1</sup>	112	216	169	376	873	
Other obligations						
Sponsorship, licensing and other	404	356	59	—	819	
Employee benefits <sup>2</sup>	62	50	48	113	273	
Transition Tax <sup>3</sup>	—	89	227	161	477	
Redeemable non-controlling interests <sup>4</sup>	76	—	—	—	76	
Total <sup>5</sup>	\$ 896	\$ 2,616	\$ 1,926	\$ 9,050	\$ 14,488	

<sup>1</sup> Amounts relate to the maturity of our operating lease liabilities. See Note 10 (Property, Equipment and Right-of-Use Assets) to the consolidated financial statements included in Part II, Item 8 for further discussion.

<sup>2</sup> Amounts relate to severance along with expected funding requirements for defined benefit pension and postretirement plans.

<sup>3</sup> Amounts relate to the U.S. tax liability on the Transition Tax on accumulated non-U.S. earnings of U.S. entities. See Note 20 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion.

<sup>4</sup> Amount relates to the fixed-price put option for the Vocalink remaining shareholders to sell their ownership interest to Mastercard on the third and fifth anniversaries of the transaction and quarterly thereafter. See Note 2 (Acquisitions) to the consolidated financial statements included in Part II, Item 8 for further discussion.

<sup>5</sup> The table does not include the following:

- Payment related to a definitive agreement to acquire the majority of the Corporate Services business of Nets Denmark A/S, for €2.85 billion (approximately \$3.19 billion as of December 31, 2019) as the transaction is subject to regulatory approval and other customary closing conditions. See Note 2 (Acquisitions) to the consolidated financial statements included in Part II, Item 8 for further discussion.
- Liability for unrecognized tax benefits of \$203 million as of December 31, 2019. These amounts have been excluded from the table since the settlement period of this liability cannot be reasonably estimated and the timing of these payments will depend on the progress of tax examinations with the various authorities. See Note 20 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion.
- Litigation provision of \$914 million as of December 31, 2019 as the timing of payments is not fixed and determinable. See Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for further discussion.
- Future cash payments that will become due to customers and merchants under business agreements as the amounts due are contingent on future performance. We have accrued \$4.8 billion as of December 31, 2019 related to these customer and merchant agreements.

## Critical Accounting Estimates

The application of GAAP requires us to make estimates and assumptions about certain items and future events that directly affect our reported financial condition. Our significant accounting policies, including recent accounting pronouncements, are described in Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8.

## Revenue Recognition - Rebates and Incentives

We enter into business agreements with certain customers that provide for rebates or support when customers meet certain volume thresholds as well as other support incentives, which are tied to customer performance. We consider various factors in estimating customer performance, including forecasted transactions, card issuance and card conversion volumes, expected payments and historical experience with that customer. Rebates and incentives are recorded as a reduction to gross revenue based on these estimates primarily when volume- and transaction - based revenues are recognized over the contractual term. Differences between actual results and our estimates are adjusted in the period the customer reports actual performance. If our customers' actual performance is not consistent with our estimates of their performance, net revenue may be materially different.

## Loss Contingencies

We are currently involved in various claims and legal proceedings. We regularly review the status of each significant matter and assess its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be reasonably estimated, we accrue a liability for the estimated loss. Significant judgment is required in both the determination of probability and whether an exposure is reasonably estimable. Our judgments are subjective based on the status of the legal or regulatory proceedings, the merits of our defenses and consultation with in-house and outside legal counsel. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to pending claims and litigation and may revise our estimates. Due to the inherent uncertainties of the legal and regulatory process in the multiple jurisdictions in which we operate, our judgments may be materially different than the actual outcomes. See Note 21 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for further discussion.

## Income Taxes

In calculating our effective income tax rate, we need to make estimates regarding the timing and amount of taxable and deductible items which will adjust the pretax income earned in various tax jurisdictions. Through our interpretation of local tax regulations, adjustments to pretax income for income earned in various tax jurisdictions are reflected within various tax filings. Although we believe that our estimates and judgments discussed herein are reasonable, actual results may be materially different than the estimated amounts.

We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. Significant judgment is required in determining the valuation allowance. We consider projected future taxable income and ongoing tax planning strategies in assessing the need for the valuation allowance. If it is determined that we are able to realize deferred tax assets in excess of the net carrying value or to the extent we are unable to realize a deferred tax asset, we would adjust the valuation allowance in the period in which such a determination is made, with a corresponding increase or decrease to earnings.

We record tax liabilities for uncertain tax positions taken, or expected to be taken, which may not be sustained or may only be partially sustained, upon examination by the relevant taxing authorities. We consider all relevant facts and current authorities in the tax law in assessing whether any benefit resulting from an uncertain tax position is more likely than not to be sustained and, if so, how current law impacts the amount reflected within these financial statements. If upon examination, we realize a tax benefit which is not fully sustained or is more favorably sustained, this would decrease or increase earnings in the period. In certain situations, we will have offsetting tax credits or taxes in other jurisdictions.

Deferred taxes are established on the estimated foreign exchange gains or losses for foreign earnings that are not considered permanently reinvested, which will be recognized through cumulative translation adjustments as incurred. Ultimately, the working capital requirements of foreign affiliates will determine the amount of cash to be remitted from respective jurisdictions.

## Business Combinations

We account for our business combinations using the acquisition method of accounting. The acquisition purchase price is allocated to the underlying identified, tangible and intangible assets, liabilities assumed and any non-controlling interest in the acquiree, based on their respective estimated fair values on the acquisition date. Any excess of purchase price over the fair value of net assets acquired, including identifiable intangible assets, is recorded as goodwill. The amounts and useful lives assigned to acquisition-related tangible and intangible assets impact the amount and timing of future amortization expense. We use various valuation techniques to determine fair value, primarily discounted cash flows analysis, relief-from-royalty and multi-period excess earnings for estimating the value of intangible assets. These valuation techniques included comparable company multiples, discount rates, growth projections and other assumptions of future business conditions. Determining the fair value of assets acquired, liabilities assumed, any non-controlling interest in the acquiree and the expected useful lives, requires management's judgment. The significance of management's estimates and assumptions is relative to the size of the acquisition. Our estimates are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable.

## Item 7A. Quantitative and qualitative disclosures about market risk

Market risk is the potential for economic losses to be incurred on market risk sensitive instruments arising from adverse changes in factors such as interest rates and foreign currency exchange rates. Our exposure to market risk from changes in interest rates and foreign exchange rates is limited. Management monitors risk exposures on an ongoing basis and establishes and oversees the implementation of policies governing our funding, investments and use of derivative financial instruments to manage these risks.

Foreign currency and interest rate exposures are managed through our risk management activities, which are discussed further in Note 23 (Derivative and Hedging Instruments) to the consolidated financial statements included in Part II, Item 8.

## Foreign Exchange Risk

We enter into foreign exchange derivative contracts to manage transactional currency exposure associated with anticipated receipts and disbursements occurring in a currency other than the functional currency of the entity. We may also enter into foreign currency derivative contracts to offset possible changes in value of assets and liabilities due to foreign exchange fluctuations. The objective of these activities is to reduce our exposure to transaction gains and losses resulting from fluctuations of foreign currencies against our functional and reporting currencies, principally the U.S. dollar and euro. The effect of a hypothetical 10% adverse change in foreign exchange rates could result in a fair value loss of approximately \$144 million and \$113 million on our foreign exchange derivative contracts outstanding at December 31, 2019 and 2018, respectively, related to the hedging program.

We are also subject to foreign exchange risk as part of our daily settlement activities. To manage this risk, we enter into foreign exchange contracts based upon anticipated receipts and disbursements for the respective currency position. This risk is typically limited to a few days between the timing of when a payment transaction takes place and the subsequent settlement with our customers.

## Interest Rate Risk

During the fourth quarter of 2019, we entered into interest rate derivative contracts that were designated as cash flow hedges in order to manage our exposure to interest rate changes on future forecasted debt issuances. At December 31, 2019, the total notional amount of these contracts was \$1 billion. The maximum length of time over which we have hedged our exposure to the variability in future cash flows is 30 years. The effect of a hypothetical 100 basis point adverse change in interest rates could result in a fair value loss of approximately \$168 million on our interest rate derivative contracts outstanding at December 31, 2019. There were no similar contracts outstanding as of December 31, 2018.

In addition, our available-for-sale debt investments include fixed and variable rate securities that are sensitive to interest rate fluctuations. Our policy is to invest in high quality securities, while providing adequate liquidity and maintaining diversification to avoid significant exposure. A hypothetical 100 basis point adverse change in interest rates would not have a material impact on our investments at December 31, 2019 and 2018.

## Item 8. Financial statements and supplementary data

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## Management's report on internal control over financial reporting

The management of Mastercard Incorporated ("Mastercard") is responsible for establishing and maintaining adequate internal control over financial reporting. 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 reporting purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. As required by Section 404 of the Sarbanes-Oxley Act of 2002, management has assessed the effectiveness of Mastercard's internal control over financial reporting as of December 31, 2019. In making its assessment, management has utilized the criteria set forth in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management has concluded that, based on its assessment, Mastercard's internal control over financial reporting was effective as of December 31, 2019. The effectiveness of Mastercard's internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears on the next page.



## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Mastercard Incorporated:

### *Opinions on the Financial Statements and Internal Control over Financial Reporting*

We have audited the accompanying consolidated balance sheets of Mastercard Incorporated and its subsidiaries (the "Company") as of December 31, 2019 and 2018 and the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

### *Basis for Opinions*

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### *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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

*Critical Audit Matters*

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

*Revenue Recognition - Rebates and Incentives*

As described in Notes 1 and 3 to the consolidated financial statements, the Company provides certain customers with rebates or incentives which totaled \$8.1 billion for the year ended December 31, 2019. The Company has business agreements with certain customers that provide for rebates or other support when customers meet certain volume hurdles as well as other support incentives, which are tied to performance. Rebates and incentives are recorded as a reduction to gross revenue primarily when volume- and transaction-based revenues are recognized over the contractual term. Rebates and incentives are calculated based upon estimated customer performance and the terms of the related business agreements. Management considers various factors in estimating customer performance, including forecasted transactions, card issuance and card conversion volumes, expected payments and historical experience with that customer.

The principal considerations for our determination that performing procedures relating to rebates and incentives is a critical audit matter was the significant judgment of management when developing estimates related to rebates and incentives based on customer performance. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's estimates related to customer performance and the reasonableness of assumptions related to the forecasted transactions, card issuance and card conversion volumes, expected payments and historical experience with that customer.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to customer rebates and incentives, including controls over evaluating customer performance based upon historical experience with that customer, forecasted transactions, card issuance and card conversion volumes and expected payments. These procedures also included, among others, evaluating the reasonableness of estimated customer performance for a sample of customer agreements, including (i) evaluating rebate and incentive contracts to identify whether all incentives are identified and recorded accurately; (ii) testing management's process for developing the estimated customer performance, including evaluating the reasonableness of the assumptions related to the forecasted transactions, card issuance and card conversion volumes, expected payments and historical customer experience; and (iii) evaluating the estimated customer performance as compared to actual results in the period the customer reports actual performance.

/s/ PricewaterhouseCoopers LLP

New York, New York  
February 14, 2020

We have served as the Company's auditor since 1989.

**Consolidated Statement of Operations**

	For the Years Ended December 31,		
	2019	2018	2017
	(in millions, except per share data)		
<b>Net Revenue</b>	<b>\$ 16,883</b>	<b>\$ 14,950</b>	<b>\$ 12,497</b>
<b>Operating Expenses</b>			
General and administrative	5,763	5,174	4,653
Advertising and marketing	934	907	771
Depreciation and amortization	522	459	436
Provision for litigation	—	1,128	15
Total operating expenses	7,219	7,668	5,875
Operating income	9,664	7,282	6,622
<b>Other Income (Expense)</b>			
Investment income	97	122	56
Gains (losses) on equity investments, net	167	—	—
Interest expense	(224)	(186)	(154)
Other income (expense), net	27	(14)	(2)
Total other income (expense)	67	(78)	(100)
Income before income taxes	9,731	7,204	6,522
Income tax expense	1,613	1,345	2,607
<b>Net Income</b>	<b>\$ 8,118</b>	<b>\$ 5,859</b>	<b>\$ 3,915</b>
<b>Basic Earnings per Share</b>	<b>\$ 7.98</b>	<b>\$ 5.63</b>	<b>\$ 3.67</b>
Basic weighted-average shares outstanding	1,017	1,041	1,067
<b>Diluted Earnings per Share</b>	<b>\$ 7.94</b>	<b>\$ 5.60</b>	<b>\$ 3.65</b>
Diluted weighted-average shares outstanding	1,022	1,047	1,072

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

**Consolidated Statement of Comprehensive Income**

	For the Years Ended December 31,		
	2019	2018	2017
	(in millions)		
<b>Net Income</b>	\$ 8,118	\$ 5,859	\$ 3,915
Other comprehensive income (loss):			
Foreign currency translation adjustments	10	(319)	565
Income tax effect	13	40	2
Foreign currency translation adjustments, net of income tax effect	23	(279)	567
Translation adjustments on net investment hedge	36	96	(236)
Income tax effect	(8)	(21)	83
Translation adjustments on net investment hedge, net of income tax effect	28	75	(153)
Cash flow hedges	14	—	—
Income tax effect	(3)	—	—
Cash flow hedges, net of income tax effect	11	—	—
Defined benefit pension and other postretirement plans	(22)	(18)	15
Income tax effect	3	3	(1)
Defined benefit pension and other postretirement plans, net of income tax effect	(19)	(15)	14
Investment securities available-for-sale	3	(3)	(3)
Income tax effect	(1)	1	2
Investment securities available-for-sale, net of income tax effect	2	(2)	(1)
Other comprehensive income (loss), net of income tax effect	45	(221)	427
<b>Comprehensive Income</b>	<b>\$ 8,163</b>	<b>\$ 5,638</b>	<b>\$ 4,342</b>

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

### Consolidated Balance Sheet

	December 31,	
	2019	2018
	(in millions, except per share data)	
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 6,988	\$ 6,682
Restricted cash for litigation settlement	584	553
Investments	688	1,696
Accounts receivable	2,514	2,276
Settlement due from customers	2,995	2,452
Restricted security deposits held for customers	1,370	1,080
Prepaid expenses and other current assets	1,763	1,432
<b>Total current assets</b>	<b>16,902</b>	<b>16,171</b>
Property, equipment and right-of-use assets, net	1,828	921
Deferred income taxes	543	570
Goodwill	4,021	2,904
Other intangible assets, net	1,417	991
Other assets	4,525	3,303
<b>Total Assets</b>	<b>\$ 29,236</b>	<b>\$ 24,860</b>
<b>Liabilities, Redeemable Non-controlling Interests and Equity</b>		
Current liabilities:		
Accounts payable	\$ 489	\$ 537
Settlement due to customers	2,714	2,189
Restricted security deposits held for customers	1,370	1,080
Accrued litigation	914	1,591
Accrued expenses	5,489	4,747
Current portion of long-term debt	—	500
Other current liabilities	928	949
<b>Total current liabilities</b>	<b>11,904</b>	<b>11,593</b>
Long-term debt	8,527	5,834
Deferred income taxes	85	67
Other liabilities	2,729	1,877
<b>Total Liabilities</b>	<b>23,245</b>	<b>19,371</b>
<b>Commitments and Contingencies</b>		
<b>Redeemable Non-controlling Interests</b>	<b>74</b>	<b>71</b>
<b>Stockholders' Equity</b>		
Class A common stock, \$0.0001 par value; authorized 3,000 shares, 1,391 and 1,387 shares issued and 996 and 1,019 outstanding, respectively	—	—
Class B common stock, \$0.0001 par value; authorized 1,200 shares, 11 and 12 issued and outstanding, respectively	—	—
Additional paid-in-capital	4,787	4,580
Class A treasury stock, at cost, 395 and 368 shares, respectively	(32,205)	(25,750)
Retained earnings	33,984	27,283
Accumulated other comprehensive income (loss)	(673)	(718)
<b>Mastercard Incorporated Stockholders' Equity</b>	<b>5,893</b>	<b>5,395</b>
Non-controlling interests	24	23
<b>Total Equity</b>	<b>5,917</b>	<b>5,418</b>
<b>Total Liabilities, Redeemable Non-controlling Interests and Equity</b>	<b>\$ 29,236</b>	<b>\$ 24,860</b>

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

Consolidated Statement of Changes in Equity

	Stockholders' Equity								
	Common Stock		Additional Paid-In Capital	Class A Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Mastercard Incorporated Stockholders' Equity	Non-Controlling Interests	Total Equity
	Class A	Class B							
	(in millions, except per share data)								
<b>Balance at December 31, 2016</b>	\$ —	\$ —	\$ 4,183	\$(17,021)	\$19,418	\$ (924)	\$ 5,656	\$ 28	\$ 5,684
Net income	—	—	—	—	3,915	—	3,915	—	3,915
Activity related to non-controlling interests	—	—	—	—	—	—	—	1	1
Redeemable non-controlling interest adjustments	—	—	—	—	(2)	—	(2)	—	(2)
Other comprehensive income (loss)	—	—	—	—	—	427	427	—	427
Dividends	—	—	—	—	(967)	—	(967)	—	(967)
Purchases of treasury stock	—	—	—	(3,747)	—	—	(3,747)	—	(3,747)
Share-based payments	—	—	182	4	—	—	186	—	186
<b>Balance at December 31, 2017</b>	—	—	<b>4,365</b>	<b>(20,764)</b>	<b>22,364</b>	<b>(497)</b>	<b>5,468</b>	<b>29</b>	<b>5,497</b>
Adoption of revenue standard	—	—	—	—	366	—	366	—	366
Adoption of intra-entity asset transfers standard	—	—	—	—	(183)	—	(183)	—	(183)
Net income	—	—	—	—	5,859	—	5,859	—	5,859
Activity related to non-controlling interests	—	—	—	—	—	—	—	(6)	(6)
Redeemable non-controlling interest adjustments	—	—	—	—	(3)	—	(3)	—	(3)
Other comprehensive income (loss)	—	—	—	—	—	(221)	(221)	—	(221)
Dividends	—	—	—	—	(1,120)	—	(1,120)	—	(1,120)
Purchases of treasury stock	—	—	—	(4,991)	—	—	(4,991)	—	(4,991)
Share-based payments	—	—	215	5	—	—	220	—	220
<b>Balance at December 31, 2018</b>	—	—	<b>4,580</b>	<b>(25,750)</b>	<b>27,283</b>	<b>(718)</b>	<b>5,395</b>	<b>23</b>	<b>5,418</b>

## Consolidated Statement of Changes in Equity (Continued)

	Stockholders' Equity								Total Equity
	Common Stock		Additional Paid-In Capital	Class A Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Mastercard Incorporated Stockholders' Equity	Non- Controlling Interests	
	Class A	Class B							
	(in millions, except per share data)								
<b>Balance at December 31, 2018</b>	—	—	4,580	(25,750)	27,283	(718)	5,395	23	5,418
Net income					8,118		8,118	—	8,118
Activity related to non-controlling interests	—	—	—	—		—	—	1	1
Redeemable non-controlling interest adjustments	—	—	—	—	(9)	—	(9)	—	(9)
Other comprehensive income (loss)	—	—	—	—	—	45	45	—	45
Dividends	—	—	—	—	(1,408)	—	(1,408)	—	(1,408)
Purchases of treasury stock	—	—	—	(6,463)	—	—	(6,463)	—	(6,463)
Share-based payments	—	—	207	8	—	—	215	—	215
<b>Balance at December 31, 2019</b>	\$ —	\$ —	\$ 4,787	\$(32,205)	\$33,984	\$ (673)	\$ 5,893	\$ 24	\$ 5,917

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

**Consolidated Statement of Cash Flows**

	<b>For the Years Ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
	<b>(in millions)</b>		
<b>Operating Activities</b>			
Net income	\$ 8,118	\$ 5,859	\$ 3,915
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of customer and merchant incentives	1,141	1,235	1,001
Depreciation and amortization	522	459	437
(Gains) losses on equity investments, net	(167)	—	—
Share-based compensation	250	196	176
Deferred income taxes	(7)	(244)	86
Venezuela charge	—	—	167
Other	24	31	59
<b>Changes in operating assets and liabilities:</b>			
Accounts receivable	(246)	(317)	(445)
Income taxes receivable	(202)	(120)	(8)
Settlement due from customers	(444)	(1,078)	(281)
Prepaid expenses	(1,661)	(1,769)	(1,402)
Accrued litigation and legal settlements	(662)	869	(12)
Restricted security deposits held for customers	290	(6)	94
Accounts payable	(42)	101	290
Settlement due to customers	477	849	394
Accrued expenses	657	439	589
Long-term taxes payable	2	(20)	577
Net change in other assets and liabilities	133	(261)	27
Net cash provided by operating activities	8,183	6,223	5,664
<b>Investing Activities</b>			
Purchases of investment securities available-for-sale	(643)	(1,300)	(714)
Purchases of investments held-to-maturity	(215)	(509)	(1,145)
Proceeds from sales of investment securities available-for-sale	1,098	604	304
Proceeds from maturities of investment securities available-for-sale	376	379	500
Proceeds from maturities of investments held-to-maturity	383	929	1,020
Purchases of property and equipment	(422)	(330)	(300)
Capitalized software	(306)	(174)	(123)
Purchases of equity investments	(467)	(91)	(147)
Acquisition of businesses, net of cash acquired	(1,440)	—	(1,175)
Other investing activities	(4)	(14)	(1)
Net cash used in investing activities	(1,640)	(506)	(1,781)
<b>Financing Activities</b>			
Purchases of treasury stock	(6,497)	(4,933)	(3,762)
Dividends paid	(1,345)	(1,044)	(942)
Proceeds from debt	2,724	991	—
Payment of debt	(500)	—	(64)
Contingent consideration paid	(199)	—	—
Tax withholdings related to share-based payments	(161)	(80)	(47)
Cash proceeds from exercise of stock options	126	104	57
Other financing activities	(15)	(4)	(6)
Net cash used in financing activities	(5,867)	(4,966)	(4,764)
Effect of exchange rate changes on cash, cash equivalents, restricted cash and restricted cash equivalents	(44)	(6)	200
Net increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	632	745	(681)
Cash, cash equivalents, restricted cash and restricted cash equivalents - beginning of period	8,337	7,592	8,273
Cash, cash equivalents, restricted cash and restricted cash equivalents - end of period	\$ 8,969	\$ 8,337	\$ 7,592

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



# Notes to consolidated financial statements

## Note 1. Summary of Significant Accounting Policies

### Organization

Mastercard Incorporated and its consolidated subsidiaries, including Mastercard International Incorporated (“Mastercard International” and together with Mastercard Incorporated, “Mastercard” or the “Company”), is a technology company in the global payments industry that connects consumers, financial institutions, merchants, governments, digital partners, businesses and other organizations worldwide, enabling them to use electronic forms of payment instead of cash and checks. The Company makes payments easier and more efficient by providing a wide range of payment solutions and services through its family of well-known brands, including Mastercard®, Maestro® and Cirrus®. The Company is a multi-rail network that offers customers one partner to turn to for their domestic and cross-border payment needs. Through its unique and proprietary global payments network, which is referred to as the core network, the Company switches (authorizes, clears and settles) payment transactions and delivers related products and services. Mastercard has additional payment capabilities that include automated clearing house (“ACH”) transactions (both batch and real-time account-based payments). The Company also provides integrated value-added offerings such as cyber and intelligence products, information and analytics services, consulting, loyalty and reward programs and processing. The Company’s payment solutions offer customers choice and flexibility and are designed to ensure safety and security for the global payments system.

A typical transaction on the Company’s core network involves four participants in addition to the Company: account holder (a person or entity who holds a card or uses another device enabled for payment), issuer (the account holder’s financial institution), merchant and acquirer (the merchant’s financial institution). The Company does not issue cards, extend credit, determine or receive revenue from interest rates or other fees charged to account holders by issuers, or establish the rates charged by acquirers in connection with merchants’ acceptance of the Company’s products. In most cases, account holder relationships belong to, and are managed by, the Company’s financial institution customers.

### Significant Accounting Policies

*Consolidation and basis of presentation* - The consolidated financial statements include the accounts of Mastercard and its majority-owned and controlled entities, including any variable interest entities (“VIEs”) for which the Company is the primary beneficiary. Investments in VIEs for which the Company is not considered the primary beneficiary are not consolidated and are accounted for as equity method or measurement alternative method investments and recorded in other assets on the consolidated balance sheet. At December 31, 2019 and 2018, there were no significant VIEs which required consolidation and the investments were not considered material to the consolidated financial statements. The Company consolidates acquisitions as of the date in which the Company has obtained a controlling financial interest. Intercompany transactions and balances have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the 2019 presentation. The Company follows accounting principles generally accepted in the United States of America (“GAAP”).

Prior to December 31, 2017, the Company included the financial results from its Venezuela subsidiaries in the consolidated financial statements using the consolidation method of accounting. In 2017, due to foreign exchange regulations restricting access to U.S. dollars in Venezuela, an other-than-temporary lack of exchangeability between the Venezuelan bolivar and U.S. dollar impacted the Company’s ability to manage risk, process cross-border transactions and satisfy U.S. dollar denominated liabilities related to operations in Venezuela. As a result of these factors, Mastercard concluded that effective December 31, 2017, it did not meet the accounting criteria for consolidation of these Venezuelan subsidiaries, and therefore would transition to the measurement alternative method of accounting as of December 31, 2017. This accounting change resulted in a pre-tax charge of \$167 million (\$108 million after tax or \$0.10 per diluted share) that was recorded in general and administrative expenses on the consolidated statement of operations for the year ended December 31, 2017.

Non-controlling interests represent the equity interest not owned by the Company and are recorded for consolidated entities in which the Company owns less than 100% of the interests. Changes in a parent’s ownership interest while the parent retains its controlling interest are accounted for as equity transactions, and upon loss of control, retained ownership interests are remeasured at fair value, with any gain or loss recognized in earnings. For 2019, 2018 and 2017, net losses from non-controlling interests were not material and, as a result, amounts are included on the consolidated statement of operations within other income (expense).

*Use of estimates* - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Future events and their effects cannot be predicted with certainty; accordingly, accounting estimates require the exercise of judgment. The accounting estimates used in the preparation of the Company’s consolidated financial statements may change as new events occur, as more experience is

acquired, as additional information is obtained and as the Company's operating environment changes. Actual results may differ from these estimates.

*Revenue recognition* - Revenue is recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled to in exchange for those goods or services. Revenue is primarily generated by charging fees to issuers, acquirers and other stakeholders for providing switching services, as well as by assessing customers based primarily on the dollar volume of activity, or gross dollar volume, on the products that carry the Company's brands. Revenue is generally derived from transactional information accumulated by Mastercard's systems or reported by customers.

Volume-based revenue (domestic assessments and cross-border volume fees) is recorded as revenue in the period it is earned, which is when the related volume is generated on the cards. Certain volume-based revenue is based upon information reported by customers. Transaction-based revenue (transaction processing) is primarily based on the number and type of transactions and is recognized as revenue in the same period in which the related transactions occur. Other payment-related products and services are recognized as revenue in the period in which the related services are performed or transactions occur.

Mastercard has business agreements with certain customers that provide for rebates or other support when the customers meet certain volume hurdles as well as other support incentives, which are tied to performance. Rebates and incentives are recorded as a reduction of gross revenue primarily when volume- and transaction-based revenues are recognized over the contractual term. Rebates and incentives are calculated based upon estimated customer performance and the terms of the related business agreements. In addition, Mastercard may make payments to a customer directly related to entering into an agreement, which are generally capitalized and amortized over the life of the agreement on a straight-line basis.

Contract assets include unbilled consideration typically resulting from executed data analytic and consulting services performed for customers in connection with Mastercard's payment network service arrangements. Collection for these services typically occurs over the contractual term. Contract assets are included in prepaid expenses and other current assets and other assets on the consolidated balance sheet.

The Company defers the recognition of revenue when consideration has been received prior to the satisfaction of performance obligations. As these performance obligations are satisfied, revenue is subsequently recognized. Deferred revenue is primarily derived from data analytic and consulting services. Deferred revenue is included in other current liabilities and other liabilities on the consolidated balance sheet.

*Business combinations* - The Company accounts for business combinations under the acquisition method of accounting. The Company measures the tangible and intangible identifiable assets acquired, liabilities assumed and any non-controlling interest in the acquiree, at fair value as of the acquisition date. Acquisition-related costs are expensed as incurred and are included in general and administrative expenses. Any excess purchase price over the fair value of net assets acquired, including identifiable intangible assets, is recorded as goodwill. Measurement period adjustments, if any, to the preliminary estimated fair value of the intangibles assets as of the acquisition date will be recorded in goodwill.

*Goodwill and other intangible assets* - Indefinite-lived intangible assets consist of goodwill, which represents the synergies expected to arise after the acquisition date and the assembled workforce, and customer relationships. Finite-lived intangible assets consist of capitalized software costs, trademarks, tradenames, customer relationships and other intangible assets. Intangible assets with finite useful lives are amortized over their estimated useful lives, on a straight-line basis, which range from one to twenty years. Capitalized software includes internal and external costs incurred directly related to the design, development and testing phases of each capitalized software project.

*Impairment of assets* - Goodwill and indefinite-lived intangible assets are not amortized but tested annually for impairment at the reporting unit level in the fourth quarter, or sooner when circumstances indicate an impairment may exist. The impairment evaluation for goodwill utilizes a qualitative assessment to determine whether it is more likely than not that goodwill is impaired. The qualitative factors may include, but are not limited to, macroeconomic conditions, industry and market conditions, operating environment, financial performance and other relevant events. If it is determined that it is more likely than not that goodwill is impaired, then the Company is required to perform a quantitative goodwill impairment test. If the fair value of a reporting unit exceeds the carrying value, goodwill is not impaired. If the fair value of the reporting unit is less than its carrying value, then goodwill is impaired and the excess of the reporting unit's carrying value over the fair value is recognized as an impairment charge.

The impairment test for indefinite-lived intangible assets consists of a qualitative assessment to evaluate relevant events and circumstances that could affect the significant inputs used to determine the fair value of indefinite-lived intangible assets. If the qualitative assessment indicates that it is more likely than not that indefinite-lived intangible assets are impaired, then a quantitative assessment is required.

Long-lived assets, other than goodwill and indefinite-lived intangible assets, are tested for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable. If the carrying value of the asset cannot be recovered from estimated

future cash flows, undiscounted and without interest, the fair value of the asset is calculated using the present value of estimated net future cash flows. If the carrying amount of the asset exceeds its fair value, an impairment is recorded.

Impairment charges, if any, are recorded in general and administrative expenses on the consolidated statement of operations.

*Litigation* - The Company is a party to certain legal and regulatory proceedings with respect to a variety of matters. The Company evaluates the likelihood of an unfavorable outcome of all legal or regulatory proceedings to which it is a party and accrues a loss contingency when the loss is probable and reasonably estimable. Loss contingencies are recorded in provision for litigation on the consolidated statement of operations. These judgments are subjective based on the status of the legal or regulatory proceedings, the merits of its defenses and consultation with in-house and external legal counsel. Legal costs are expensed as incurred and recorded in general and administrative expenses on the consolidated statement of operations.

*Settlement and other risk management* - Mastercard's rules guarantee the settlement of many of the transactions between its customers. Settlement exposure is the outstanding settlement risk to customers under Mastercard's rules due to the difference in timing between the payment transaction date and subsequent settlement. While the term and amount of the guarantee are unlimited, the duration of settlement exposure is short term and typically limited to a few days.

The Company also enters into agreements in the ordinary course of business under which the Company agrees to indemnify third parties against damages, losses and expenses incurred in connection with legal and other proceedings arising from relationships or transactions with the Company. As the extent of the Company's obligations under these agreements depends entirely upon the occurrence of future events, the Company's potential future liability under these agreements is not determinable.

The Company accounts for each of its guarantees by recording the guarantee at its fair value at the inception or modification date through earnings.

*Income taxes* - The Company follows an asset and liability based approach in accounting for income taxes as required under GAAP. Deferred income tax assets and liabilities are recorded to reflect the tax consequences on future years of temporary differences between the financial statement carrying amounts and income tax bases of assets and liabilities. Deferred income taxes are displayed separately as noncurrent assets and liabilities on the consolidated balance sheet. Valuation allowances are provided against assets which are not more likely than not to be realized. The Company recognizes all material tax positions, including uncertain tax positions in which it is more likely than not that the position will be sustained based on its technical merits and if challenged by the relevant taxing authorities. At each balance sheet date, unresolved uncertain tax positions are reassessed to determine whether subsequent developments require a change in the amount of recognized tax benefit. The allowance for uncertain tax positions is recorded in other current and noncurrent liabilities on the consolidated balance sheet. The Company records interest expense related to income tax matters as interest expense on the consolidated statement of operations. The Company includes penalties related to income tax matters in the income tax provision.

*Cash and cash equivalents* - Cash and cash equivalents include certain investments with daily liquidity and with an original maturity of three months or less from the date of purchase. Cash equivalents are recorded at cost, which approximates fair value.

*Restricted cash* - The Company classifies cash and cash equivalents as restricted when it is unavailable for withdrawal or use in its general operations. The Company has the following types of restricted cash and restricted cash equivalents which are included in the reconciliation of beginning-of-period and end-of-period amounts shown on the consolidated statement of cash flows:

- *Restricted cash for litigation settlement* - The Company has restricted cash for litigation within a qualified settlement fund related to the settlement agreement for the U.S. merchant class litigation. The funds continue to be restricted for payments until the litigation matter is resolved.
- *Restricted security deposits held for customers* - The Company requires collateral from certain customers for settlement of their transactions. The majority of collateral for settlement is in the form of standby letters of credit and bank guarantees which are not recorded on the consolidated balance sheet. Additionally, the Company holds cash deposits and certificates of deposit from certain customers as collateral for settlement of their transactions, which are recorded as assets on the consolidated balance sheet. These assets are fully offset by corresponding liabilities included on the consolidated balance sheet. These security deposits are typically held for the duration of the agreement with the customers.
- *Other restricted cash balances* - The Company has other restricted cash balances which include contractually restricted deposits, as well as cash balances that are restricted based on the Company's intention with regard to usage. These funds are classified on the consolidated balance sheet within prepaid expenses and other current assets and other assets.

*Fair value* - The Company measures certain financial assets and liabilities at fair value on a recurring basis by estimating the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. The Company classifies these recurring fair value measurements into a three-level hierarchy ("Valuation Hierarchy").

The Valuation Hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. A financial instrument's categorization within the Valuation Hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of the Valuation Hierarchy are as follows:

- Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets
- Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in inactive markets and inputs that are observable for the asset or liability
- Level 3 - inputs to the valuation methodology are unobservable and cannot be directly corroborated by observable market data

Certain assets are measured at fair value on a nonrecurring basis. The Company's non-financial assets measured at fair value on a nonrecurring basis include property, equipment and right-of-use assets, goodwill and other intangible assets. These assets are subject to fair value adjustments in certain circumstances, such as when there is evidence of impairment.

The valuation methods for goodwill and other intangible assets acquired in business combinations involve assumptions concerning comparable company multiples, discount rates, growth projections and other assumptions of future business conditions. The Company uses various valuation techniques to determine fair value, primarily discounted cash flows analysis, relief-from-royalty, and multi-period excess earnings for estimating the fair value of its intangible assets. As the assumptions employed to measure these assets are based on management's judgment using internal and external data, these fair value determinations are classified in Level 3 of the Valuation Hierarchy.

*Contingent consideration* - Certain business combinations involve the potential for future payment of consideration that is contingent upon the achievement of performance milestones. These liabilities are classified within Level 3 of the Valuation Hierarchy as the inputs used to measure fair value are unobservable and require management's judgment. The fair value of the contingent consideration at the acquisition date and subsequent periods is determined utilizing an income approach based on a Monte Carlo technique and is recorded in other current liabilities and other liabilities on the consolidated balance sheet. Changes to projected performance milestones of the acquired businesses could result in a higher or lower contingent consideration liability. The changes in fair value as a result of updated assumptions will be recorded in general and administrative expenses on the consolidated statement of operations.

*Investment securities* - The Company classifies investments as available-for-sale or held-to-maturity at the date of acquisition.

- Available-for-sale debt securities:
  - Available-for-sale securities that are available to meet the Company's current operational needs are classified as current assets and the securities that are not available for current operational needs are classified as non-current assets on the consolidated balance sheet.

The investments in debt securities are carried at fair value, with unrealized gains and losses, net of tax, recorded as a separate component of accumulated other comprehensive income (loss) on the consolidated statement of comprehensive income. Net realized gains and losses on debt securities are recognized in investment income on the consolidated statement of operations. The specific identification method is used to determine realized gains and losses.

The Company evaluates its debt securities for other-than-temporary impairment on an ongoing basis. When there has been a decline in fair value of a debt security below the amortized cost basis, the Company recognizes an other-than-temporary impairment if: (1) it has the intent to sell the security; (2) it is more likely than not that it will be required to sell the security before recovery of the amortized cost basis; or (3) it does not expect to recover the entire amortized cost basis of the security. The credit loss component of the impairment would be recognized in other income (expense), net on the consolidated statement of operations while the non-credit loss would remain in accumulated other comprehensive income (loss) until realized from a sale or an other-than-temporary impairment.

- Held-to-maturity securities:
  - Time deposits - The Company classifies time deposits with original maturities greater than three months as held-to-maturity. Held-to-maturity securities that mature within one year are classified as current assets within investments on the consolidated balance sheet while held-to-maturity securities with maturities of greater than one year are classified as non-current assets. Time deposits are carried at amortized cost on the consolidated balance sheet and are intended to be held until maturity.

*Equity investments* - The Company holds equity securities of publicly traded and privately held companies.

- **Marketable equity securities** - Marketable equity securities are strategic investments in publicly traded companies and are measured at fair value using quoted prices in their respective active markets with changes recorded through gain (losses) on equity investments, net on the consolidated statement of operations. Securities that are not for use in current operations are classified in other assets on the consolidated balance sheet.
- **Nonmarketable equity investments** - The Company's nonmarketable equity investments, which are reported in other assets on the consolidated balance sheet, include investments in privately held companies without readily determinable market values. The Company uses discounted cash flows and market assumptions to estimate the fair value of its nonmarketable equity investments when certain events or circumstances indicate that impairment may exist. The Company's nonmarketable equity investments are accounted for under the equity method or measurement alternative method.
  - **Equity method** - The Company accounts for investments in common stock or in-substance common stock under the equity method of accounting when it has the ability to exercise significant influence over the investee, generally when it holds between 20% and 50% ownership in the entity. In addition, investments in flow-through entities such as limited partnerships and limited liability companies are also accounted for under the equity method when the Company has the ability to exercise significant influence over the investee, generally when the investment ownership percentage is equal to or greater than 5% of the outstanding ownership interest. The excess of the cost over the underlying net equity of investments accounted for under the equity method is allocated to identifiable tangible and intangible assets and liabilities based on fair values at the date of acquisition. The amortization of the excess of the cost over the underlying net equity of investments and Mastercard's share of net earnings or losses of entities accounted for under the equity method of accounting is included in other income (expense), net on the consolidated statement of operations.
  - **Measurement alternative method** - The Company accounts for investments in common stock or in-substance common stock under the measurement alternative method of accounting when it does not exercise significant influence, generally when it holds less than 20% ownership in the entity or when the interest in a limited partnership or limited liability company is less than 5% and the Company has no significant influence over the operation of the investee. Investments in companies that Mastercard does not control, but that are not in the form of common stock or in-substance common stock, are also accounted for under the measurement alternative method of accounting. Measurement alternative investments are measured at cost, less any impairment and adjusted for changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer. Fair value adjustments, as well as impairments, are included in gain (losses) on equity investments, net on the consolidated statement of operations.

*Derivative and hedging instruments* - The Company's derivative financial instruments are recorded as either assets or liabilities on the balance sheet and measured at fair value. The Company's foreign exchange and interest rate derivative contracts are included in Level 2 of the Valuation Hierarchy as the fair value of the contracts are based on inputs, which are observable based on broker quotes for the same or similar instruments. As the Company does not designate foreign exchange contracts as hedging instruments, realized and unrealized gains and losses from the change in fair value of the contracts are recognized immediately in current-period earnings. The Company's foreign exchange contracts are not entered into for trading or speculative purposes.

The Company's derivatives that are designated as hedging instruments are required to meet established accounting criteria. In addition, an effectiveness assessment is required to demonstrate that the derivative is expected to be highly effective at offsetting changes in fair value or cash flows of the underlying exposure both at inception of the hedging relationship and on an ongoing basis. The method of assessing hedge effectiveness and measuring hedge results is formally documented at hedge inception and assessed at least quarterly throughout the designated hedge period. For cash flow hedges, the fair value adjustments are recorded, net of tax, in other comprehensive income (loss). Any gains and losses deferred in other comprehensive income (loss) are then recognized in current-period earnings when earnings are affected by the variability of cash flows of the hedged forecasted transaction.

The Company has numerous investments in its foreign subsidiaries. The net assets of these subsidiaries are exposed to volatility in foreign currency exchange rates. The Company uses foreign currency denominated debt to hedge a portion of its net investment in foreign operations against adverse movements in exchange rates. The effective portion of the foreign currency gains and losses related to the foreign currency denominated debt are reported in accumulated other comprehensive income (loss) on the consolidated balance sheet as part of the cumulative translation adjustment component of equity. The Company evaluates the effectiveness of the net investment hedge each quarter.

*Settlement due from/due to customers* - The Company operates systems for clearing and settling payment transactions among customers. Net settlements are generally cleared daily among customers through settlement cash accounts by wire transfer or other bank clearing means. However, some transactions may not settle until subsequent business days, resulting in amounts due from and due to customers.

*Property, equipment and right-of-use assets* - Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the estimated useful lives of the assets. Depreciation of leasehold improvements and amortization of finance leases is included in depreciation and amortization expense on the consolidated statement of operations. Operating lease amortization expense is included in general and administrative expenses on the consolidated statement of operations.

The useful lives of the Company's assets are as follows:

Asset Category	Estimated Useful Life
Buildings	30 years
Building equipment	10 - 15 years
Furniture and fixtures and equipment	3 - 5 years
Leasehold improvements	Shorter of life of improvement or lease term
Right-of-use assets	Shorter of life of the asset or lease term

The Company determines if a contract is, or contains, a lease at contract inception. The Company's right-of-use ("ROU") assets are primarily related to operating leases for office space, automobiles and other equipment. Leases are included in property, equipment and right-of-use assets, other current liabilities and other liabilities on the consolidated balance sheet.

ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. In addition, ROU assets include initial direct costs incurred by the lessee as well as any lease payments made at or before the commencement date, and exclude lease incentives. As most of the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The incremental borrowing rate is determined by using the rate of interest that the Company would pay to borrow on a collateralized basis an amount equal to the lease payments for a similar term and in a similar economic environment. Lease terms include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Leases with a term of one year or less are excluded from ROU assets and liabilities.

The Company excludes variable lease payments in measuring ROU assets and lease liabilities, other than those that depend on an index, a rate or are in-substance fixed payments. Lease and nonlease components are generally accounted for separately. When available, consideration is allocated to the separate lease and nonlease components in a lease contract on a relative standalone price basis using observable standalone prices.

*Pension and other postretirement plans* - The Company recognizes the funded status of its single-employer defined benefit pension plans and postretirement plans as assets or liabilities on its consolidated balance sheet and recognizes changes in the funded status in the year in which the changes occur through accumulated other comprehensive income (loss). The funded status is measured as the difference between the fair value of plan assets and the projected benefit obligation at December 31, the measurement date. Overfunded plans, if any, are aggregated and recorded in other assets, while underfunded plans are aggregated and recorded as accrued expenses and other liabilities on the consolidated balance sheet.

Net periodic pension and postretirement benefit cost/(income), excluding the service cost component, is recognized in other income (expense) on the consolidated statement of operations. These costs include interest cost, expected return on plan assets, amortization of prior service costs or credits and gains or losses previously recognized as a component of accumulated other comprehensive income (loss). The service cost component is recognized in general and administrative expenses on the consolidated statement of operations.

*Defined contribution plans* - The Company's contributions to defined contribution plans are recorded as employees render service to the Company. The charge is recorded in general and administrative expenses on the consolidated statement of operations.

*Advertising and marketing* - Expenses incurred to promote Mastercard's brand, products and services are recognized in advertising and marketing on the consolidated statement of operations. The timing of recognition is dependent on the type of advertising or marketing expense.

*Foreign currency remeasurement and translation* - Monetary assets and liabilities are remeasured to functional currencies using current exchange rates in effect at the balance sheet date. Non-monetary assets and liabilities are recorded at historical exchange rates. Revenue and expense accounts are remeasured at the weighted-average exchange rate for the period. Resulting exchange gains and losses related to remeasurement are included in general and administrative expenses on the consolidated statement of operations.

Where a non-U.S. currency is the functional currency, translation from that functional currency to U.S. dollars is performed for balance sheet accounts using current exchange rates in effect at the balance sheet date and for revenue and expense accounts using a weighted-

average exchange rate for the period. Resulting translation adjustments are reported as a component of accumulated other comprehensive income (loss).

*Treasury stock* - The Company records the repurchase of shares of its common stock at cost on the trade date of the transaction. These shares are considered treasury stock, which is a reduction to stockholders' equity. Treasury stock is included in authorized and issued shares but excluded from outstanding shares.

*Share-based payments* - The Company measures share-based compensation expense at the grant date, based on the estimated fair value of the award and uses the straight-line method of attribution, net of estimated forfeitures, for expensing awards over the requisite employee service period. The Company estimates the fair value of its non-qualified stock option awards ("Options") using a Black-Scholes valuation model. The fair value of restricted stock units ("RSUs") is determined and fixed on the grant date based on the Company's stock price, adjusted for the exclusion of dividend equivalents. The Monte Carlo simulation valuation model is used to determine the grant date fair value of performance stock units ("PSUs") granted. All share-based compensation expenses are recorded in general and administrative expenses on the consolidated statement of operations.

*Redeemable non-controlling interests* - The Company's business combinations may include provisions allowing non-controlling equity owners the ability to require the Company to purchase additional interests in the subsidiary at their discretion. The interests are initially recorded at fair value and in subsequent reporting periods are accreted or adjusted to the estimated redemption value. The adjustments to the redemption value are recorded to retained earnings or additional paid-in capital on the consolidated balance sheet. The redeemable non-controlling interests are considered temporary and reported outside of permanent equity on the consolidated balance sheet at the greater of the carrying amount adjusted for the non-controlling interest's share of net income (loss) or its redemption value.

*Earnings per share* - The Company calculates basic earnings per share ("EPS") by dividing net income by the weighted-average number of common shares outstanding during the year. Diluted EPS is calculated by dividing net income by the weighted-average number of common shares outstanding during the year, adjusted for the potentially dilutive effect of stock options and unvested stock units using the treasury stock method. The Company may be required to calculate EPS using the two-class method as a result of its redeemable non-controlling interests. If redemption value exceeds the fair value of the redeemable non-controlling interests, the excess would be a reduction to net income for the EPS calculation.

### Accounting pronouncements adopted

*Leases* - In February 2016, the Financial Accounting Standards Board (the "FASB") issued accounting guidance that changed how companies account for and present lease arrangements. This guidance requires companies to recognize lease assets and liabilities for both finance and operating leases on the consolidated balance sheet. The Company adopted this guidance effective January 1, 2019, under the modified retrospective transition method with the available practical expedients.

The following table summarizes the impact of the changes made to the January 1, 2019 consolidated balance sheet for the adoption of the new accounting standard pertaining to leases. The prior periods have not been restated and have been reported under the accounting standard in effect for those periods.

	Balance at December 31, 2018	Impact of lease standard (in millions)	Balance at January 1, 2019
<b>Assets</b>			
Property, equipment and right-of-use assets, net	\$ 921	\$ 375	\$ 1,296
<b>Liabilities</b>			
Other current liabilities	949	72	1,021
Other liabilities	1,877	303	2,180

For a more detailed discussion on lease arrangements, refer to Note 10 (Property, Equipment and Right-of-Use Assets).

*Comprehensive income* - In February 2018, the FASB issued accounting guidance that allows for a one-time reclassification from accumulated other comprehensive income (loss) to retained earnings for stranded tax effects resulting from U.S. tax reform. The Company adopted this guidance effective January 1, 2019, electing to retain the stranded tax effects in accumulated other comprehensive income (loss). The adoption did not result in a material impact on the Company's consolidated financial statements.

*Revenue recognition* - In May 2014, the FASB issued accounting guidance that provides a single, comprehensive revenue recognition model for all contracts with customers and supersedes most of the existing revenue recognition requirements. Under this guidance, an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company adopted this guidance effective January 1, 2018 under the modified retrospective transition method, applying the standard to contracts not completed as of January 1, 2018 and considered the aggregate amount of modifications.

This revenue guidance impacts the timing of certain customer incentives recognized in the Company's consolidated statement of operations, as they are recognized over the life of the contract. Previously, such incentives were recognized when earned by the customer. This revenue guidance also impacts the Company's accounting recognition for certain market development fund contributions and expenditures. Historically, these items were recorded on a net basis in net revenue and will now be recognized on a gross basis, resulting in an increase to both revenues and expenses.

The following tables summarize the impact of the revenue standard on the Company's consolidated statement of operations and consolidated balance sheet:

	Year Ended December 31, 2018		
	Balances excluding revenue standard	Impact of revenue standard	As reported
	(in millions)		
<b>Net Revenue</b>	\$ 14,471	\$ 479	\$ 14,950
<b>Operating Expenses</b>			
Advertising and marketing	743	164	907
Income before income taxes	6,889	315	7,204
Income tax expense	1,278	67	1,345
<b>Net Income</b>	<b>5,611</b>	<b>248</b>	<b>5,859</b>

	December 31, 2018		
	Balances excluding revenue standard	Impact of revenue standard	As reported
	(in millions)		
<b>Assets</b>			
Accounts receivable	\$ 2,214	\$ 62	\$ 2,276
Prepaid expenses and other current assets	1,176	256	1,432
Deferred income taxes	666	(96)	570
Other assets	2,388	915	3,303
<b>Liabilities</b>			
Accounts payable	959	(422)	537
Accrued expenses	4,375	372	4,747
Other current liabilities	1,085	(136)	949
Other liabilities	1,145	732	1,877
<b>Equity</b>			
Retained earnings	26,692	591	27,283

For a more detailed discussion on revenue recognition, refer to Note 3 (Revenue).

*Intra-entity asset transfers* - In October 2016, the FASB issued accounting guidance to simplify the accounting for income tax consequences of intra-entity transfers of assets other than inventory. Under this guidance, companies are required to recognize the income tax consequences of an intra-entity asset transfer when the transfer occurs. This guidance must be applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the period of adoption. The guidance is effective for periods beginning after December 15, 2017. The Company adopted this guidance effective January 1, 2018. See the section in this note entitled Cumulative Effect of the Adopted Accounting Pronouncements for a summary of the cumulative impact of adopting this standard as of January 1, 2018.



*Cumulative effect of the 2018 adopted accounting pronouncements*

The following table summarizes the cumulative impact of the changes made to the January 1, 2018 consolidated balance sheet for the adoption of the new accounting standards pertaining to revenue recognition and intra-entity asset transfers. The prior periods have not been restated and have been reported under the accounting standards in effect for those periods.

	Balance at December 31, 2017	Impact of revenue standard	Impact of intra- entity asset transfers standard	Balance at January 1, 2018
	(in millions)			
<b>Assets</b>				
Accounts receivable	\$ 1,969	\$ 44	\$ —	\$ 2,013
Prepaid expenses and other current assets	1,040	181	(17)	1,204
Deferred income taxes	250	(69)	186	367
Other assets	2,298	690	(352)	2,636
<b>Liabilities</b>				
Accounts payable	933	(495)	—	438
Accrued expenses	3,931	391	—	4,322
Other current liabilities	792	(44)	—	748
Other liabilities	1,438	628	—	2,066
<b>Equity</b>				
Retained earnings	22,364	366	(183)	22,547

**Accounting pronouncements not yet adopted**

*Implementation costs incurred in a hosting arrangement that is a service contract* - In August 2018, the FASB issued accounting guidance which aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This guidance is effective for periods beginning after December 15, 2019. Companies are required to adopt this guidance either retrospectively or by prospectively applying the guidance to all implementation costs incurred after the date of adoption. The Company will adopt this guidance effective January 1, 2020 by applying the prospective approach as of the date of adoption and this guidance will not have a material impact on its consolidated financial statements.

*Disclosure requirements for fair value measurement* - In August 2018, the FASB issued accounting guidance which modifies disclosure requirements for fair value measurements by removing, modifying and adding certain disclosures. This guidance is effective for periods beginning after December 15, 2019. Companies are required to adopt the guidance for certain added disclosures prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption and all other amendments retrospectively to all periods presented upon their effective date. The Company will adopt this guidance effective January 1, 2020 and the impact will not be material.

**Note 2. Acquisitions**

In 2019 and 2017, the Company acquired several businesses in separate transactions for total consideration of \$1.5 billion in each year, representing both cash and contingent consideration. There were no acquisitions in 2018. These acquisitions align with the Company's strategy to grow, diversify and build the Company's business. Refer to Note 1 (Summary of Significant Accounting Policies) for the valuation techniques Mastercard utilizes to fair value the respective components of business combinations. The residual value allocated to goodwill is primarily attributable to the synergies expected to arise after the acquisition date and a portion of the goodwill is expected to be deductible for tax purposes.

The Company is evaluating and finalizing the purchase accounting for businesses acquired during 2019. In 2018, the Company finalized the purchase accounting for businesses acquired during 2017. The preliminary estimated and final fair values of the purchase price allocations in aggregate, as of the acquisition dates, are noted below for 2019 and 2017, respectively. There were no acquisitions in 2018.

	2019	2017
	(in millions)	
<b>Assets:</b>		
Cash and cash equivalents	\$ 54	\$ 111
Other current assets	143	110
Other intangible assets	395	488
Goodwill	1,076	1,135
Other assets	48	91
<b>Total assets</b>	<b>1,716</b>	<b>1,935</b>
<b>Liabilities:</b>		
Other current liabilities	121	234
Deferred income taxes	52	64
Other liabilities	32	66
<b>Total liabilities</b>	<b>205</b>	<b>364</b>
<b>Net assets acquired</b>	<b>\$ 1,511</b>	<b>\$ 1,571</b>

The following table summarizes the identified intangible assets acquired for 2019 and 2017:

	2019	2017	2019	2017
	Acquisition Date Fair Value		Weighted-Average Useful Life	
	(in millions)		(in years)	
Developed technologies	\$ 199	\$ 319	7.7	7.5
Customer relationships	178	166	12.6	9.9
Other	18	3	5.0	1.4
<b>Other intangible assets</b>	<b>\$ 395</b>	<b>\$ 488</b>	<b>9.7</b>	<b>8.3</b>

Pro forma information related to the acquisitions was not included because the impact on the Company's consolidated results of operations was not considered to be material.

The businesses acquired in 2019 were not individually significant to Mastercard. For the businesses acquired in 2017, the largest acquisition relates to Vocalink, a payment systems and ATM switching platform operator, located principally in the U.K. On April 28, 2017, Mastercard acquired 92.4% controlling interest in Vocalink for cash consideration of £719 million (\$929 million). In addition, the Vocalink sellers earned additional contingent consideration of £169 million (\$219 million) upon meeting 2018 revenue targets in accordance with terms of the purchase agreement. Refer to Note 8 (Fair Value Measurements) for additional information related to the fair value of contingent consideration.

A majority of Vocalink's shareholders have retained a 7.6% ownership for at least three years, which is recorded as redeemable non-controlling interests on the consolidated balance sheet. These remaining shareholders have a put option to sell their ownership interest to Mastercard on the third and fifth anniversaries of the transaction and quarterly thereafter (the "Third Anniversary Option" and "Fifth Anniversary Option", respectively). The Third Anniversary Option is exercisable at a fixed price of £58 million (approximately \$76 million as of December 31, 2019) ("Fixed Price"). The Fifth Anniversary Option is exercisable at the greater of the Fixed Price or fair value. Additionally, Mastercard has a call option to purchase the remaining interest from Vocalink's shareholders on the fifth anniversary of the transaction and quarterly thereafter, which is exercisable at the greater of the Fixed Price or fair value. The fair value of the redeemable non-controlling interests was determined utilizing a market approach, which extrapolated the consideration transferred that was discounted for lack of control and marketability.

## Pending Acquisition

In August 2019, Mastercard entered into a definitive agreement to acquire the majority of the Corporate Services business of Nets Denmark A/S, for €2.85 billion (approximately \$3.19 billion as of December 31, 2019) after adjusting for cash and certain other liabilities at closing. The pending acquisition primarily comprises the clearing and instant payment services, and e-billing solutions of Nets Denmark A/S's Corporate Services business. While the Company anticipates completing the acquisition in the first half of 2020, the transaction is subject to regulatory approval and other customary closing conditions.

## Note 3. Revenue

Mastercard's business model involves four participants in addition to the Company: account holders, issuers (the account holders' financial institutions), merchants and acquirers (the merchants' financial institutions). Revenue from contracts with customers is recognized when services are performed in an amount that reflects the consideration to which the Company expects to be entitled to in exchange for those services. Revenue recognized from domestic assessments, cross-border volume fees and transaction processing are derived from Mastercard's payment network services. Revenue is primarily generated by charging fees to issuers, acquirers and other stakeholders for providing switching services, as well as by assessing customers based primarily on the dollar volume of activity, or gross dollar volume, on the products that carry the Company's brands. Revenue is generally derived from transactional information accumulated by Mastercard's systems or reported by customers. In addition, the Company recognizes revenue from other payment-related products and services in the period in which the related transactions occur or services are performed.

The price structure for Mastercard's products and services is dependent on the nature of volumes, types of transactions and type of products and services offered to customers. Net revenue can be impacted by the following:

- domestic or cross-border transactions
- geographic region or country in which the transaction occurs
- volumes/transactions subject to tiered rates
- processed or not processed by the Company
- amount of usage of the Company's other products or services
- amount of rebates and incentives provided to customers

The Company classifies its net revenue into the following five categories:

**Domestic assessments** are fees charged to issuers and acquirers based primarily on the dollar volume of activity on cards and other devices that carry the Company's brands where the merchant country and the country of issuance are the same. Revenue from domestic assessments is recorded as revenue in the period it is earned, which is when the related volume is generated on the cards or other devices that carry the Company's brands.

**Cross-border volume fees** are charged to issuers and acquirers based primarily on the dollar volume of activity on cards and other devices that carry the Company's brands where the merchant country and the country of issuance are different. Revenue from cross-border volume is recorded as revenue in the period it is earned, which is when the related volume is generated on the cards or other devices that carry the Company's brands.

**Transaction processing** revenue is recognized for both domestic and cross-border transactions in the period in which the related transactions occur. Transaction processing includes the following:

- *Switched transaction* revenue is generated from the following products and services:
  - Authorization is the process by which a transaction is routed to the issuer for approval. In certain circumstances, such as when the issuer's systems are unavailable or cannot be contacted, Mastercard or others approve such transactions on behalf of the issuer in accordance with either the issuer's instructions or applicable rules (also known as "stand-in").
  - Clearing is the determination and exchange of financial transaction information between issuers and acquirers after a transaction has been successfully conducted at the point of interaction. Transactions are cleared among customers through Mastercard's central and regional processing systems.
  - Settlement is facilitating the exchange of funds between parties.
- *Connectivity fees* are charged to issuers, acquirers and other financial institutions for network access, equipment and the transmission of authorization and settlement messages. These fees are based on the size of the data being transmitted and the number of connections to the Company's network.
- *Other processing fees* include issuer and acquirer processing solutions; payment gateways for e-commerce merchants; mobile gateways for mobile-initiated transactions; and safety and security.

**Other revenues** consist of value-added service offerings that are typically sold with the Company's payment service offerings and are recognized in the period in which the related services are performed or transactions occur. Other revenues include the following:

- Data analytics and consulting fees.
- Cyber and intelligence fees are for products and services offered to prevent, detect and respond to fraud and to ensure the safety of transactions made primarily on Mastercard products.
- Loyalty and rewards solutions fees are charged to issuers for benefits provided directly to consumers with Mastercard-branded cards, such as access to a global airline lounge network, global and local concierge services, individual insurance coverages, emergency card replacement, emergency cash advance services and a 24-hour cardholder service center. Loyalty and reward solution fees also include rewards campaigns and management services.
- Program management services provided to prepaid card issuers consist of foreign exchange margin, commissions, load fees and ATM withdrawal fees paid by cardholders on the sale and encashment of prepaid cards.
- Batch and real-time account-based payment services relating to ACH transactions and other ACH related services.
- Other payment-related products and services, including account and transaction enhancement services, rules compliance and publications.

**Rebates and incentives (contra-revenue)** are provided to customers that meet certain volume targets and can be in the form of a rebate or other support incentives, which are tied to performance. Rebates and incentives are recorded as a reduction of gross revenue primarily when volume- and transaction-based revenues are recognized over the contractual term. In addition, Mastercard may make incentive payments to a customer directly related to entering into an agreement, which are generally capitalized and amortized over the life of the agreement on a straight-line basis.

The Company's disaggregated net revenue by source and geographic region were as follows for the years ended December 31:

	2019	2018
	(in millions)	
<b>Revenue by source:</b>		
Domestic assessments	\$ 6,781	\$ 6,138
Cross-border volume fees	5,606	4,954
Transaction processing	8,469	7,391
Other revenues	4,124	3,348
Gross revenue	<b>24,980</b>	<b>21,831</b>
Rebates and incentives (contra-revenue)	(8,097)	(6,881)
Net revenue	<b>\$ 16,883</b>	<b>\$ 14,950</b>
<b>Net revenue by geographic region:</b>		
North American Markets	\$ 5,843	\$ 5,312
International Markets	10,869	9,514
Other <sup>1</sup>	171	124
Net revenue	<b>\$ 16,883</b>	<b>\$ 14,950</b>

<sup>1</sup> Includes revenues managed by corporate functions.

Receivables from contracts with customers of \$2.3 billion and \$2.1 billion as of December 31, 2019 and 2018, respectively, are recorded within accounts receivable on the consolidated balance sheet. The Company's customers are generally billed weekly, however the frequency is dependent upon the nature of the performance obligation and the underlying contractual terms. The Company does not typically offer extended payment terms to customers.

Contract assets are included in prepaid expenses and other current assets and other assets on the consolidated balance sheet at December 31, 2019 in the amounts of \$48 million and \$152 million, respectively. The comparable amounts included in prepaid expenses and other current assets and other assets at December 31, 2018 were \$40 million and \$92 million, respectively.

Deferred revenue is included in other current liabilities and other liabilities on the consolidated balance sheet at December 31, 2019 in the amounts of \$238 million and \$106 million, respectively. The comparable amounts included in other current liabilities and other

liabilities at December 31, 2018 were \$218 million and \$101 million, respectively. In 2019 and 2018, revenue recognized from the satisfaction of such performance obligations was \$904 million in each year.

The Company's remaining performance periods for its contracts with customers for its payment network services are typically long-term in nature (generally up to 10 years). As a payment network service provider, the Company provides its customers with continuous access to its global payment processing network and stands ready to provide transaction processing and related services over the contractual term. Consideration is variable as the Company generates revenues from assessing its customers based on the GDV of activity on the products that carry the Company's brands. The Company has elected the optional exemption to not disclose the remaining performance obligations related to its payment network services. The Company also earns revenues from other value-added services comprised of both batch and real-time account-based payment services, consulting fees, loyalty programs and other payment-related products and services. At December 31, 2019, the estimated aggregate consideration allocated to unsatisfied performance obligations for these other value-added services is \$1.3 billion, which is expected to be recognized through 2022. The estimated remaining performance obligations related to these revenues are subject to change and are affected by several factors, including modifications and terminations and are not expected to be material to any future annual period.

#### Note 4. Earnings Per Share

The components of basic and diluted EPS for common shares for each of the years ended December 31 were as follows:

	2019	2018	2017
	(in millions, except per share data)		
<b>Numerator</b>			
Net income	\$ 8,118	\$ 5,859	\$ 3,915
<b>Denominator</b>			
Basic weighted-average shares outstanding	1,017	1,041	1,067
Dilutive stock options and stock units	5	6	5
Diluted weighted-average shares outstanding <sup>1</sup>	1,022	1,047	1,072
<b>Earnings per Share</b>			
Basic	\$ 7.98	\$ 5.63	\$ 3.67
Diluted	\$ 7.94	\$ 5.60	\$ 3.65

Note: Table may not sum due to rounding.

<sup>1</sup> For the years presented, the calculation of diluted EPS excluded a minimal amount of anti-dilutive share-based payment awards.

#### Note 5. Cash, Cash Equivalents, Restricted Cash and Restricted Cash Equivalents

The following table provides a reconciliation of cash, cash equivalents, restricted cash and restricted cash equivalents reported on the consolidated balance sheet that total to the amounts shown on the consolidated statement of cash flows for the years ended December 31:

	2019	2018	2017	2016
	(in millions)			
Cash and cash equivalents	\$ 6,988	\$ 6,682	\$ 5,933	\$ 6,721
Restricted cash and restricted cash equivalents				
Restricted cash for litigation settlement	584	553	546	543
Restricted security deposits held for customers	1,370	1,080	1,085	991
Prepaid expenses and other current assets	27	22	28	3
Other assets	—	—	—	15
Cash, cash equivalents, restricted cash and restricted cash equivalents	\$ 8,969	\$ 8,337	\$ 7,592	\$ 8,273

## Note 6. Supplemental Cash Flows

The following table includes supplemental cash flow disclosures for each of the years ended December 31:

	2019	2018	2017
	(in millions)		
Cash paid for income taxes, net of refunds	\$ 1,644	\$ 1,790	\$ 1,893
Cash paid for interest	199	153	135
Cash paid for legal settlements	668	260	47
Non-cash investing and financing activities			
Dividends declared but not yet paid	403	340	263
Accrued property, equipment and right-of-use assets	468	10	30
Fair value of assets acquired, net of cash acquired	1,662	—	1,825
Fair value of liabilities assumed related to acquisitions	205	—	365

## Note 7. Investments

The Company's investments on the consolidated balance sheet include both available-for-sale and held-to-maturity securities (see Investments section below). The Company classifies its investments in equity securities of publicly traded and privately held companies within other assets on the consolidated balance sheet (see Equity Investments section below).

### Investments

Investments on the consolidated balance sheet consisted of the following at December 31:

	2019	2018
	(in millions)	
Available-for-sale securities	\$ 591	\$ 1,432
Held-to-maturity securities	97	264
Total investments	\$ 688	\$ 1,696

### Available-for-Sale Securities

The major classes of the Company's available-for-sale investment securities and their respective amortized cost basis and fair values were as follows:

	December 31, 2019				December 31, 2018			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
	(in millions)							
Municipal securities	\$ 15	\$ —	\$ —	\$ 15	\$ 15	\$ —	\$ —	\$ 15
Government and agency securities	108	—	—	108	157	—	—	157
Corporate securities	381	1	—	382	1,044	1	(2)	1,043
Asset-backed securities	85	1	—	86	217	—	—	217
Total	\$ 589	\$ 2	\$ —	\$ 591	\$ 1,433	\$ 1	\$ (2)	\$ 1,432

The Company's available-for-sale investment securities held at December 31, 2019 and 2018, primarily carried a credit rating of A- or better with unrealized gains and losses recorded as a separate component of other comprehensive income (loss) on the consolidated statement of comprehensive income. The municipal securities are comprised of state tax-exempt bonds and are diversified across states and sectors. Government and agency securities include U.S. government bonds, U.S. government sponsored agency bonds and foreign government bonds with similar credit quality to that of the U.S. government bonds. Corporate securities are comprised of commercial paper and corporate bonds. The asset-backed securities are investments in bonds which are collateralized primarily by automobile loan receivables.

The maturity distribution based on the contractual terms of the Company's investment securities at December 31, 2019 was as follows:

	Available-For-Sale	
	Amortized Cost	Fair Value
	(in millions)	
Due within 1 year	\$ 180	\$ 181
Due after 1 year through 5 years	409	410
<b>Total</b>	<b>\$ 589</b>	<b>\$ 591</b>

Investment income on the consolidated statement of operations primarily consists of interest income generated from cash, cash equivalents, time deposits, and realized gains and losses on the Company's debt securities. The realized gains and losses from the sale of available-for-sale securities for 2019, 2018 and 2017 were not significant.

### Held-to-Maturity Securities

The Company classifies time deposits with maturities greater than three months but less than one year as held-to-maturity. Time deposits are carried at amortized cost on the consolidated balance sheet and are intended to be held until maturity. The cost of these securities approximates fair value.

### Equity Investments

Included in other assets on the consolidated balance sheet are equity investments with readily determinable fair values ("Marketable securities") and equity investments without readily determinable fair values ("Nonmarketable securities"). Marketable securities are publicly traded companies and are measured using unadjusted quoted prices in their respective active markets. Nonmarketable securities that do not qualify for equity method accounting are measured at cost, less any impairment and adjusted for changes resulting from observable price changes in orderly transactions for the identical or similar investments of the same issuer ("measurement alternative").

The following table is a summary of the activity related to the Company's equity investments:

	Balance at December 31, 2018	Purchases (Sales), net <sup>1</sup>	Changes in Fair Value <sup>2</sup>	Balance at December 31, 2019
	(in millions)			
Marketable securities	\$ —	\$ 362	\$ 117	\$ 479
Nonmarketable securities	337	48	50	435
<b>Total equity investments</b>	<b>\$ 337</b>	<b>\$ 410</b>	<b>\$ 167</b>	<b>\$ 914</b>

<sup>1</sup> Includes impact of balance sheet foreign currency translation

<sup>2</sup> Recorded in gains (losses) on equity investments, net on the consolidated statement of operations

At December 31, 2019, the total carrying value of Nonmarketable securities included \$317 million of measurement alternative investments and \$118 million of equity method investments. At December 31, 2018, the total carrying value of Nonmarketable securities included \$232 million of measurement alternative investments and \$105 million of equity method investments.

### Note 8. Fair Value Measurements

The Company classifies its fair value measurements of financial instruments into a three-level hierarchy within the Valuation Hierarchy. Financial instruments are categorized for fair value measurement purposes as recurring or non-recurring in nature. There were no transfers made among the three levels in the Valuation Hierarchy for 2019 and 2018.

## Financial Instruments - Recurring Measurements

The distribution of the Company's financial instruments measured at fair value on a recurring basis within the Valuation Hierarchy were as follows:

	December 31, 2019				December 31, 2018			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(in millions)							
<b>Assets</b>								
<b>Investment securities available for sale <sup>1</sup>:</b>								
Municipal securities	\$ —	\$ 15	\$ —	\$ 15	\$ —	\$ 15	\$ —	\$ 15
Government and agency securities	66	42	—	108	65	92	—	157
Corporate securities	—	382	—	382	—	1,043	—	1,043
Asset-backed securities	—	86	—	86	—	217	—	217
<b>Derivative instruments <sup>2</sup>:</b>								
Foreign exchange contracts	—	12	—	12	—	35	—	35
Interest rate contracts	—	14	—	14	—	—	—	—
<b>Marketable securities <sup>3</sup>:</b>								
Equity securities	479	—	—	479	—	—	—	—
<b>Deferred compensation plan <sup>4</sup>:</b>								
Deferred compensation assets	67	—	—	67	54	—	—	54
<b>Liabilities</b>								
<b>Derivative instruments <sup>2</sup>:</b>								
Foreign exchange derivative liabilities	\$ —	\$ (32)	\$ —	\$ (32)	\$ —	\$ (6)	\$ —	\$ (6)
<b>Deferred compensation plan <sup>5</sup>:</b>								
Deferred compensation liabilities	(67)	—	—	(67)	(54)	—	—	(54)

<sup>1</sup> The Company's U.S. government securities are classified within Level 1 of the Valuation Hierarchy as the fair values are based on unadjusted quoted prices for identical assets in active markets. The fair value of the Company's available-for-sale municipal securities, government and agency securities, corporate securities and asset-backed securities are based on observable inputs such as quoted prices, benchmark yields and issuer spreads for similar assets in active markets and are therefore included in Level 2 of the Valuation Hierarchy.

<sup>2</sup> The Company's foreign exchange and interest rate derivative asset and liability contracts have been classified within Level 2 of the Valuation Hierarchy as the fair value is based on observable inputs such as broker quotes relating to foreign currency exchange rates for similar derivative instruments. See Note 23 (Derivative and Hedging Instruments) for further details.

<sup>3</sup> The Company's Marketable securities are publicly held and classified within Level 1 of the Valuation Hierarchy as the fair values are based on unadjusted quoted prices in their respective active markets.

<sup>4</sup> The Company has a nonqualified deferred compensation plan where assets are invested primarily in mutual funds held in a rabbi trust, which is restricted for payments to participants of the plan. The Company has elected to use the fair value option for these mutual funds, which are measured using quoted prices of identical instruments in active markets and are included in prepaid expenses and other current assets on the consolidated balance sheet.

<sup>5</sup> The deferred compensation liabilities are measured at fair value based on the quoted prices of identical instruments to the investment vehicles selected by the participants. These are included in other liabilities on the consolidated balance sheet.



## Financial Instruments - Non-Recurring Measurements

### Nonmarketable Securities

The Company's Nonmarketable securities are recorded at fair value on a non-recurring basis in periods after initial recognition under the equity method or measurement alternative method. Nonmarketable securities are classified within Level 3 of the Valuation Hierarchy due to the absence of quoted market prices, the inherent lack of liquidity and unobservable inputs used to measure fair value that require management's judgment. The Company uses discounted cash flows and market assumptions to estimate the fair value of its Nonmarketable securities when certain events or circumstances indicate that impairment may exist. See Note 7 (Investments) for further details.

### Debt

The Company estimates the fair value of its long-term debt based on market quotes. These debt instruments are not traded in active markets and are classified as Level 2 of the Valuation Hierarchy. At December 31, 2019, the carrying value and fair value of total long-term debt (including the current portion) was \$8.5 billion and \$9.2 billion, respectively. At December 31, 2018, the carrying value and fair value of long-term debt (including the current portion) was \$6.3 billion and \$6.5 billion, respectively. See Note 15 (Debt) for further details.

### Other Financial Instruments

Certain financial instruments are carried on the consolidated balance sheet at cost or amortized cost basis, which approximates fair value due to their short-term, highly liquid nature. These instruments include cash and cash equivalents, restricted cash, time deposits, accounts receivable, settlement due from customers, restricted security deposits held for customers, accounts payable, settlement due to customers and other accrued liabilities.

### Contingent Consideration

The contingent consideration attributable to acquisitions made in 2017 was primarily based on the achievement of 2018 revenue targets and was measured at fair value on a recurring basis. This contingent consideration liability of \$219 million was included in other current liabilities on the consolidated balance sheet at December 31, 2018. This liability was classified within Level 3 of the Valuation Hierarchy due to the absence of quoted market prices and unobservable inputs used to measure fair value that require management's judgment. During 2019, the Company paid \$219 million to settle the contingent consideration.

## Note 9. Prepaid Expenses and Other Assets

Prepaid expenses and other current assets consisted of the following at December 31:

	2019	2018
	(in millions)	
Customer and merchant incentives	\$ 872	\$ 778
Prepaid income taxes	105	51
Other	786	603
<b>Total prepaid expenses and other current assets</b>	<b>\$ 1,763</b>	<b>\$ 1,432</b>

Other assets consisted of the following at December 31:

	2019	2018
	(in millions)	
Customer and merchant incentives	\$ 2,838	\$ 2,458
Equity investments	914	337
Income taxes receivable	460	298
Other	313	210
<b>Total other assets</b>	<b>\$ 4,525</b>	<b>\$ 3,303</b>

Customer and merchant incentives represent payments made to customers and merchants under business agreements. Costs directly related to entering into such an agreement are generally deferred and amortized over the life of the agreement.

See Note 7 (Investments) for further information on the Company's equity investments.

## Note 10. Property, Equipment and Right-of-Use Assets

Property, equipment and right-of-use assets consisted of the following at December 31:

	2019	2018
	(in millions)	
Building, building equipment and land	\$ 505	\$ 481
Equipment	1,218	987
Furniture and fixtures	92	85
Leasehold improvements	303	215
Operating lease right-of-use assets	810	—
Property, equipment and right-of-use assets	<b>2,928</b>	<b>1,768</b>
Less accumulated depreciation and amortization	(1,100)	(847)
Property, equipment and right-of-use assets, net	<b>\$ 1,828</b>	<b>\$ 921</b>

Depreciation and amortization expense for the above property, equipment and right-of-use assets was \$336 million, \$209 million and \$185 million for 2019, 2018 and 2017, respectively.

The increase in property, equipment and right-of-use assets at December 31, 2019 from December 31, 2018 was primarily due to the impact from the adoption of the new accounting standard pertaining to lease arrangements as of January 1, 2019 as well as leases that commenced in 2019. See Note 1 (Summary of Significant Accounting Policies) for additional information of the accounting policy under the new leasing standard.

Operating lease ROU assets and operating lease liabilities are recorded on the consolidated balance sheet as follows:

	December 31, 2019
	(in millions)
Balance sheet location	
Property, equipment and right-of-use assets, net	\$ 711
Other current liabilities	106
Other liabilities	656

Operating lease amortization expense for 2019 was \$99 million. As of December 31, 2019, weighted-average remaining lease term of operating leases was 9.5 years and weighted-average discount rate for operating leases was 2.9%.

The following table summarizes the maturity of the Company's operating lease liabilities at December 31, 2019 based on lease term:

	Operating Leases
	(in millions)
2020	\$ 112
2021	113
2022	103
2023	90
2024	79
Thereafter	376
<b>Total operating lease payments</b>	<b>873</b>
Less: Interest	(111)
<b>Present value of operating lease liabilities</b>	<b>\$ 762</b>

As of December 31, 2019, the Company has entered into additional operating leases as a lessee, primarily for real estate. These leases have not yet commenced and will result in ROU assets and corresponding lease liabilities of approximately \$23 million. These operating leases are expected to commence in fiscal year 2020, with lease terms between one and ten years.

The following disclosures relate to periods prior to adoption of the new lease accounting standard, including those operating leases entered into during 2018, but not yet commenced:

At December 31, 2018, the Company had the following future minimum payments due under non-cancelable leases:

	Operating Leases (in millions)
2019	\$ 72
2020	75
2021	76
2022	68
2023	58
Thereafter	327
<b>Total</b>	<b>\$ 676</b>

Consolidated rental expense for the Company's leased office space was \$94 million and \$77 million for 2018 and 2017, respectively. Consolidated lease expense for automobiles, computer equipment and office equipment was \$20 million and \$22 million for 2018 and 2017, respectively.

### Note 11. Goodwill

The changes in the carrying amount of goodwill for the years ended December 31 were as follows:

	2019	2018
	(in millions)	
Beginning balance	\$ 2,904	\$ 3,035
Additions	1,076	2
Foreign currency translation	41	(133)
Ending balance	<b>\$ 4,021</b>	<b>\$ 2,904</b>

The Company performed its annual qualitative assessment of goodwill during the fourth quarter of 2019 and determined a quantitative assessment was not necessary. The Company concluded that goodwill was not impaired and had no accumulated impairment losses at December 31, 2019.

### Note 12. Other Intangible Assets

The following table sets forth net intangible assets, other than goodwill, at December 31:

	2019			2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(in millions)					
Finite-lived intangible assets						
Capitalized software	\$ 1,884	\$ (988)	\$ 896	\$ 1,514	\$ (898)	\$ 616
Customer relationships	621	(264)	357	439	(232)	207
Other	44	(44)	—	46	(45)	1
<b>Total</b>	<b>2,549</b>	<b>(1,296)</b>	<b>1,253</b>	<b>1,999</b>	<b>(1,175)</b>	<b>824</b>
Indefinite-lived intangible assets						
Customer relationships	164	—	164	167	—	167
<b>Total</b>	<b>\$ 2,713</b>	<b>\$ (1,296)</b>	<b>\$ 1,417</b>	<b>\$ 2,166</b>	<b>\$ (1,175)</b>	<b>\$ 991</b>

The increase in the gross carrying amount of amortized intangible assets in 2019 was primarily related to the businesses acquired in 2019. See Note 2 (Acquisitions) for further details. Certain intangible assets are denominated in foreign currencies. As such, the change in intangible assets includes a component attributable to foreign currency translation. Based on the qualitative assessment performed in 2019, it was determined that the Company's indefinite-lived intangible assets were not impaired.

Amortization on the assets above amounted to \$285 million, \$250 million and \$252 million in 2019, 2018 and 2017, respectively. The following table sets forth the estimated future amortization expense on finite-lived intangible assets on the consolidated balance sheet at December 31, 2019 for the years ending December 31:

	(in millions)
2020	\$ 300
2021	243
2022	164
2023	115
2024 and thereafter	431
	<b>\$ 1,253</b>

### Note 13. Accrued Expenses and Accrued Litigation

Accrued expenses consisted of the following at December 31:

	2019	2018
	(in millions)	
Customer and merchant incentives	\$ 3,892	\$ 3,275
Personnel costs	713	744
Income and other taxes	332	158
Other	552	570
Total accrued expenses	<b>\$ 5,489</b>	<b>\$ 4,747</b>

Customer and merchant incentives represent amounts to be paid to customers under business agreements. As of December 31, 2019 and 2018, the Company's provision for litigation was \$914 million and \$1,591 million, respectively. These amounts are not included in the accrued expenses table above and are separately reported as accrued litigation on the consolidated balance sheet. See Note 21 (Legal and Regulatory Proceedings) for additional information regarding the Company's accrued litigation.

### Note 14. Pension, Postretirement and Savings Plans

The Company and certain of its subsidiaries maintain various pension and other postretirement plans that cover substantially all employees worldwide.

#### Defined Contribution Plans

The Company sponsors defined contribution retirement plans. The primary plan is the Mastercard Savings Plan, a 401(k) plan for substantially all of the Company's U.S. employees, which is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended. In addition, the Company has several defined contribution plans outside of the U.S. The Company's total expense for its defined contribution plans was \$127 million, \$98 million and \$84 million in 2019, 2018 and 2017, respectively.

#### Defined Benefit and Other Postretirement Plans

The Company sponsors pension and postretirement plans for certain non-U.S. employees (the "non-U.S. Plans") that cover various benefits specific to their country of employment. Additionally, Vocalink has a defined benefit pension plan (the "Vocalink Plan") which was permanently closed to new entrants and future accruals as of July 21, 2013, however, plan participants' obligations are adjusted for future salary changes. The Company has agreed to make contributions of £15 million (approximately \$19 million as of December 31, 2019) annually until September 2022. The term "Pension Plans" includes the non-U.S. Plans and the Vocalink Plan.

The Company maintains a postretirement plan providing health coverage and life insurance benefits for substantially all of its U.S. employees hired before July 1, 2007 (the "Postretirement Plan").

The Company uses a December 31 measurement date for the Pension Plans and its Postretirement Plan (collectively the “Plans”). The Company recognizes the funded status of its Plans, measured as the difference between the fair value of the plan assets and the projected benefit obligation, in the consolidated balance sheet. The following table sets forth the Plans’ funded status, key assumptions and amounts recognized in the Company’s consolidated balance sheet at December 31:

	Pension Plans		Postretirement Plan	
	2019	2018	2019	2018
	(\$ in millions)			
<b>Change in benefit obligation</b>				
Benefit obligation at beginning of year	\$ 438	\$ 468	\$ 57	\$ 61
Service cost	11	9	1	1
Interest cost	13	12	2	2
Actuarial (gain) loss	73	(7)	9	(2)
Benefits paid	(15)	(22)	(5)	(5)
Transfers in	2	1	—	—
Foreign currency translation	9	(23)	—	—
Benefit obligation at end of year	<b>531</b>	<b>438</b>	<b>64</b>	<b>57</b>
<b>Change in plan assets</b>				
Fair value of plan assets at beginning of year	<b>410</b>	<b>427</b>	—	—
Actual (loss) gain on plan assets	79	(8)	—	—
Employer contributions	32	33	5	5
Benefits paid	(15)	(23)	(5)	(5)
Transfers in	2	2	—	—
Foreign currency translation	10	(21)	—	—
Fair value of plan assets at end of year	<b>518</b>	<b>410</b>	—	—
<b>Funded status at end of year</b>	<b>\$ (13)</b>	<b>\$ (28)</b>	<b>\$ (64)</b>	<b>\$ (57)</b>
<b>Amounts recognized on the consolidated balance sheet consist of:</b>				
Other liabilities, short-term	—	—	(3)	(3)
Other liabilities, long-term	(13)	(28)	(61)	(54)
	<b>\$ (13)</b>	<b>\$ (28)</b>	<b>\$ (64)</b>	<b>\$ (57)</b>
<b>Accumulated other comprehensive income consists of:</b>				
Net actuarial (gain) loss	\$ 7	\$ (5)	\$ 2	\$ (7)
Prior service credit	1	1	(5)	(6)
Balance at end of year	<b>\$ 8</b>	<b>\$ (4)</b>	<b>\$ (3)</b>	<b>\$ (13)</b>
<b>Weighted-average assumptions used to determine end of year benefit obligations</b>				
<b>Discount rate</b>				
Non-U.S. Plans	0.70%	1.80%	*	*
Vocalink Plan	2.00%	3.10%	*	*
Postretirement Plan	*	*	3.25%	4.25%
<b>Rate of compensation increase</b>				
Non-U.S. Plans	1.50%	2.60%	*	*
Vocalink Plan	2.50%	4.00%	*	*
Postretirement Plan	*	*	3.00%	3.00%

\* Not applicable

All of the Pension Plans had benefit obligations in excess of plan assets at December 31, 2019 and 2018. Information on the Pension Plans were as follows:

	2019	2018
	(in millions)	
Projected benefit obligation	\$ 531	\$ 438
Accumulated benefit obligation	524	430
Fair value of plan assets	518	410

For the year ended December 31, 2019, the Company's projected benefit obligation related to its Pension Plans increased \$93 million primarily attributable to actuarial losses related to lower discount rate assumptions. For the year ended December 31, 2018, the Company's projected benefit obligation related to its Pension Plans decreased \$30 million primarily attributable to foreign currency translation and benefits paid.

Components of net periodic benefit cost recorded in earnings were as follows for the Plans for each of the years ended December 31:

	Pension Plans			Postretirement Plan		
	2019	2018	2017	2019	2018	2017
	(in millions)					
Service cost	\$ 11	\$ 9	\$ 9	\$ 1	\$ 1	\$ 1
Interest cost	13	12	8	2	2	2
Expected return on plan assets	(18)	(20)	(13)	—	—	—
Amortization of actuarial loss	1	—	—	—	—	—
Amortization of prior service credit	—	—	—	(1)	(2)	(2)
Net periodic benefit cost	<b>\$ 7</b>	<b>\$ 1</b>	<b>\$ 4</b>	<b>\$ 2</b>	<b>\$ 1</b>	<b>\$ 1</b>

The service cost component is recognized in general and administrative expenses on the consolidated statement of operations. Net periodic benefit cost, excluding the service cost component, is recognized in other income (expense) on the consolidated statement of operations.

Other changes in plan assets and benefit obligations recognized in other comprehensive income for the years ended December 31 were as follows:

	Pension Plans			Postretirement Plan		
	2019	2018	2017	2019	2018	2017
	(in millions)					
Current year actuarial loss (gain)	\$ 12	\$ 17	\$ (22)	\$ 9	\$ (2)	\$ 5
Current year prior service credit	—	1	—	—	—	—
Amortization of prior service credit	—	—	—	1	2	2
Total other comprehensive loss (income)	<b>\$ 12</b>	<b>\$ 18</b>	<b>\$ (22)</b>	<b>\$ 10</b>	<b>\$ —</b>	<b>\$ 7</b>
Total net periodic benefit cost and other comprehensive loss (income)	<b>\$ 19</b>	<b>\$ 19</b>	<b>\$ (18)</b>	<b>\$ 12</b>	<b>\$ 1</b>	<b>\$ 8</b>

## Assumptions

Weighted-average assumptions used to determine net periodic benefit cost were as follows for the years ended December 31:

	Pension Plans			Postretirement Plan		
	2019	2018	2017	2019	2018	2017
Discount rate						
Non-U.S. Plans	1.80%	1.80%	1.60%	*	*	*
Vocalink Plan	2.00%	2.80%	2.50%	*	*	*
Postretirement Plan	*	*	*	4.25%	3.50%	4.00%
Expected return on plan assets						
Non-U.S. Plans	2.10%	3.00%	3.25%	*	*	*
Vocalink Plan	3.75%	4.75%	4.75%	*	*	*
Rate of compensation increase						
Non-U.S. Plans	1.50%	2.60%	2.59%	*	*	*
Vocalink Plan	2.50%	3.85%	3.95%	*	*	*
Postretirement Plan	*	*	*	3.00%	3.00%	3.00%

\* Not applicable

The Company's discount rate assumptions are based on yield curves derived from high quality corporate bonds, which are matched to the expected cash flows of each respective plan. The expected return on plan assets assumptions are derived using the current and expected asset allocations of the Pension Plans' assets and considering historical as well as expected returns on various classes of plan assets. The rates of compensation increases are determined by the Company, based upon its long-term plans for such increases.

The following additional assumptions were used at December 31 in accounting for the Postretirement Plan:

	2019	2018
Health care cost trend rate assumed for next year	6.00%	6.00%
Ultimate trend rate	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2	2

## Assets

Plan assets are managed taking into account the timing and amount of future benefit payments. The Vocalink Plan assets are managed within the following target asset allocations: fixed income 36%, U.K. government securities 25%, equity 25%, real estate 9% and cash and cash equivalents 5%. For the non-U.S. Plans, the assets are concentrated primarily in insurance contracts.

The Valuation Hierarchy of the Pension Plans' assets is determined using a consistent application of the categorization measurements for the Company's financial instruments. See Note 1 (Summary of Significant Accounting Policies) for additional information.

The following tables set forth by level, within the Valuation Hierarchy, the Pension Plans' assets at fair value:

	December 31, 2019				December 31, 2018			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Fair Value
	(in millions)							
Cash and cash equivalents <sup>1</sup>	\$ 16	\$ —	\$ —	\$ 16	\$ 22	\$ —	\$ —	\$ 22
Government and agency securities <sup>2</sup>	—	—	—	—	—	88	—	88
Mutual funds <sup>3</sup>	153	193	—	346	154	30	—	184
Insurance contracts <sup>4</sup>	—	75	—	75	—	57	—	57
Asset-backed securities <sup>5</sup>	—	—	—	—	—	—	34	34
Other <sup>6</sup>	—	—	—	—	—	25	—	25
<b>Total</b>	<b>\$ 169</b>	<b>\$ 268</b>	<b>\$ —</b>	<b>\$ 437</b>	<b>\$ 176</b>	<b>\$ 200</b>	<b>\$ 34</b>	<b>\$ 410</b>
Investments at Net Asset Value ("NAV") <sup>7</sup>								
Mutual funds				36				—
Other				45				—
<b>Total Plan Assets</b>				<b>\$ 518</b>				<b>\$ 410</b>

- <sup>1</sup> Cash and cash equivalents are valued at quoted market prices, which represent the net asset value of the shares held by the Plans.
- <sup>2</sup> Governmental and agency securities are valued at unit values provided by investment managers, which are based on the fair value of the underlying investments utilizing public information, independent external valuation from third-party services or third-party advisors.
- <sup>3</sup> Certain mutual funds are valued at quoted market prices, which represent the value of the shares held by the Plans, and are therefore included in Level 1. Certain other mutual funds are valued at unit values provided by investment managers, which are based on the fair value of the underlying investments utilizing public information, independent external valuation from third-party services or third-party advisors, and are therefore included in Level 2.
- <sup>4</sup> Insurance contracts are valued at unit values provided by investment managers, which are based on the fair value of the underlying investments utilizing public information, independent external valuation from third-party services or third-party advisors.
- <sup>5</sup> Asset-backed securities are classified as Level 3 due to a lack of observable inputs in measuring fair value. These assets were sold during 2019.
- <sup>6</sup> Other represents hedge fund pooled vehicles which are based on the fair value of the underlying investments utilizing public information, independent external valuation from third-party services or third-party advisors, and are therefore included in Level 2.
- <sup>7</sup> Mutual funds (comprised primarily of credit investments) and other investments (comprised primarily of real estate investments) are valued using the NAV provided by the administrator as a practical expedient, and therefore these investments are not included in the valuation hierarchy. These investments have quarterly redemption frequencies with redemption notice periods ranging from 60 to 90 days.

The following table summarizes expected benefit payments (as of December 31, 2019) through 2029 for the Pension Plans and the Postretirement Plan, including those payments expected to be paid from the Company's general assets. Actual benefit payments may differ from expected benefit payments.

	Pension Plans	Postretirement Plan
	(in millions)	
2020	\$ 17	\$ 4
2021	11	4
2022	12	4
2023	13	4
2024	15	4
2025 - 2029	70	20



## Note 15. Debt

Long-term debt consisted of the following at December 31:

Notes	Issuance Date	Interest Payment Terms	Maturity Date	Aggregate Principal Amount	Stated Interest Rate	Effective Interest Rate	2019	2018
(in millions, except percentages)								
2019 USD Notes	May 2019	Semi-annually	2029	\$ 1,000	2.950%	3.030%	\$ 1,000	\$ —
			2049	1,000	3.650%	3.689%	1,000	—
	December 2019	Semi-annually	2025	750	2.000%	2.147%	750	\$ —
				<b>\$ 2,750</b>				
2018 USD Notes	February 2018	Semi-annually	2028	\$ 500	3.500%	3.598%	500	500
			2048	500	3.950%	3.990%	500	500
		<b>\$ 1,000</b>						
2016 USD Notes	November 2016	Semi-annually	2021	\$ 650	2.000%	2.236%	650	650
			2026	750	2.950%	3.044%	750	750
			2046	600	3.800%	3.893%	600	600
				<b>\$ 2,000</b>				
2015 Euro Notes	December 2015	Annually	2022	€ 700	1.100%	1.265%	785	801
			2027	800	2.100%	2.189%	896	916
			2030	150	2.500%	2.562%	169	172
	<b>€ 1,650</b>							
2014 USD Notes	March 2014	Semi-annually	2019	\$ 500	2.000%	2.178%	—	500
			2024	1,000	3.375%	3.484%	1,000	1,000
				<b>\$ 1,500</b>				
						<b>8,600</b>	<b>6,389</b>	
Less: Unamortized discount and debt issuance costs							(73)	(55)
Total debt outstanding							<b>\$ 8,527</b>	<b>\$ 6,334</b>
Less: Current portion <sup>1</sup>							—	(500)
Long-term debt							<b>\$ 8,527</b>	<b>\$ 5,834</b>

<sup>1</sup> Relates to the 2014 USD Notes, which was classified in current liabilities as of December 31, 2018, matured and was paid during 2019

In May 2019, the Company issued \$1 billion principal amount of notes due June 2029 and \$1 billion principal amount of notes due June 2049 and in December 2019, the Company issued \$750 million principal amount of notes due March 2025 (collectively the “2019 USD Notes”). The net proceeds from the issuance of the 2019 USD Notes, after deducting the original issue discount, underwriting discount and offering expenses, were \$2.724 billion.

The net proceeds, after deducting the original issue discount, underwriting discount and offering expenses, from the issuance of the 2018 USD Notes were \$991 million.

The outstanding debt, described above, is not subject to any financial covenants and it may be redeemed in whole, or in part, at the Company's option at any time for a specified make-whole amount. These notes are senior unsecured obligations and would rank equally with any future unsecured and unsubordinated indebtedness. The proceeds of the notes are to be used for general corporate purposes.

Scheduled annual maturities of the principal portion of long-term debt outstanding at December 31, 2019 are summarized below.

	(in millions)
2020	\$ —
2021	650
2022	785
2023	—
2024	1,000
Thereafter	6,165
<b>Total</b>	<b>\$ 8,600</b>

On November 14, 2019, the Company increased its commercial paper program (the "Commercial Paper Program") from \$4.5 billion to \$6 billion under which the Company is authorized to issue unsecured commercial paper notes with maturities of up to 397 days from the date of issuance. The Commercial Paper Program is available in U.S. dollars.

In conjunction with the Commercial Paper Program, the Company entered into a committed five-year unsecured \$6 billion revolving credit facility (the "Credit Facility") on November 14, 2019. The Credit Facility, which expires on November 14, 2024, amended and restated the Company's prior \$4.5 billion credit facility which was set to expire on November 15, 2023. Borrowings under the Credit Facility are available in U.S. dollars and/or euros. The facility fee under the Credit Facility is determined according to the Company's credit rating and is payable on the average daily commitment, regardless of usage, per annum. In addition to the facility fee, interest rates on borrowings under the Credit Facility would be based on prevailing market interest rates plus applicable margins that fluctuate based on the Company's credit rating. The Credit Facility contains customary representations, warranties, affirmative and negative covenants, events of default and indemnification provisions. The Company was in compliance in all material respects with the covenants of the Credit Facility at December 31, 2019 and 2018.

Borrowings under the Commercial Paper Program and the Credit Facility are used to provide liquidity for general corporate purposes, including providing liquidity in the event of one or more settlement failures by the Company's customers. The Company may borrow and repay amounts under the Commercial Paper Program and Credit Facility from time to time. The Company had no borrowings under the Credit Facility and the Commercial Paper Program at December 31, 2019 and 2018.

## Note 16. Stockholders' Equity

### Classes of Capital Stock

Mastercard's amended and restated certificate of incorporation authorizes the following classes of capital stock:

Class	Par Value Per Share	Authorized Shares (in millions)	Dividend and Voting Rights
A	\$0.0001	3,000	One vote per share Dividend rights
B	\$0.0001	1,200	Non-voting Dividend rights
Preferred	\$0.0001	300	No shares issued or outstanding at December 31, 2019 and 2018. Dividend and voting rights are to be determined by the Board of Directors of the Company upon issuance.

## Dividends

The Company declared a quarterly cash dividend on its Class A and Class B Common Stock during each of the four quarters of 2019, 2018 and 2017. For the years ended December 31, 2019, 2018 and 2017, the Company declared total per share dividends of \$1.39, \$1.08, and \$0.91, respectively, resulting in total annual dividends of \$1,408 million, \$1,120 million and \$967 million, respectively.

## Ownership and Governance Structure

Equity ownership and voting power of the Company's shares were allocated as follows as of December 31:

	2019		2018	
	Equity Ownership	General Voting Power	Equity Ownership	General Voting Power
Public Investors (Class A stockholders)	87.8%	88.8%	88.0%	89.0%
Principal or Affiliate Customers (Class B stockholders)	1.1%	—%	1.1%	—%
Mastercard Foundation (Class A stockholders)	11.1%	11.2%	10.9%	11.0%

## Class B Common Stock Conversions

Shares of Class B common stock are convertible on a one-for-one basis into shares of Class A common stock. Entities eligible to hold Mastercard's Class B common stock are defined in the Company's amended and restated certificate of incorporation (generally the Company's principal or affiliate customers), and they are restricted from retaining ownership of shares of Class A common stock. Class B stockholders are required to subsequently sell or otherwise transfer any shares of Class A common stock received pursuant to such a conversion.

## Mastercard Foundation

In connection and simultaneously with its 2006 initial public offering (the "IPO"), the Company issued and donated 135 million newly authorized shares of Class A common stock to Mastercard Foundation. Mastercard Foundation is a private charitable foundation incorporated in Canada that is controlled by directors who are independent of the Company and its principal customers. Under the terms of the donation, Mastercard Foundation became able to resell the donated shares in May 2010 to the extent necessary to meet charitable disbursement requirements dictated by Canadian tax law. Under Canadian tax law, Mastercard Foundation is generally required to disburse at least 3.5% of its assets not used in administration each year for qualified charitable disbursements. However, Mastercard Foundation obtained permission from the Canadian tax authorities to defer the giving requirements until 2021. Mastercard Foundation, at its discretion, may decide to meet its disbursement obligations on an annual basis or to settle previously accumulated obligations during any given year. Mastercard Foundation will be permitted to sell all of its remaining shares beginning May 1, 2027, subject to certain conditions.

## Stock Repurchase Programs

The Company's Board of Directors have approved share repurchase programs authorizing the Company to repurchase shares of its Class A Common Stock. These programs become effective after the completion of the previously authorized share repurchase program.

The following table summarizes the Company's share repurchase authorizations of its Class A common stock through December 31, 2019, as well as historical purchases:

Board authorization dates	December 2019	December 2018	December 2017	December 2016	December 2015	
Date program became effective	January 2020	January 2019	March 2018	April 2017	February 2016	Total
	(in millions, except average price data)					
Board authorization	\$ 8,000	\$ 6,500	\$ 4,000	\$ 4,000	\$ 4,000	\$ 26,500
Dollar-value of shares repurchased in 2017	\$ —	\$ —	\$ —	\$ 2,766	\$ 996	\$ 3,762
Remaining authorization at December 31, 2017	\$ —	\$ —	\$ 4,000	\$ 1,234	\$ —	\$ 5,234
Dollar-value of shares repurchased in 2018	\$ —	\$ —	\$ 3,699	\$ 1,234	\$ —	\$ 4,933
Remaining authorization at December 31, 2018	\$ —	\$ 6,500	\$ 301	\$ —	\$ —	\$ 6,801
Dollar-value of shares repurchased in 2019	\$ —	\$ 6,196	\$ 301	\$ —	\$ —	\$ 6,497
Remaining authorization at December 31, 2019	\$ 8,000	\$ 304	\$ —	\$ —	\$ —	\$ 8,304
Shares repurchased in 2017	—	—	—	21.0	9.1	30.1
Average price paid per share in 2017	\$ —	\$ —	\$ —	\$ 131.97	\$ 109.16	\$ 125.05
Shares repurchased in 2018	—	—	19.0	7.2	—	26.2
Average price paid per share in 2018	\$ —	\$ —	\$ 194.77	\$ 171.11	\$ —	\$ 188.26
Shares repurchased in 2019	—	24.8	1.6	—	—	26.4
Average price paid per share in 2019	\$ —	\$ 249.58	\$ 188.38	\$ —	\$ —	\$ 245.89
Cumulative shares repurchased through December 31, 2019	—	24.8	20.6	28.2	40.4	114.0
Cumulative average price paid per share	\$ —	\$ 249.58	\$ 194.27	\$ 141.99	\$ 99.10	\$ 159.68

The following table presents the changes in the Company's outstanding Class A and Class B common stock for the years ended December 31:

	Outstanding Shares	
	Class A	Class B
	(in millions)	
Balance at December 31, 2016	1,062.4	19.3
Purchases of treasury stock	(30.1)	—
Share-based payments	2.2	—
Conversion of Class B to Class A common stock	5.2	(5.2)
Balance at December 31, 2017	<b>1,039.7</b>	<b>14.1</b>
Purchases of treasury stock	(26.2)	—
Share-based payments	2.8	—
Conversion of Class B to Class A common stock	2.3	(2.3)
Balance at December 31, 2018	<b>1,018.6</b>	<b>11.8</b>
Purchases of treasury stock	(26.4)	—
Share-based payments	3.2	—
Conversion of Class B to Class A common stock	0.6	(0.6)
Balance at December 31, 2019	<b>996.0</b>	<b>11.2</b>

## Note 17. Accumulated Other Comprehensive Income (Loss)

The changes in the balances of each component of accumulated other comprehensive income (loss), net of tax, for the years ended December 31, 2019 and 2018 were as follows:

	Foreign Currency Translation Adjustments <sup>1</sup>	Translation Adjustments on Net Investment Hedge <sup>2</sup>	Cash Flow Hedges <sup>3</sup>	Defined Benefit Pension and Other Postretirement Plans <sup>4</sup>	Investment Securities Available- for-Sale <sup>5</sup>	Accumulated Other Comprehensive Income (Loss)
	(in millions)					
Balance at December 31, 2017	\$ (382)	\$ (141)	\$ —	\$ 25	\$ 1	\$ (497)
Other comprehensive income (loss)	(279)	75	—	(15)	(2)	(221)
Balance at December 31, 2018	<b>(661)</b>	<b>(66)</b>	—	<b>10</b>	<b>(1)</b>	<b>(718)</b>
Other comprehensive income (loss)	23	28	11	(19)	2	45
Balance at December 31, 2019	<b>\$ (638)</b>	<b>\$ (38)</b>	<b>\$ 11</b>	<b>\$ (9)</b>	<b>\$ 1</b>	<b>\$ (673)</b>

<sup>1</sup> During 2018, the increase in the accumulated other comprehensive loss related to foreign currency translation adjustments was driven primarily by the depreciation of the euro, British pound and Brazilian real. During 2019, the decrease in the accumulated other comprehensive loss related to foreign currency translation adjustments was driven primarily by the appreciation of the British pound partially offset by the depreciation of the euro.

<sup>2</sup> The Company uses foreign currency denominated debt to hedge a portion of its net investment in foreign operations against adverse movements in exchange rates. Changes in the value of the debt are recorded in accumulated other comprehensive income (loss). During 2018 and 2019, the decreases in the accumulated other comprehensive loss related to the net investment hedge were driven by the depreciation of the euro. See Note 23 (Derivative and Hedging Instruments) for additional information.

<sup>3</sup> In 2019, the Company entered into treasury rate locks which are accounted for as cash flow hedges. During 2019, in connection with these cash flow hedges, the Company recorded unrealized gains, net of tax, of \$11 million in accumulated other comprehensive income (loss). See Note 23 (Derivative and Hedging Instruments) for additional information.

<sup>4</sup> During 2018, the decrease in the accumulated other comprehensive gain related to the Company's Plans was driven primarily by an actuarial loss within the Vocalink Plan. During 2019, the decrease in the accumulated other comprehensive gain related to the Company's Plans was primarily driven by actuarial losses within the Vocalink and non-U.S. Plans. During 2018 and 2019, amounts reclassified from accumulated other comprehensive income (loss) to earnings, were not material. See Note 14 (Pension, Postretirement and Savings Plans) for additional information.

<sup>5</sup> During 2018 and 2019, gains and losses on available-for-sale investment securities, reclassified from accumulated other comprehensive income (loss) to investment income, were not material. See Note 7 (Investments) for additional information.

## Note 18. Share-Based Payments

In May 2006, the Company implemented the Mastercard Incorporated 2006 Long Term Incentive Plan, which was amended and restated as of June 5, 2012 (the "LTIP"). The LTIP is a stockholder-approved plan that permits the grant of various types of equity awards to employees. The Company has granted Options, RSUs and PSUs under the LTIP. The Company uses the straight-line method of attribution for expensing all equity awards. Compensation expense is recorded net of estimated forfeitures, with estimates adjusted as appropriate.

There are approximately 116 million shares of Class A common stock authorized for equity awards under the LTIP. Although the LTIP permits the issuance of shares of Class B common stock, no such shares have been authorized for issuance. Shares issued as a result of Option exercises and the conversions of RSUs and PSUs were funded primarily with the issuance of new shares of Class A common stock.

## Stock Options

Stock Options expire ten years from the date of grant and vest ratably over four years. For Options granted, a participant's unvested awards are forfeited upon termination. However, in the event a participant terminates employment due to disability or retirement more than six months (seven months for those granted on or after March 1, 2017) after receiving the award, the participant retains all of their awards without providing additional service to the Company. Retirement eligibility is dependent upon age and years of service. Compensation expense continues to be recognized over the vesting period as stated in the LTIP.

The fair value of each Option is estimated on the date of grant using a Black-Scholes option pricing model. The following table presents the weighted-average assumptions used in the valuation and the resulting weighted-average fair value per option granted for the years ended December 31:

	2019	2018	2017
Risk-free rate of return	2.6%	2.7%	2.0%
Expected term (in years)	6.00	6.00	5.00
Expected volatility	19.6%	19.7%	19.3%
Expected dividend yield	0.6%	0.6%	0.8%
Weighted-average fair value per Option granted	\$ 53.09	\$ 40.90	\$ 21.23

The risk-free rate of return was based on the U.S. Treasury yield curve in effect on the date of grant. The expected term and the expected volatility were based on historical Mastercard information. The expected dividend yields were based on the Company's expected annual dividend rate on the date of grant.

The following table summarizes the Company's option activity for the year ended December 31, 2019:

	Options (in millions)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at January 1, 2019	7.6	\$ 93		
Granted	0.9	\$ 227		
Exercised	(1.8)	\$ 71		
Forfeited/expired	(0.1)	\$ 148		
Outstanding at December 31, 2019	<b>6.6</b>	<b>\$ 117</b>	<b>6.2</b>	<b>\$ 1,206</b>
Exercisable at December 31, 2019	<b>3.9</b>	<b>\$ 86</b>	<b>5.1</b>	<b>\$ 836</b>
Options vested and expected to vest at December 31, 2019	<b>6.6</b>	<b>\$ 116</b>	<b>6.2</b>	<b>\$ 1,200</b>

As of December 31, 2019, there was \$34 million of total unrecognized compensation cost related to non-vested Options. The cost is expected to be recognized over a weighted-average period of 2.3 years.

## Restricted and Performance Stock Units

RSUs and PSUs generally vest after three years. For all RSUs and PSUs granted prior to March 2017, a participant's unvested awards are forfeited upon termination of employment. For all RSUs and PSUs granted on or after March 1, 2017, in the event of termination due to job elimination (as defined by the Company), a participant will retain a pro-rata portion of the unvested awards for services performed through the date of termination. In the event a participant terminates employment due to disability or retirement more than six months (seven months for those granted on or after March 1, 2017) after receiving the award, the participant retains all of their awards without providing additional service to the Company. Compensation expense is recognized over the shorter of the vesting periods stated in the LTIP or the date the individual becomes eligible to retire but not less than six months (or seven months for grants awarded on or after March 1, 2017).

The following table summarizes the Company's RSU activity for the year ended December 31, 2019:

	Units	Weighted-Average Grant-Date Fair Value	Aggregate Intrinsic Value
	(in millions)		(in millions)
Outstanding at January 1, 2019	3.7	\$ 117	
Granted	1.0	\$ 226	
Converted	(1.6)	\$ 93	
Forfeited	(0.2)	\$ 154	
Outstanding at December 31, 2019	<b>2.9</b>	<b>\$ 166</b>	<b>\$ 852</b>
RSUs expected to vest at December 31, 2019	<b>2.8</b>	<b>\$ 165</b>	<b>\$ 824</b>

The fair value of each RSU is the closing stock price on the New York Stock Exchange of the Company's Class A common stock on the date of grant, adjusted for the exclusion of dividend equivalents. Upon vesting, a portion of the RSU award may be withheld to satisfy the minimum statutory withholding taxes. The remaining RSUs will be settled in shares of the Company's Class A common stock after the vesting period. As of December 31, 2019, there was \$180 million of total unrecognized compensation cost related to non-vested RSUs. The cost is expected to be recognized over a weighted-average period of 1.8 years.

The following table summarizes the Company's PSU activity for the year ended December 31, 2019:

	Units	Weighted-Average Grant-Date Fair Value	Aggregate Intrinsic Value
	(in millions)		(in millions)
Outstanding at January 1, 2019	0.6	\$ 120	
Granted	0.1	\$ 231	
Converted	(0.4)	\$ 92	
Other <sup>1</sup>	0.2	\$ 126	
Outstanding at December 31, 2019	<b>0.5</b>	<b>\$ 167</b>	<b>\$ 162</b>
PSUs expected to vest at December 31, 2019	<b>0.5</b>	<b>\$ 167</b>	<b>\$ 162</b>

<sup>1</sup> Represents additional shares issued in March 2019 related to the 2016 PSU grant based on performance and market conditions achieved over the three-year measurement period. These shares vested upon issuance.

Since 2013, PSUs containing performance and market conditions have been issued. Performance measures used to determine the actual number of shares that vest after three years include net revenue growth, EPS growth and relative total shareholder return ("TSR"). Relative TSR is considered a market condition, while net revenue and EPS growth are considered performance conditions. The Monte Carlo simulation valuation model is used to determine the grant-date fair value.

Compensation expenses for PSUs are recognized over the requisite service period if it is probable that the performance target will be achieved and subsequently adjusted if the probability assessment changes. As of December 31, 2019, there was \$13 million of total unrecognized compensation cost related to non-vested PSUs. The cost is expected to be recognized over a weighted-average period of 1.8 years.

## Additional Information

The following table includes additional share-based payment information for each of the years ended December 31:

	2019	2018	2017
	(in millions, except weighted-average fair value)		
Share-based compensation expense: Options, RSUs and PSUs	\$ 250	\$ 196	\$ 176
Income tax benefit recognized for equity awards	53	41	57
Income tax benefit realized related to Options exercised	69	53	36
<i>Options:</i>			
Total intrinsic value of Options exercised	317	242	106
<i>RSUs:</i>			
Weighted-average grant-date fair value of awards granted	226	171	112
Total intrinsic value of RSUs converted into shares of Class A common stock	394	194	131
<i>PSUs:</i>			
Weighted-average grant-date fair value of awards granted	231	226	126
Total intrinsic value of PSUs converted into shares of Class A common stock	85	40	13

## Note 19. Commitments

At December 31, 2019, the Company had the following future minimum payments due under noncancelable agreements, primarily related to sponsorships to promote the Mastercard brand and licensing arrangements. The Company has accrued \$20 million of these future payments as of December 31, 2019.

	(in millions)
2020	\$ 404
2021	224
2022	132
2023	42
2024	17
Thereafter	—
Total	\$ 819

## Note 20. Income Taxes

### Components of Income and Income tax expense

The domestic and foreign components of income before income taxes for the years ended December 31 are as follows:

	2019	2018	2017
	(in millions)		
United States	\$ 4,213	\$ 3,510	\$ 3,482
Foreign	5,518	3,694	3,040
Income before income taxes	\$ 9,731	\$ 7,204	\$ 6,522



The total income tax provision for the years ended December 31 is comprised of the following components:

	2019	2018	2017
	(in millions)		
Current			
Federal	\$ 642	\$ 649	\$ 1,704
State and local	81	69	65
Foreign	897	871	752
	<b>1,620</b>	<b>1,589</b>	<b>2,521</b>
Deferred			
Federal	40	(228)	134
State and local	—	(11)	1
Foreign	(47)	(5)	(49)
	<b>(7)</b>	<b>(244)</b>	<b>86</b>
Income tax expense	<b>\$ 1,613</b>	<b>\$ 1,345</b>	<b>\$ 2,607</b>

### Effective Income Tax Rate

A reconciliation of the effective income tax rate to the U.S. federal statutory income tax rate for the years ended December 31, is as follows:

	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
	(in millions, except percentages)					
Income before income taxes	\$ 9,731		\$ 7,204		\$ 6,522	
Federal statutory tax	2,044	21.0 %	1,513	21.0 %	2,283	35.0 %
State tax effect, net of federal benefit	65	0.7 %	46	0.6 %	43	0.7 %
Foreign tax effect	(208)	(2.1)%	(92)	(1.3)%	(380)	(5.8)%
European Commission fine	—	— %	194	2.7 %	—	— %
Foreign tax credits <sup>1</sup>	(32)	(0.3)%	(110)	(1.5)%	(27)	(0.4)%
Transition Tax	(30)	(0.3)%	22	0.3 %	629	9.6 %
Remeasurement of deferred taxes	—	— %	(7)	(0.1)%	157	2.4 %
Windfall benefit	(129)	(1.3)%	(72)	(1.0)%	(43)	(0.7)%
Other, net	(97)	(1.1)%	(149)	(2.0)%	(55)	(0.8)%
Income tax expense	<b>\$ 1,613</b>	<b>16.6 %</b>	<b>\$ 1,345</b>	<b>18.7 %</b>	<b>\$ 2,607</b>	<b>40.0 %</b>

<sup>1</sup> Included within the impact of the foreign tax credits is \$27 million for 2019 and \$90 million for 2018 of tax benefits relating to the carryback of certain foreign tax credits.

The effective income tax rates for the years ended December 31, 2019, 2018 and 2017 were 16.6%, 18.7% and 40.0%, respectively. The effective income tax rate for 2019 was lower than the effective income tax rate for 2018, primarily due to the nondeductible nature of the fine issued by the European Commission in 2018 and a discrete tax benefit related to a favorable court ruling in 2019. These 2019 benefits were partially offset by discrete tax benefits in 2018 primarily related to foreign tax credits generated in 2018 as a result of U.S. tax reform, which can be carried back and utilized in 2017 under transition rules issued by the Department of the Treasury and the Internal Revenue Service.

The effective income tax rate for 2018 was lower than the effective income tax rate for 2017 primarily due to additional tax expense of \$873 million in 2017 attributable to U.S. tax reform (which included provisional amounts of \$825 million related to the one-time deemed repatriation tax on accumulated foreign earnings (the "Transition Tax"), the remeasurement of the Company's net deferred tax asset balance in the U.S. and the recognition of a deferred tax liability related to a change in assertion regarding the indefinite reinvestment of a substantial amount of the Company's foreign earnings, as well as \$48 million due to a foregone foreign tax credit benefit on 2017 repatriations). Additionally, the lower effective income tax rate in 2018 was due to a lower 2018 statutory tax rate in the U.S. and Belgium, a more favorable geographic mix of earnings and discrete tax benefits, relating primarily to \$90 million of foreign tax credits generated in 2018, which can be carried back and utilized in 2017 under transition rules issued by the Department of the Treasury and the Internal Revenue Service, along with provisions for legal matters in the United States. These benefits were partially offset by the

nondeductible nature of the fine issued by the European Commission. See Note 21 (Legal and Regulatory Proceedings) for further discussion of the European Commission fine and U.S. merchant class litigation.

### Singapore Income Tax Rate

In connection with the expansion of the Company's operations in the Asia Pacific, Middle East and Africa region, the Company's subsidiary in Singapore, Mastercard Asia Pacific Pte. Ltd. ("MAPPL") received an incentive grant from the Singapore Ministry of Finance in 2010. The incentive had provided MAPPL with, among other benefits, a reduced income tax rate for the 10-year period commencing January 1, 2010 on taxable income in excess of a base amount. The Company continued to explore business opportunities in this region, resulting in an expansion of the incentives being granted by the Ministry of Finance, including a further reduction to the income tax rate on taxable income in excess of a revised fixed base amount commencing July 1, 2011 and continuing through December 31, 2025. Without the incentive grant, MAPPL would have been subject to the statutory income tax rate on its earnings. For 2019, 2018 and 2017, the impact of the incentive grant received from the Ministry of Finance resulted in a reduction of MAPPL's income tax liability of \$300 million, or \$0.29 per diluted share, \$212 million, or \$0.20 per diluted share, and \$104 million, or \$0.10 per diluted share, respectively.

### Indefinite Reinvestment

During 2019 and 2018, the Company repatriated approximately \$2.5 billion and \$3.3 billion, respectively. As of December 31, 2019 and 2018 the Company had approximately \$3.5 billion and \$2.5 billion, respectively, of accumulated earnings to be repatriated in the future, for which immaterial deferred tax benefits were recorded. The tax effect is primarily related to the estimated foreign exchange impact recognized when earnings are repatriated. The Company expects that foreign withholding taxes associated with these future repatriated earnings will not be material. Earnings of approximately \$0.8 billion remain permanently reinvested and the Company estimates that immaterial U.S. federal and state and local income tax benefit would result, primarily from foreign exchange, if these earnings were to be repatriated.

### Deferred Taxes

Deferred tax assets and liabilities represent the expected future tax consequences of temporary differences between the carrying amounts and the tax basis of assets and liabilities. The components of deferred tax assets and liabilities at December 31 are as follows:

	2019	2018
	(in millions)	
Deferred Tax Assets		
Accrued liabilities	\$ 354	\$ 297
Compensation and benefits	214	210
State taxes and other credits	41	30
Net operating and capital losses	119	104
U.S. foreign tax credits <sup>1</sup>	145	—
Intangible assets	157	170
Other items	94	115
Less: Valuation allowance	(205)	(94)
<b>Total Deferred Tax Assets</b>	<b>919</b>	<b>832</b>
Deferred Tax Liabilities		
Prepaid expenses and other accruals	83	89
Goodwill and intangible assets	187	125
Property, plant and equipment	128	97
Other items	63	18
<b>Total Deferred Tax Liabilities</b>	<b>461</b>	<b>329</b>
<b>Net Deferred Tax Assets</b>	<b>\$ 458</b>	<b>\$ 503</b>

<sup>1</sup> A deferred tax asset has been established in 2019 for \$145 million related to foreign taxes paid in the current period, which are not expected to be utilized as credits in the current or future period, with a corresponding full valuation allowance.

The valuation allowance balance at December 31, 2019 primarily relates to the Company's ability to recognize future tax benefits associated with the carry forward of U.S. foreign tax credits generated in the current period and certain foreign net operating losses. The valuation allowance balance at December 31, 2018 relates primarily to the Company's ability to recognize tax benefits associated

with certain foreign net operating losses. The recognition of the foreign tax credits is dependent upon the realization of future foreign source income in the appropriate foreign tax credit basket in accordance with U.S. federal income tax law. The recognition of the foreign losses is dependent upon the future taxable income in such jurisdictions and the ability under tax law in these jurisdictions to utilize net operating losses following a change in control.

A reconciliation of the beginning and ending balance for the Company's unrecognized tax benefits for the years ended December 31, is as follows:

	2019	2018	2017
	(in millions)		
Beginning balance	\$ 164	\$ 183	\$ 169
Additions:			
Current year tax positions	22	23	21
Prior year tax positions	37	5	9
Reductions:			
Prior year tax positions	(11)	(17)	(1)
Settlements with tax authorities	(2)	(18)	(4)
Expired statute of limitations	(7)	(12)	(11)
Ending balance	<b>\$ 203</b>	<b>\$ 164</b>	<b>\$ 183</b>

The unrecognized tax benefit of \$203 million, if recognized, would reduce the effective income tax rate. In 2019, there was an increase to the Company's unrecognized tax benefits primarily due to various U.S. and non-U.S. tax issues, compared to a reduction in the prior year primarily due to a favorable court decision and settlements with tax authorities in multiple jurisdictions. Further, the information gained related to these matters was considered in measuring uncertain tax benefits recognized for the periods subsequent to the periods settled.

The Company is subject to tax in the U.S., Belgium, Singapore, the United Kingdom and various other foreign jurisdictions, as well as state and local jurisdictions. Uncertain tax positions are reviewed on an ongoing basis and are adjusted after considering facts and circumstances, including progress of tax audits, developments in case law and closing of statutes of limitation. Within the next twelve months, the Company believes that the resolution of certain federal, foreign and state and local examinations are reasonably possible and that a change in estimate, reducing unrecognized tax benefits, may occur. While such a change may be significant, it is not possible to provide a range of the potential change until the examinations progress further or the related statutes of limitation expire. The Company has effectively settled its U.S. federal income tax obligations through 2011. With limited exception, the Company is no longer subject to state and local or foreign examinations by tax authorities for years before 2010.

At December 31, 2019 and 2018, the Company had a net income tax-related interest payable of \$13 million and \$8 million, respectively, in its consolidated balance sheet. Tax-related interest income/(expense) in 2019, 2018 and 2017 was not material. In addition, as of December 31, 2019 and 2018, the amounts the Company has recognized for penalties payable in its consolidated balance sheet were not material.

## Note 21. Legal and Regulatory Proceedings

Mastercard is a party to legal and regulatory proceedings with respect to a variety of matters in the ordinary course of business. Some of these proceedings are based on complex claims involving substantial uncertainties and unascertainable damages. Accordingly, except as discussed below, it is not possible to determine the probability of loss or estimate damages, and therefore, Mastercard has not established reserves for any of these proceedings. When the Company determines that a loss is both probable and reasonably estimable, Mastercard records a liability and discloses the amount of the liability if it is material. When a material loss contingency is only reasonably possible, Mastercard does not record a liability, but instead discloses the nature and the amount of the claim, and an estimate of the loss or range of loss, if such an estimate can be made. Unless otherwise stated below with respect to these matters, Mastercard cannot provide an estimate of the possible loss or range of loss based on one or more of the following reasons: (1) actual or potential plaintiffs have not claimed an amount of monetary damages or the amounts are unsupported or exaggerated, (2) the matters are in early stages, (3) there is uncertainty as to the outcome of pending appeals or motions, (4) there are significant factual issues to be resolved, (5) the existence in many such proceedings of multiple defendants or potential defendants whose share of any potential financial responsibility has yet to be determined and/or (6) there are novel legal issues presented. Furthermore, except as identified with respect to the matters below, Mastercard does not believe that the outcome of any individual existing legal or regulatory proceeding to which it is a party will have a material adverse effect on its results of operations, financial condition or overall business. However, an adverse judgment or other outcome or settlement with respect to any proceedings discussed below could result in fines or payments by Mastercard and/or could require Mastercard to change its business practices. In addition, an adverse outcome in a regulatory proceeding could lead to the filing of civil damage claims and possibly result in significant damage awards. Any of these events could have a material adverse effect on Mastercard's results of operations, financial condition and overall business.

### Interchange Litigation and Regulatory Proceedings

Mastercard's interchange fees and other practices are subject to regulatory, legal review and/or challenges in a number of jurisdictions, including the proceedings described below. When taken as a whole, the resulting decisions, regulations and legislation with respect to interchange fees and acceptance practices may have a material adverse effect on the Company's prospects for future growth and its overall results of operations, financial position and cash flows.

*United States.* In June 2005, the first of a series of complaints were filed on behalf of merchants (the majority of the complaints were styled as class actions, although a few complaints were filed on behalf of individual merchant plaintiffs) against Mastercard International, Visa U.S.A., Inc., Visa International Service Association and a number of financial institutions. Taken together, the claims in the complaints were generally brought under both Sections 1 and 2 of the Sherman Act, which prohibit monopolization and attempts or conspiracies to monopolize a particular industry, and some of these complaints contain unfair competition law claims under state law. The complaints allege, among other things, that Mastercard, Visa, and certain financial institutions conspired to set the price of interchange fees, enacted point of sale acceptance rules (including the no surcharge rule) in violation of antitrust laws and engaged in unlawful tying and bundling of certain products and services. The cases were consolidated for pre-trial proceedings in the U.S. District Court for the Eastern District of New York in MDL No. 1720. The plaintiffs filed a consolidated class action complaint that seeks treble damages.

In July 2006, the group of purported merchant class plaintiffs filed a supplemental complaint alleging that Mastercard's initial public offering of its Class A Common Stock in May 2006 (the "IPO") and certain purported agreements entered into between Mastercard and financial institutions in connection with the IPO: (1) violate U.S. antitrust laws and (2) constituted a fraudulent conveyance because the financial institutions allegedly attempted to release, without adequate consideration, Mastercard's right to assess them for Mastercard's litigation liabilities. The class plaintiffs sought treble damages and injunctive relief including, but not limited to, an order reversing and unwinding the IPO.

In February 2011, Mastercard and Mastercard International entered into each of: (1) an omnibus judgment sharing and settlement sharing agreement with Visa Inc., Visa U.S.A. Inc. and Visa International Service Association and a number of financial institutions; and (2) a Mastercard settlement and judgment sharing agreement with a number of financial institutions. The agreements provide for the apportionment of certain costs and liabilities which Mastercard, the Visa parties and the financial institutions may incur, jointly and/or severally, in the event of an adverse judgment or settlement of one or all of the cases in the merchant litigations. Among a number of scenarios addressed by the agreements, in the event of a global settlement involving the Visa parties, the financial institutions and Mastercard, Mastercard would pay 12% of the monetary portion of the settlement. In the event of a settlement involving only Mastercard and the financial institutions with respect to their issuance of Mastercard cards, Mastercard would pay 36% of the monetary portion of such settlement.

In October 2012, the parties entered into a definitive settlement agreement with respect to the merchant class litigation (including with respect to the claims related to the IPO) and the defendants separately entered into a settlement agreement with the individual merchant plaintiffs. The settlements included cash payments that were apportioned among the defendants pursuant to the omnibus judgment sharing and settlement sharing agreement described above. Mastercard also agreed to provide class members with a short-term reduction in default credit interchange rates and to modify certain of its business practices, including its "no surcharge" rule. The court

granted final approval of the settlement in December 2013, and objectors to the settlement appealed that decision to the U.S. Court of Appeals for the Second Circuit. In June 2016, the court of appeals vacated the class action certification, reversed the settlement approval and sent the case back to the district court for further proceedings. The court of appeals' ruling was based primarily on whether the merchants were adequately represented by counsel in the settlement. As a result of the appellate court ruling, the district court divided the merchants' claims into two separate classes - monetary damages claims (the "Damages Class") and claims seeking changes to business practices (the "Rules Relief Class"). The court appointed separate counsel for each class.

In September 2018, the parties to the Damages Class litigation entered into a class settlement agreement to resolve the Damages Class claims. Mastercard increased its reserve by \$237 million during 2018 to reflect both its expected financial obligation under the Damages Class settlement agreement and the filed and anticipated opt-out merchant cases. The time period during which Damages Class members were permitted to opt out of the class settlement agreement ended in July 2019 with merchants representing slightly more than 25% of the Damages Class interchange volume choosing to opt out of the settlement. The district court granted final approval of the settlement in December 2019. The district court's settlement approval order has been appealed. Mastercard has commenced settlement negotiations with a number of the opt-out merchants and has reached settlements and/or agreements in principle to settle a number of these claims. The Damages Class settlement agreement does not relate to the Rules Relief Class claims. Separate settlement negotiations with the Rules Relief Class are ongoing.

As of December 31, 2019 and 2018, Mastercard had accrued a liability of \$914 million as a reserve for both the Damages Class litigation and the filed and anticipated opt-out merchant cases. As of December 31, 2019 and 2018, Mastercard had \$584 million and \$553 million, respectively, in a qualified cash settlement fund related to the Damages Class litigation and classified as restricted cash on its consolidated balance sheet. During the first quarter of 2019, Mastercard increased its qualified cash settlement fund by \$108 million in accordance with a January 2019 preliminary approval of the settlement. The Damages Class settlement agreement provided for a return to the defendants of a portion of the cash settlement fund, based upon the percentage of interchange volume represented by the opt out merchants. During the fourth quarter of 2019, \$84 million of the qualified cash settlement fund was reclassified from restricted cash to cash and cash equivalents in accordance with the December 2019 final approval of the settlement.

The reserve as of December 31, 2019 for both the Damages Class litigation and the filed opt-out merchants represents Mastercard's best estimate of its probable liabilities in these matters. The portion of the accrued liability relating to both the opt-out merchants and the Damages Class litigation settlement does not represent an estimate of a loss, if any, if the matters were litigated to a final outcome. Mastercard cannot estimate the potential liability if that were to occur.

*Canada.* In December 2010, a proposed class action complaint was commenced against Mastercard in Quebec on behalf of Canadian merchants. The suit essentially repeated the allegations and arguments of a previously filed application by the Canadian Competition Bureau to the Canadian Competition Tribunal (dismissed in Mastercard's favor) concerning certain Mastercard rules related to point-of-sale acceptance, including the "honor all cards" and "no surcharge" rules. The Quebec suit sought compensatory and punitive damages in unspecified amounts, as well as injunctive relief. In the first half of 2011, additional purported class action lawsuits were commenced in British Columbia and Ontario against Mastercard, Visa and a number of large Canadian financial institutions. The British Columbia suit sought compensatory damages in unspecified amounts, and the Ontario suit sought compensatory damages of \$5 billion on the basis of alleged conspiracy and various alleged breaches of the Canadian Competition Act. Additional purported class action complaints were commenced in Saskatchewan and Alberta with claims that largely mirror those in the other suits. In June 2017, Mastercard entered into a class settlement agreement to resolve all of the Canadian class action litigation. The settlement, which requires Mastercard to make a cash payment and modify its "no surcharge" rule, has received court approval in each Canadian province. Objectors to the settlement have sought to appeal the approval orders. Certain appellate courts have rejected the objectors' appeals, while outstanding appeals remain in a few provinces. In 2017, Mastercard recorded a provision for litigation of \$15 million related to this matter.

*Europe.* In July 2015, the European Commission ("EC") issued a Statement of Objections related to Mastercard's interregional interchange fees and central acquiring rule within the European Economic Area (the "EEA"). The Statement of Objections, which followed an investigation opened in 2013, included preliminary conclusions concerning the alleged anticompetitive effects of these practices. In December 2018, Mastercard announced the anticipated resolution of the EC's investigation. With respect to interregional interchange fees, Mastercard made a settlement proposal whereby it would make changes to its interregional interchange fees. The EC issued a decision accepting the settlement in April 2019, with changes to interregional interchange fees going into effect in the fourth quarter of 2019. In addition, with respect to Mastercard's historic central acquiring rule, the EC issued a negative decision in January 2019. The EC's negative decision covers a period of time of less than two years before the rule's modification. The rule was modified in late 2015 to comply with the requirements of the EEA Interchange Fee Regulation. The decision does not require any modification of Mastercard's current business practices but included a fine of €571 million, which was paid in April 2019. Mastercard incurred a charge of \$654 million in 2018 in relation to this matter.

Since May 2012, a number of United Kingdom ("U.K.") retailers filed claims or threatened litigation against Mastercard seeking damages for alleged anti-competitive conduct with respect to Mastercard's cross-border interchange fees and its U.K. and Ireland domestic

interchange fees (the “U.K. Merchant claimants”). In addition, Mastercard, has faced similar filed or threatened litigation by merchants with respect to interchange rates in other countries in Europe (the “Pan-European Merchant claimants”). In aggregate, the alleged damages claims from the U.K. and Pan-European Merchant claimants were in the amount of approximately £3 billion (approximately \$4 billion as of December 31, 2019). Mastercard has resolved over £2 billion (approximately \$3 billion as of December 31, 2019) of these damages claims through settlement or judgment. Since June 2015, Mastercard has recorded litigation provisions for settlements, judgments and legal fees relating to these claims, including charges of \$237 million in 2018. As detailed below, Mastercard continues to litigate with the remaining U.K. and Pan-European Merchant claimants and it has submitted statements of defense disputing liability and damages claims.

In January 2017, Mastercard received a liability judgment in its favor on all significant matters in a separate action brought by ten of the U.K. Merchant claimants. Three of the U.K. Merchant claimants appealed the judgment, and these appeals were combined with Mastercard’s appeal of a 2016 judgment in favor of one U.K. merchant. In July 2018, the U.K. appellate court ruled against both Mastercard and Visa on two of the three legal issues being considered, concluding that U.K. interchange rates restricted competition and that they were not objectively necessary for the payment networks. The appellate court sent the cases back to trial for reconsideration on the remaining issue concerning the “lawful” level of interchange. The U.K. Supreme Court granted the parties permission to appeal the appellate court’s rulings and oral argument on the appeals was heard in January 2020. Mastercard expects the litigation process to be delayed pending the decision of the U.K. Supreme Court on the appeals.

In September 2016, a proposed collective action was filed in the United Kingdom on behalf of U.K. consumers seeking damages for intra-EEA and domestic U.K. interchange fees that were allegedly passed on to consumers by merchants between 1992 and 2008. The complaint, which seeks to leverage the European Commission’s 2007 decision on intra-EEA interchange fees, claims damages in an amount that exceeds £14 billion (approximately \$17 billion as of December 31, 2019). In July 2017, the trial court denied the plaintiffs’ application for the case to proceed as a collective action. In April 2019, the U.K. appellate court granted the plaintiffs’ appeal of the trial court’s decision and sent the case back to the trial court for a re-hearing on the plaintiffs’ collective action application. Mastercard has been granted permission to appeal the appellate court ruling to the U.K. Supreme Court and oral argument on that appeal is scheduled to occur in May 2020.

#### **ATM Non-Discrimination Rule Surcharge Complaints**

In October 2011, a trade association of independent Automated Teller Machine (“ATM”) operators and 13 independent ATM operators filed a complaint styled as a class action lawsuit in the U.S. District Court for the District of Columbia against both Mastercard and Visa (the “ATM Operators Complaint”). Plaintiffs seek to represent a class of non-bank operators of ATM terminals that operate in the United States with the discretion to determine the price of the ATM access fee for the terminals they operate. Plaintiffs allege that Mastercard and Visa have violated Section 1 of the Sherman Act by imposing rules that require ATM operators to charge non-discriminatory ATM surcharges for transactions processed over Mastercard’s and Visa’s respective networks that are not greater than the surcharge for transactions over other networks accepted at the same ATM. Plaintiffs seek both injunctive and monetary relief equal to treble the damages they claim to have sustained as a result of the alleged violations and their costs of suit, including attorneys’ fees.

Subsequently, multiple related complaints were filed in the U.S. District Court for the District of Columbia alleging both federal antitrust and multiple state unfair competition, consumer protection and common law claims against Mastercard and Visa on behalf of putative classes of users of ATM services (the “ATM Consumer Complaints”). The claims in these actions largely mirror the allegations made in the ATM Operators Complaint, although these complaints seek damages on behalf of consumers of ATM services who pay allegedly inflated ATM fees at both bank and non-bank ATM operators as a result of the defendants’ ATM rules. Plaintiffs seek both injunctive and monetary relief equal to treble the damages they claim to have sustained as a result of the alleged violations and their costs of suit, including attorneys’ fees.

In January 2012, the plaintiffs in the ATM Operators Complaint and the ATM Consumer Complaints filed amended class action complaints that largely mirror their prior complaints. In February 2013, the district court granted Mastercard’s motion to dismiss the complaints for failure to state a claim. On appeal, the Court of Appeals reversed the district court’s order in August 2015 and sent the case back for further proceedings. In September 2019, the plaintiffs filed their motions for class certification in which the plaintiffs, in aggregate, allege over \$1 billion in damages against all of the defendants. Mastercard intends to vigorously defend against both the plaintiffs’ liability and damages claims and to oppose class certification. Mastercard expects briefing on class certification to be completed in the second quarter of 2020.

### U.S. Liability Shift Litigation

In March 2016, a proposed U.S. merchant class action complaint was filed in federal court in California alleging that Mastercard, Visa, American Express and Discover (the “Network Defendants”), EMVCo and a number of issuing banks (the “Bank Defendants”) engaged in a conspiracy to shift fraud liability for card present transactions from issuing banks to merchants not yet in compliance with the standards for EMV chip cards in the United States (the “EMV Liability Shift”), in violation of the Sherman Act and California law. Plaintiffs allege damages equal to the value of all chargebacks for which class members became liable as a result of the EMV Liability Shift on October 1, 2015. The plaintiffs seek treble damages, attorney’s fees and costs and an injunction against future violations of governing law, and the defendants have filed a motion to dismiss. In September 2016, the court denied the Network Defendants’ motion to dismiss the complaint, but granted such a motion for EMVCo and the Bank Defendants. In May 2017, the court transferred the case to New York so that discovery could be coordinated with the U.S. merchant class interchange litigation described above. The plaintiffs have filed a renewed motion for class certification, following the district court’s denial of their initial motion.

### Telephone Consumer Protection Class Action

Mastercard is a defendant in a Telephone Consumer Protection Act (“TCPA”) class action pending in Florida. The plaintiffs are individuals and businesses who allege that approximately 381,000 unsolicited faxes were sent to them advertising a Mastercard co-brand card issued by First Arkansas Bank (“FAB”). The TCPA provides for uncapped statutory damages of \$500 per fax. Mastercard has asserted various defenses to the claims, and has notified FAB of an indemnity claim that it has (which FAB has disputed). In June 2018, the court granted Mastercard’s motion to stay the proceedings until the Federal Communications Commission (“FCC”) makes a decision on the application of the TCPA to online fax services. In December 2019, the FCC issued a declaratory ruling clarifying that the TCPA does not apply to faxes sent to online fax services that are received via e-mail. As a result of the ruling, the stay of the litigation was lifted in January 2020.

## Note 22. Settlement and Other Risk Management

Mastercard’s rules guarantee the settlement of many of the transactions between its customers (“settlement risk”). Settlement exposure is the settlement risk to customers under Mastercard’s rules due to the difference in timing between the payment transaction date and subsequent settlement. While the term and amount of the guarantee are unlimited, the duration of settlement exposure is short term and typically limited to a few days.

Gross settlement exposure is estimated using the average daily payment volume during the three months ended December 31, 2019 multiplied by the estimated number of days of exposure. The Company has global risk management policies and procedures, which include risk standards, to provide a framework for managing the Company’s settlement risk and exposure. In the event of a failed customer, Mastercard may pursue one or more remedies available under the Company’s rules to recover potential losses. Historically, the Company has experienced a low level of losses from customer failures.

As part of its policies, Mastercard requires certain customers that are not in compliance with the Company’s risk standards to post collateral, such as cash, letters of credit, or guarantees. This requirement is based on a review of the individual risk circumstances for each customer. Mastercard monitors its credit risk portfolio on a regular basis and the adequacy of collateral on hand. Additionally, from time to time, the Company reviews its risk management methodology and standards. As such, the amounts of estimated settlement exposure are revised as necessary.

The Company’s estimated settlement exposure was as follows at December 31:

	2019	2018
	(in millions)	
Gross settlement exposure	\$ 55,800	\$ 49,666
Collateral held for settlement exposure	(4,772)	(4,711)
Net uncollateralized settlement exposure	<b>\$ 51,028</b>	<b>\$ 44,955</b>

Mastercard also provides guarantees to customers and certain other counterparties indemnifying them from losses stemming from failures of third parties to perform duties. This includes guarantees of Mastercard-branded travelers cheques issued, but not yet cashed of \$367 million and \$377 million at December 31, 2019 and 2018, respectively, of which \$290 million and \$297 million at December 31, 2019 and 2018, respectively, is mitigated by collateral arrangements. In addition, the Company enters into agreements in the ordinary course of business under which the Company agrees to indemnify third parties against damages, losses and expenses incurred in connection with legal and other proceedings arising from relationships or transactions with the Company. Certain indemnifications do not provide a stated maximum exposure. As the extent of the Company’s obligations under these agreements depends entirely upon the occurrence of future events, the Company’s potential future liability under these agreements is not determinable. Historically, payments made by the Company under these types of contractual arrangements have not been material.

## Note 23. Derivative and Hedging Instruments

The Company monitors and manages its foreign currency and interest rate exposures as part of its overall risk management program which focuses on the unpredictability of financial markets and seeks to reduce the potentially adverse effects that the volatility of these markets may have on its operating results. A primary objective of the Company's risk management strategies is to reduce the financial impact that may arise from volatility in foreign currency exchange rates principally through the use of both foreign exchange derivative contracts (Derivatives) and foreign currency denominated debt (Net Investment Hedge). In addition, the Company may enter into interest rate derivative contracts to manage the effects of interest rate movements on the Company's aggregate liability portfolio, including potential future debt issuances (Cash Flow Hedges).

### Foreign Exchange Risk

#### Derivatives

The Company enters into foreign exchange derivative contracts to manage transactional currency exposure associated with anticipated receipts and disbursements which are valued based on currencies other than the functional currency of the entity. The Company may also enter into foreign exchange derivative contracts to offset possible changes in value due to foreign exchange fluctuations of assets and liabilities. The objective of these activities is to reduce the Company's exposure to gains and losses resulting from fluctuations of foreign currencies against its functional currencies.

The Company's foreign exchange derivative contracts are summarized below:

	December 31, 2019		December 31, 2018	
	Notional	Estimated Fair Value	Notional	Estimated Fair Value
	(in millions)			
Commitments to purchase foreign currency	\$ 185	\$ 3	\$ 34	\$ (1)
Commitments to sell foreign currency	1,506	(25)	1,066	26
Options to sell foreign currency	21	2	25	4
Balance sheet location				
Prepaid expenses and other current assets <sup>1</sup>		\$ 12		\$ 35
Other current liabilities <sup>1</sup>		(32)		(6)

<sup>1</sup> The derivative contracts are subject to enforceable master netting arrangements, which contain various netting and setoff provisions.

The amount of gain (loss) recognized on the consolidated statement of operations for the contracts to purchase and sell foreign currency is summarized below:

	Year Ended December 31,		
	2019	2018	2017
	(in millions)		
Foreign exchange derivative contracts			
General and administrative	\$ (39)	\$ 53	\$ (75)

The fair value of the foreign exchange derivative contracts generally reflects the estimated amounts that the Company would receive (or pay), on a pre-tax basis, to terminate the contracts. The terms of the foreign exchange derivative contracts are generally less than 18 months. The Company had no deferred gains or losses related to foreign exchange contracts in accumulated other comprehensive income as of December 31, 2019 and 2018, as these contracts were not designated as hedging instruments for accounting.

The Company's derivative financial instruments are subject to both market and counterparty credit risk. Market risk is the potential for economic losses to be incurred on market risk sensitive instruments arising from adverse changes in market factors such as foreign currency exchange rates, interest rates and other related variables. Counterparty credit risk is the risk of loss due to failure of the counterparty to perform its obligations in accordance with contractual terms. To mitigate counterparty credit risk, the Company enters into derivative contracts with a diversified group of selected financial institutions based upon their credit ratings and other factors. Generally, the Company does not obtain collateral related to derivatives because of the high credit ratings of the counterparties.



### Net Investment Hedge

The Company uses foreign currency denominated debt to hedge a portion of its net investment in foreign operations against adverse movements in exchange rates, with changes in the value of the debt recorded within currency translation adjustment in accumulated other comprehensive income (loss). In 2015, the Company designated its €1.65 billion euro-denominated debt as a net investment hedge for a portion of its net investment in European operations. As of December 31, 2019, the Company had a net foreign currency transaction pre-tax loss of \$84 million in accumulated other comprehensive income (loss) associated with hedging activity.

### Interest Rate Risk

#### Cash Flow Hedges

The Company is exposed to interest rate volatility on future debt issuances. To manage this risk, in the fourth quarter of 2019, the Company entered into treasury rate locks to lock the benchmark rate on a portion of the interest payments related to forecasted debt issuances. These locks are linked to future interest payments on anticipated U.S. dollar debt issuances forecasted to occur during 2020 and are accounted for as cash flow hedges. The maximum length of time over which the Company has hedged its exposure to the variability in future cash flows is 30 years. As of December 31, 2019, the total notional amount of interest rate contracts outstanding was \$1 billion. The Company did not have any derivative instruments relating to this program outstanding as of December 31, 2018.

As of December 31, 2019, in connection with these cash flow hedges, the Company recorded pre-tax net unrealized gains of \$14 million in accumulated other comprehensive income. As of December 31, 2019, the fair value of these contracts was \$14 million and is included in prepaid expenses and other current assets on the consolidated balance sheet.

## Note 24. Segment Reporting

Mastercard has concluded it has one reportable operating segment, "Payment Solutions." Mastercard's President and Chief Executive Officer has been identified as the chief operating decision-maker. All of the Company's activities are interrelated, and each activity is dependent upon and supportive of the other. Accordingly, all significant operating decisions are based upon analysis of Mastercard at the consolidated level.

Revenue by geographic market is based on the location of the Company's customer that issued the card, as well as the location of the merchant acquirer where the card is being used. Revenue generated in the U.S. was approximately 32% of total revenue in 2019, 33% in 2018 and 35% in 2017. No individual country, other than the U.S., generated more than 10% of total revenue in those periods. Mastercard did not have any individual customer that generated greater than 10% of net revenue in 2019, 2018 or 2017.

The following table reflects the geographical location of the Company's property, equipment and right-of-use assets, net, as of December 31:

	2019	2018	2017
	(in millions)		
United States	\$ 1,147	\$ 613	\$ 572
Other countries	681	308	257
<b>Total</b>	<b>\$ 1,828</b>	<b>\$ 921</b>	<b>\$ 829</b>

## Note 25. Summary of Quarterly Data (Unaudited)

	2019 Quarter Ended					2019 Total
	March 31	June 30	September 30	December 31		
	(in millions, except per share data)					
Net revenue	\$ 3,889	\$ 4,113	\$ 4,467	\$ 4,414	\$	16,883
Operating income	2,213	2,397	2,655	2,399		9,664
Net income	1,862	2,048	2,108	2,100		8,118
Basic earnings per share	\$ 1.81	\$ 2.01	\$ 2.08	\$ 2.08	\$	7.98
Basic weighted-average shares outstanding	1,026	1,020	1,013	1,008		1,017
Diluted earnings per share	\$ 1.80	\$ 2.00	\$ 2.07	\$ 2.07	\$	7.94
Diluted weighted-average shares outstanding	1,032	1,025	1,019	1,013		1,022

	2018 Quarter Ended					2018 Total
	March 31	June 30	September 30	December 31		
	(in millions, except per share data)					
Net revenue	\$ 3,580	\$ 3,665	\$ 3,898	\$ 3,807	\$	14,950
Operating income	1,825	1,936	2,287	1,234		7,282
Net income	1,492	1,569	1,899	899		5,859
Basic earnings per share	\$ 1.42	\$ 1.50	\$ 1.83	\$ 0.87	\$	5.63
Basic weighted-average shares outstanding	1,051	1,043	1,037	1,032		1,041
Diluted earnings per share	\$ 1.41	\$ 1.50	\$ 1.82	\$ 0.87	\$	5.60
Diluted weighted-average shares outstanding	1,057	1,049	1,043	1,038		1,047

Note: Tables may not sum due to rounding.

## Item 9. Changes in and disagreements with accountants on accounting and financial disclosure

Not applicable.

### Item 9A. Controls and procedures

#### Evaluation of Disclosure Controls and Procedures

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 designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and to ensure that information required to be disclosed is accumulated and communicated to management, including our President and Chief Executive Officer and our Chief Financial Officer, to allow timely decisions regarding disclosure. The President and Chief Executive Officer and the Chief Financial Officer, with assistance from other members of management, have reviewed the effectiveness of our disclosure controls and procedures as of December 31, 2019 and, based on their evaluation, have concluded that the disclosure controls and procedures were effective as of such date.

#### Internal Control over Financial Reporting

In addition, Mastercard Incorporated’s management assessed the effectiveness of Mastercard’s internal control over financial reporting as of December 31, 2019. Management’s report on internal control over financial reporting is included in Part II, Item 8. PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, on the effectiveness of our internal control over financial reporting.

#### Changes in Internal Control over Financial Reporting

There was no change in Mastercard’s internal control over financial reporting that occurred during the three months ended December 31, 2019 that has materially affected, or is reasonably likely to materially affect, Mastercard’s internal control over financial reporting.

### Item 9B. Other Information

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, we hereby incorporate by reference herein the disclosure contained in Exhibit 99.1 of this Report.

# PART III

Item 10. Directors, executive officers and corporate governance

Item 11. Executive compensation

Item 12. Security ownership of certain beneficial owners and management and related stockholder matters

Item 13. Certain relationships and related transactions, and director independence

Item 14. Principal accountant fees and services

## Item 10. Directors, executive officers and corporate governance

Information regarding our executive officers is included in section “Information about our executive officers” in Part I of this Report. Additional information required by this Item with respect to our directors and executive officers, code of ethics, procedures for recommending nominees, audit committee, audit committee financial experts and compliance with Section 16(a) of the Exchange Act will appear in our definitive proxy statement to be filed with the SEC and delivered to stockholders in connection with our 2020 annual meeting of stockholders (the “Proxy Statement”).

The aforementioned information in the Proxy Statement is incorporated by reference into this Report.

## Item 11. Executive compensation

The information required by this Item with respect to executive officer and director compensation will appear in the Proxy Statement and is incorporated by reference into this Report.

## Item 12. Security ownership of certain beneficial owners and management and related stockholder matters

The information required by this Item with respect to security ownership of certain beneficial owners and management equity and compensation plans will appear in the Proxy Statement and is incorporated by reference into this Report.

## Item 13. Certain relationships and related transactions, and director independence

The information required by this Item with respect to transactions with related persons, the review, approval or ratification of such transactions and director independence will appear in the Proxy Statement and is incorporated by reference into this Report.

## Item 14. Principal accountant fees and services

The information required by this Item with respect to auditors’ services and fees will appear in the Proxy Statement and is incorporated by reference into this Report.

# PART IV

Item 15. Exhibits and financial statement schedules

Item 16. Form 10-K summary

## Item 15. Exhibits and financial statement schedules

(a) The following documents are filed as part of this Report:

1 Consolidated Financial Statements

See Index to Consolidated Financial Statements in Part II, Item 8.

2 Consolidated Financial Statement Schedules

None.

3 The following exhibits are filed as part of this Report or, where indicated, were previously filed and are hereby incorporated by reference:

Refer to the Exhibit Index included herein.

## Item 16. Form 10-K summary

None.

## Exhibit index

Exhibit number	Exhibit Description
3.1(a)	Amended and Restated Certificate of Incorporation of Mastercard Incorporated (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed September 29, 2016 (File No. 001-32877)).
3.1(b)	Amended and Restated Bylaws of Mastercard Incorporated (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed September 29, 2016 (File No. 001-32877)).
4.1	Indenture, dated as of March 31, 2014, between the Company and Deutsche Bank Trust Company Americas, as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on March 31, 2014 (File No. 001-32877)).
4.2	Officer's Certificate of the Company, dated as of March 31, 2014 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on March 31, 2014 (File No. 001-32877)).
4.3	Form of Global Note representing the Company's 2.000% Notes due 2019 (included in Officer's Certificate of the Company, dated as of March 31, 2014) (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed on March 31, 2014 (File No. 001-32877)).
4.4	Form of Global Note representing the Company's 3.375% Notes due 2024 (included in Officer's Certificate of the Company, dated as of March 31, 2014) (incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K filed on March 31, 2014 (File No. 001-32877)).
4.5	Officer's Certificate of the Company, dated as of December 1, 2015 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on December 1, 2015 (File No. 001-32877)).
4.6	Form of Global Note representing the Company's 1.100% Notes due 2022 (included in Officer's Certificate of the Company, dated as of December 1, 2015) (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on December 1, 2015 (File No. 001-32877)).
4.7	Form of Global Note representing the Company's 2.100% Notes due 2027 (included in Officer's Certificate of the Company, dated as of December 1, 2015) (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed on December 1, 2015 (File No. 001-32877)).
4.8	Form of Global Note representing the Company's 2.500% Notes due 2030 (included in Officer's Certificate of the Company, dated as of December 1, 2015) (incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K filed on December 1, 2015 (File No. 001-32877)).
4.9	Officer's Certificate of the Company, dated as of November 21, 2016 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on November 21, 2016 (File No. 001-32877)).
4.10	Form of Global Note representing the Company's 2.000% Notes due 2021 (included in Officer's Certificate of the Company, dated as of November 21, 2016) (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on November 21, 2016 (File No. 001-32877)).
4.11	Form of Global Note representing the Company's 2.950% Notes due 2026 (included in Officer's Certificate of the Company, dated as of November 21, 2016) (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed on November 21, 2016 (File No. 001-32877)).
4.12	Form of Global Note representing the Company's 3.800% Notes due 2046 (included in Officer's Certificate of the Company, dated as of November 21, 2016) (incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K filed on November 21, 2016 (File No. 001-32877)).
4.13	Officer's Certificate of the Company, dated as of February 26, 2018 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on February 26, 2018 (File No. 001-32877)).
4.14	Form of Global Note representing the Company's 3.5% Notes due 2028 (included in Officer's Certificate of the Company, dated as of February 26, 2018) (incorporated by reference to Exhibit 4.1 of the of the Company's Current Report on Form 8-K filed on February 26, 2018 (File No. 001-32877)).
4.15	Form of Global Note representing the Company's 3.95% Notes due 2048 (included in Officer's Certificate of the Company, dated as of February 26, 2018) (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on February 26, 2018 (File No. 001-32877)).
4.16	Officer's Certificate of the Company, dated as of May 31, 2019 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 31, 2019 (File No. 001-32877)).



4.17	Form of Global Note representing the Company's 2.950% Notes due 2029 (included in Officer's Certificate of the Company, dated as of May 31, 2019) (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 31, 2019 (File No. 001-32877)).
4.18	Form of Global Note representing the Company's 3.650% Notes due 2049 (included in Officer's Certificate of the Company, dated as of May 31, 2019) (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 31, 2019 (File No. 001-32877)).
4.19	Officer's Certificate of the Company, dated as of December 3, 2019 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on December 3, 2019 (File No. 001-32877)).
4.20	Form of Global Note representing the Company's 2.000% Notes due 2025 (included in Officer's Certificate of the Company, dated as of December 3, 2019) (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on December 3, 2019 (File No. 001-32877)).
4.21*	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
10.1*	\$6,000,000,000 Amended and Restated Credit Agreement, dated as of November 14, 2019, among Mastercard Incorporated, the several lenders and agents from time to time party thereto, Citibank, N.A., as managing administrative agent and JPMorgan Chase Bank, N.A. as administrative agent.
10.2+	Employment Agreement between Mastercard International Incorporated and Ajaypal Banga, dated as of July 1, 2010 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 8, 2010 (File No. 001-32877)).
10.3+	Employment Agreement between Martina Hund-Mejean and Mastercard International, amended and restated as of December 24, 2012 (incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K filed February 14, 2013 (File No. 001-32877)).
10.3.1+	Amendment to Amended and Restated Employment Agreement between Martina Hund-Mejean and Mastercard International, dated as of December 21, 2017 (incorporated by reference to Exhibit 10.3.1 to the Company's Annual Report on Form 10-K filed February 14, 2018 (File No. 001-32877)).
10.4+	Contract of Employment between Mastercard UK Management Services Limited and Ann Cairns, amended and restated as of April 5, 2018 (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed May 2, 2018 (File No. 001-32877)).
10.4.1+	Deed of Employment between Mastercard UK Management Services Limited and Ann Cairns, dated July 6, 2011 (incorporated by reference to Exhibit 10.8.2 to the Company's Annual Report on Form 10-K filed February 16, 2012 (File No. 001-32877)).
10.5+	Description of Employment Arrangement with Craig Vosburg (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed May 2, 2018 (File No. 001-32877)).
10.6+	Description of Employment Arrangement with Gilberto Caldart (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q filed April 30, 2019 (File No. 001-32877)).
10.7+	Description of Employment Arrangement with Tim Murphy (incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed April 30, 2019 (File No. 001-32877)).
10.8+	Mastercard International Senior Executive Annual Incentive Compensation Plan, as amended and restated effective June 9, 2015 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 10, 2015 (File No. 001-32877)).
10.9+	Mastercard International Incorporated Restoration Program, as amended and restated January 1, 2007 unless otherwise provided (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K filed February 19, 2009 (File No. 001-32877)).
10.10+	Mastercard Incorporated Deferral Plan, as amended and restated effective December 1, 2008 for account balances established after December 31, 2004 (incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K filed February 19, 2009 (File No. 001-32877)).
10.11+	Mastercard Incorporated 2006 Long Term Incentive Plan, amended and restated effective June 5, 2012 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed August 1, 2012 (File No. 001-32877)).
10.12+	Form of Restricted Stock Unit Agreement for awards under 2006 Long Term Incentive Plan (effective for awards granted on and subsequent to March 1, 2019) (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed April 30, 2019 (File No. 001-32877)).

10.13+	Form of Stock Option Agreement for awards under 2006 Long Term Incentive Plan (effective for awards granted on and subsequent to March 1, 2019) (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed April 30, 2019 (File No. 001-32877)).
10.14+	Form of Performance Unit Agreement for awards under 2006 Long Term Incentive Plan (effective for awards granted on and subsequent to March 1, 2019) (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed April 30, 2019 (File No. 001-32877)).
10.15+	Form of Mastercard Incorporated Long Term Incentive Plan Non-Competition and Non-Solicitation Agreement for named executive officers (incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K filed February 16, 2012 (File No. 001-32877)).
10.16+	Amended and Restated Mastercard International Incorporated Executive Severance Plan, amended and restated as of April 10, 2018 (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed May 2, 2018 (File No. 001-32877)).
10.17+	Amended and Restated Mastercard International Incorporated Change in Control Severance Plan, amended and restated as of June 25, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed July 26, 2018 (File No. 001-32877)).
10.18	Schedule of Non-Employee Directors' Annual Compensation effective as of June 25, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed July 30, 2019 (File No. 001-32877)).
10.19	2006 Non-Employee Director Equity Compensation Plan, amended and restated effective as of June 26, 2018 (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed July 26, 2018 (File No. 001-32877)).
10.20	Form of Deferred Stock Unit Agreement for awards under 2006 Non-Employee Director Equity Compensation Plan, amended and restated effective June 26, 2018 (effective for awards granted on and subsequent to June 25, 2019) (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed July 30, 2019 (File No. 001-32877)).
10.21	Form of Restricted Stock Agreement for awards under 2006 Non-Employee Director Equity Compensation Plan, amended and restated effective June 26, 2018 (effective for awards granted on and subsequent to June 25, 2019) (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed July 30, 2019 (File No. 001-32877)).
10.22	Form of Indemnification Agreement between Mastercard Incorporated and certain of its directors (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed May 2, 2006 (File No. 000-50250)).
10.23	Form of Indemnification Agreement between Mastercard Incorporated and certain of its director nominees (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed May 2, 2006 (File No. 000-50250)).
10.24	Deed of Gift between Mastercard Incorporated and Mastercard Foundation (incorporated by reference to Exhibit 10.28 to Pre-Effective Amendment No. 5 to the Company's Registration Statement on Form S-1 filed May 3, 2006 (File No. 333-128337)).
10.25	Settlement Agreement, dated as of June 4, 2003, between Mastercard International Incorporated and Plaintiffs in the class action litigation entitled In Re Visa Check/MasterMoney Antitrust Litigation (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed August 8, 2003 (File No. 000-50250)).
10.26	Stipulation and Agreement of Settlement, dated July 20, 2006, between Mastercard Incorporated, the several defendants and the plaintiffs in the consolidated federal class action lawsuit titled In re Foreign Currency Conversion Fee Antitrust Litigation (MDL 1409), and the California state court action titled Schwartz v. Visa Int'l Corp., et al. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed November 1, 2006 (File No. 001-32877)).
10.27	Omnibus Agreement Regarding Interchange Litigation Judgment Sharing and Settlement Sharing, dated as of February 7, 2011, by and among Mastercard Incorporated, Mastercard International Incorporated, Visa Inc., Visa U.S.A. Inc., Visa International Service Association and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.33 to Amendment No.1 to the Company's Annual Report on Form 10-K/A filed on November 23, 2011).

10.27.1	Amendment to Omnibus Agreement Regarding Interchange Litigation Judgment Sharing and Settlement Sharing, dated as of August 25, 2014, by and among Mastercard Incorporated, Mastercard International Incorporated, Visa Inc., Visa U.S.A Inc., Visa International Service Association and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed October 30, 2014 (File No. 001-32877)).
10.27.2	Second Amendment to Omnibus Agreement Regarding Interchange Litigation Judgment Sharing and Settlement Sharing, dated as of October 22, 2015, by and among Mastercard Incorporated, Mastercard International Incorporated, Visa Inc., Visa U.S.A Inc., Visa International Service Association and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed October 29, 2015 (File No. 001-32877)).
10.28**	Mastercard Settlement and Judgment Sharing Agreement, dated as of February 7, 2011, by and among Mastercard Incorporated, Mastercard International Incorporated and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.34 to Amendment No.1 to the Company's Annual Report on Form 10-K/A filed on November 23, 2011).
10.28.1	Amendment to Mastercard Settlement and Judgment Sharing Agreement, dated as of August 26, 2014, by and among Mastercard Incorporated, Mastercard International Incorporated and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed October 30, 2014 (File No. 001-32877)).
10.28.2	Second Amendment to Mastercard Settlement and Judgment Sharing Agreement, dated as of October 22, 2015, by and among Mastercard Incorporated, Mastercard International Incorporated and Mastercard's customer banks that are parties thereto (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed October 29, 2015 (File No. 001-32877)).
10.29	Superseding and Amended Class Settlement Agreement, dated September 17, 2018, by and among Mastercard Incorporated and Mastercard International Incorporated; Visa, Inc., Visa U.S.A. Inc. and Visa International Service Association; the Class Plaintiffs defined therein; and the Customer Banks defined therein (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed September 18, 2018 (File No. 001-32877)).
21*	List of Subsidiaries of Mastercard Incorporated.
23.1*	Consent of PricewaterhouseCoopers LLP.
31.1*	Certification of Ajay Banga, President and Chief Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Sachin Mehra, Chief Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Ajay Banga, President and Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Sachin Mehra, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
99.1*	Disclosure pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012.
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

+ Management contracts or compensatory plans or arrangements.

\* Filed or furnished herewith.

\*\* Exhibit omits certain information that has been filed separately with the U.S. Securities and Exchange Commission and has been granted confidential treatment.

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and should not be relied upon for that purpose. In particular, any representations and warranties made by the Company in these agreements or other documents were made solely

within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

## Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

MASTERCARD INCORPORATED

(Registrant)

Date: February 14, 2020

By:

/s/ AJAY BANGA

Ajay Banga

President and Chief Executive Officer  
(Principal Executive Officer)

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:

Date: February 14, 2020

By:

/s/ AJAY BANGA

Ajay Banga

President and Chief Executive Officer; Director  
(Principal Executive Officer)

Date: February 14, 2020

By:

/s/ SACHIN MEHRA

Sachin Mehra

Chief Financial Officer  
(Principal Financial Officer)

Date: February 14, 2020

By:

/s/ SANDRA ARKELL

Sandra Arkell

Corporate Controller  
(Principal Accounting Officer)

Date: February 14, 2020

By:

/s/ DAVID R. CARLUCCI

David R. Carlucci

Director

Date: February 14, 2020

By:

/s/ RICHARD K. DAVIS

Richard K. Davis

Director

Date: February 14, 2020

By:

/s/ STEVEN J. FREIBERG

Steven J. Freiberg

Director

SIGNATURES

Date: February 14, 2020

By: /s/ JULIUS GENACHOWSKI  
**Julius Genachowski**  
**Director**

Date: February 14, 2020

By: /s/ CHOON PHONG GOH  
**Choon Phong Goh**  
**Director**

Date: February 14, 2020

By: /s/ RICHARD HAYTHORNTHWAITE  
**Richard Haythornthwaite**  
**Chairman of the Board; Director**

Date: February 14, 2020

By: /s/ MERIT E. JANOW  
**Merit E. Janow**  
**Director**

Date: February 14, 2020

By: /s/ OKI MATSUMOTO  
**Oki Matsumoto**  
**Director**

Date: February 14, 2020

By: /s/ YOUNGME MOON  
**Youngme Moon**  
**Director**

Date: February 14, 2020

By: /s/ RIMA QURESHI  
**Rima Qureshi**  
**Director**

Date: February 14, 2020

By: /s/ JOSÉ OCTAVIO REYES LAGUNES  
**José Octavio Reyes Lagunes**  
**Director**

Date: February 14, 2020

By: /s/ GABRIELLE SULZBERGER  
**Gabrielle Sulzberger**  
**Director**

Date: February 14, 2020

By: /s/ JACKSON TAI  
**Jackson Tai**  
**Director**

Date: February 14, 2020

By: /s/ LANCE UGGLA  
**Lance Ugglá**  
**Director**