Mastercard Inc
Form 10-K
February 14, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017
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	13-4172551
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)
2000 Purchase Street	10577
Purchase, NY	(Zip Code)

(Address of principal executive offices)
(914) 249-2000
(Registrant's telephone number, including area code)

Title of each Class	Name of each exchange on which registered
Class A common stock, par value $0.0001 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g): 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 x 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 x
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 x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files) Yes x No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

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 x	Accelerated filer o
Non-accelerated filer o (do not check if a smaller reporting company)	Smaller reporting company o
	Emerging growth company o

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. o

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

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 30, 2017, the last business day of the registrant’s most recently completed second fiscal quarter) was approximately $113.8 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 9, 2018, there were 1,037,246,307 shares outstanding of the registrant’s Class A common stock, par value $0.0001 per share and 14,138,629 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 2018 Annual Meeting of Stockholders are incorporated by reference into Part III hereof.

MASTERCARD INCORPORATED
FISCAL YEAR 2017 FORM 10-K ANNUAL REPORT
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In this Report on Form 10-K ("Report"), references to the "Company," "Mastercard," "we," "us" or "our" refer to the Masterca brand generally, and to the business conducted by Mastercard Incorporated and its consolidated subsidiaries, including our operating subsidiary, Mastercard International Incorporated.

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 wor 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:

- direct regulation of the payments industry (including regulatory, legislative and litigation activity with respect to interchange fees, surcharging and the extension of current regulatory activity to additional jurisdictions or products)
- the impact of preferential or protective government actions
- regulation to which we are directly or indirectly subject based on our participation in the payments industry (including anti-money laundering and economic sanctions, financial sector oversight, real-time account-based payment systems, issuer practice regulation and regulation of internet and digital transactions)
- the impact of changes in laws, including the recent U.S. tax legislation, regulations and interpretations thereof, or challenges to our tax positions
- regulation of privacy, data protection and security
- potential or incurred liability and limitations on business resulting from litigation
- 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 an account-based payment system in addition to our core network and to working with new customers and end users
- the impact of information security incidents, account data breaches, fraudulent activity or service disruptions on our business
- 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)
- the impact of our relationships with other stakeholders, including merchants and governments
- exposure to loss or illiquidity due to settlement guarantees and other significant third-party obligations
- the impact of global economic and political events and conditions (including global financial market activity, declines in cross-border activity, negative trends in consumer spending, the effect of adverse currency fluctuation and the effects of the U.K.'s proposed withdrawal from the E.U.)
- reputational impact, including impact related to brand perception
- 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 a complete discussion of these risk factors in Part I, Item 1A - 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.

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PART I
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. Through our global payments processing network, we facilitate the switching (authorization, clearing and settlement) of payment transactions and deliver related products and services. We make payments easier and more efficient by creating a wide range of payment solutions and services using our family of well-known brands, including Mastercard®, Maestro®, Cirrus® and Masterpass®. Our recent acquisition of VocaLink Holdings Limited ("Vocalink") has expanded our capability to process automated clearing house ("ACH") transactions, among other things. As a multi-rail network, we now offer customers one partner to turn to for their payment needs for both domestic and cross-border transactions. We also provide value-added offerings such as safety and security products, information services and consulting, loyalty and reward programs and issuer and acquirer processing. Our networks 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 consumer who holds a card or uses another device enabled for payment), merchant, issuer (the account holder's financial institution) 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 branded 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 processing and from other payment-related products and services.
Our Strategy
We grow, diversify and build our business through a combination of organic growth and strategic investments, including acquisitions. 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 electronic payments and providing value-added products and services. In addition, our ability to grow our business extends to other payments flows, such as business to business ("B2B"), person to person ("P2P"), business to consumer ("B2C") and government disbursements, among others. We have enhanced our capabilities to capture these payment flows through a combination of product offerings and expanded solutions for our customers. As a result, the total market opportunity for our addressable payment flows is approximately $225 trillion.
Grow. We focus on growing our core businesses globally, including growing our consumer credit, debit, prepaid and commercial products and solutions, thereby increasing the number of payment transactions we switch. We also look to take advantage of the opportunities presented by the evolving ways people interact and transact in the growing digital economy.
Diversify. We diversify our business by:

- adding new players to our customer base in new and existing markets by working with partners such as governments, merchants, technology companies (such as digital players and mobile providers) and other businesses
- expanding capabilities based on our core network into new areas to provide opportunities for electronic payments and to capture more payment flows, such as B2C transfers, B2B transfers, P2P transfers, including in the areas of transit and government disbursements

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- driving acceptance at merchants of all sizes
- 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, such as real-time account-based payment, Mastercard B2B Hub™ and Mastercard Send™ platforms
- providing value-added services across safety and security, consulting, data analytics, processing and loyalty.

Strategic Partners. We work with a variety of stakeholders. We provide financial institutions with solutions to help them increase revenue by driving preference for Mastercard-branded 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 better, safer and more convenient ways to pay.

Recent Business and Legal/Regulatory Developments

Digital Payments. Numerous trends in the digital economy, such as demand for faster payments and the application of emerging technology, present opportunities for growth and impetus for change in our business. We have launched and extended products and platforms that take advantage of the growing digital economy, where consumers are increasingly using technology to interact with other consumers and merchants. Among our recent developments in 2017 we:

- expanded our use of Masterpass globally, which is live in dozens of markets around the world. Masterpass is a global digital payment service that allows consumers to make fast, simple and secure transactions on any device and across any channel. Over the last year, we have enhanced the browser and in-app checkout experience globally and made significant platform improvements to make it easier and faster for consumers to checkout. We have also launched a new merchant onboarding experience and a new package of software to make it easier for merchants to integrate with Masterpass.
- continued to expand and scale Mastercard Send™ capabilities, using HomeSend, to connect more people, businesses and governments to facilitate the transfer of funds quickly and securely both domestically and cross-border in over 100 markets.
- broadened our acceptance solutions to offer Quick Response (“QR”) codes under a common set of new global specifications developed in conjunction with EMVCo and other industry players. Masterpass QR provides people with mobile phones the ability to safely make in-person purchases without a card and avoids the need for expensive point of sale equipment.

Real-time Account-based Payment Systems. In 2017, we completed the acquisition of a controlling interest in Vocalink. Vocalink operates systems for ACH payments and ATM processing platforms in the United Kingdom and other countries. ACH payments constitute a significant amount of all payments made by consumers, businesses and governments. Adding ACH payments to our core card-based business will expand our ability to offer more electronic payment options to consumers, businesses and governments, and help us capture more payment flows.

Safety and Security. As new technologies and cyber-security threats evolve, including organized cyber-crime and nation state attacks, there is a growing need to protect transactions and people's identities regardless of the device or channel used to make a purchase, while at the same time continuing to improve the payment experience for all stakeholders. Our focus on security is embedded in our products, our systems

and our
networks, as
well as our
analytics to
prevent fraud.
In 2017, we:

- acquired Brighterion, Inc., a software company specializing in Artificial Intelligence (“AI”), that enhances our networks, improves our existing product suite and helps us build the next generation of solutions to tackle fraud and cybersecurity threats.

- acquired NuData Security, a global technology company that helps businesses prevent online and mobile fraud using session and behavioral biometric indicators, to enhance security of the internet of things (the “IoT”), including device-level security and authentication.
- launched Early Detection System™, a service that provides issuers with a unique predictive capability to identify accounts with a heightened risk of fraud based on their exposure to security incidents or data breaches. Early Detection System determines if an account is at risk and sends an alert to the issuer with a quantification of the level of risk. The issuer then uses the level of risk to more accurately prioritize what action to take; from monitoring transactions more closely to proactively issuing a replacement card.
- embedded AI across our network with Decision Intelligence™, a comprehensive decision and fraud detection solution that utilizes our networks to increase approvals and reduce false declines. This solution now applies AI scoring to every processed transaction on our networks and is used by multiple issuers globally.
- expanded Safety Net, a technology that intelligently detects and blocks large scale fraud events resulting from cyber-attacks against our issuers. This technology now features new advanced detection capabilities, and acts as an extra layer of defense for every issuer we work with globally, monitoring every processed transaction on our networks.
- helped stakeholders to increase approvals and reduce declines for consumers with our account continuity solution, Automated Billing Updater. This solution automatically updates expired card numbers at merchant card-on-file locations and is increasingly used by major digital merchants.
- leveraged MDES to tokenize Masterpass and enable third-party token vaults compliant with EMV® (the global standard for chip technology) to tokenize Mastercard-branded products and services and extended the utility of MDES to tokenize credentials-on-file.

Commercial. Our market share in commercial products is growing globally, as we offer solutions with travel and entertainment, procurement, fleet and virtual cards. We estimate there is $120 trillion in addressable payment flows in B2B globally, of which approximately $100 trillion is related to accounts payable. To address this opportunity, we are expanding our capabilities to capture non-carded payment flows with new solutions, such as the Mastercard B2B Hub, Mastercard Send for cross-border payments, and real-time account-based payment systems for ACH transactions. We launched the innovative Mastercard B2B Hub platform in 2017 to enable small and midsized businesses to optimize their invoice and payment processes with automation tools that improve the speed, ease and security of their commercial payments. Financial Inclusion. We are focused on addressing financial inclusion, reaching people without access to an account that allows them to store and use money. In 2015, we made a commitment to reach 500 million people previously excluded from financial services by 2020. We are more than halfway to delivering on that commitment. In 2017, we worked with governments across several geographies to develop and roll out electronic payments solutions, social payment distribution mechanisms and digital identity solutions. We also worked with merchants globally to help drive acceptance necessary to support these inclusion efforts.

Legal and Regulatory. We operate in

a dynamic and rapidly evolving legal and regulatory environment, with heightened regulatory and legislative scrutiny, expansion of local regulatory schemes and other legal challenges, particularly with respect to interchange fees (as discussed below under "Our Operations and Network"). These create both risks and opportunities for our industry. See Part I, Item 1A for a more detailed discussion of our legal and regulatory developments and risks. Also see Note 18 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8. Our recent legal and regulatory

developments
include:

- European Union
  - In 2015, the European Commission issued a statement of objections related to the interregional interchange rates we set and our central acquiring rules within the European Economic Area (the “EEA”). The statement of objections preliminarily concludes that these practices have anticompetitive effects, and the European Commission has indicated it intends to seek fines if it confirms these conclusions. We submitted a response in April 2016 and participated in a related oral hearing in May 2016. Since that time, we have remained in discussions with the European Commission and expect to obtain greater clarity with respect to these issues in the first half of 2018.

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- E.U. member states were required to finish transposing the EEA's revised Payment Services Directive (commonly referred to as "PSD2") into their national laws by January 2018. This directive requires financial institutions to provide third party payment processors access to consumer payment accounts, which may enable these processors to route transactions away from Mastercard products by offering certain services directly to people who currently use our products. This directive also requires a new standard for authentication of transactions, which requires 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.
- In 2016, the European Parliament passed the General Data Protection Regulation (the "GDPR"), a new data protection regulation that will increase our compliance burden for using and processing personal and sensitive data of EEA residents. We have implemented an approach to achieve compliance by the May 2018 deadline.

- United States
  - Merchant Class Litigation. In June 2016, the U.S. Court of Appeals for the Second Circuit reversed the approval of a settlement of an antitrust litigation among a class of merchants, Mastercard, Visa and a number of financial institutions. The court vacated the class action certification and sent the case back to the district court for further proceedings. The parties are proceeding with discovery while at the same time are involved in mediation.
  - Tax Cuts and Jobs Act. On December 22, 2017, the U.S. passed a comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "TCJA"). Among other things, the TCJA reduces the U.S. corporate income tax rate from 35% to 21% in 2018, puts into effect the migration towards a territorial tax system and imposes a one-time deemed repatriation tax on accumulated foreign earnings (the "Transition Tax"). The enactment of the tax legislation has resulted in additional tax expense of $873 million in the fourth quarter and year ended December 31, 2017, due primarily to provisional amounts recorded for the Transition Tax and the remeasurement of U.S. deferred tax assets and liabilities at lower enacted corporate tax rates. These provisional amounts are based on our initial analysis of the TCJA and may be adjusted in 2018. See Note 17 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion of the TCJA.
- United Kingdom
  - Beginning in May 2012, a number of retailers filed claims or threatened litigation against us seeking damages for alleged anti-competitive conduct with respect to our cross-border interchange fees and our U.K. and Ireland domestic interchange fees. In 2016, a tribunal in one of these cases issued a judgment against us for damages, and we entered into settlements with additional claimants. In January 2017, we received a favorable liability judgment on all significant matters in a separate action brought by ten of the claimants (who were seeking over $500 million in damages). Both the negative judgment and positive judgment for us are being appealed before the U.K. appellate court.
  - In connection with the Vocalink part of our business, we expect to enter into a period of consultation with the U.K. Treasury regarding the possible extension of the U.K. payment systems oversight regime to include Vocalink's role as a service provider.
- China - In 2017, People's Bank of China issued the Service Guidelines for Market Access of Bank Card Clearing Institutions, providing more guidance and clarity in addition to the 2016 regulations on license application and operational requirements for network operators, including international networks such as ours, to process domestic payments in China. We have been engaged with regulators and other stakeholders in connection with steps required to advance an application. In the meantime, we continue to work to expand issuance and acceptance of Mastercard-branded products in the Chinese market to support our existing cross-border business and to prepare for potential domestic opportunities.

Our Business

Our Operations and Network

We operate a unique and proprietary global payments network, our core network, that 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

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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 authorize, clear and settle transactions through our core network for our issuer customers in more than 150 currencies and in more than 210 countries and territories. Our acquisition of Vocalink expands our range of payment capabilities beyond our core network.

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, as further described below), 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 consumers and merchants incur. 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.

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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 determination and 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 issuer country 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 issuer country are the same ("domestic transactions"). We switch approximately half of all transactions using 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.

Our 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 features an intelligent architecture that enables the network to adapt to the needs of each transaction by blending two distinct network structures:

- a distributed (peer-to-peer) switching structure for transactions that require fast, reliable switching to ensure they are switched close to where the transaction occurred; and
- a centralized (hub-and-spoke) switching structure for transactions that require value-added switching, such as real-time access to transaction data for fraud scoring or rewards at the point-of-sale.

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 Systems. Augmenting our core network, we now offer real-time account-based payments through our acquisition of Vocalink, which enables payments between bank accounts in near real-time in countries in which it has been deployed.

Payments System Security. Our networks and products are designed to ensure safety and security for the global payments system. The networks 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 networks support and enable 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 between our issuers and 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 services facilitate transactions on our core network among account holders, merchants, financial institutions, businesses, governments, and other organizations in markets globally.

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Core Products

Consumer Credit and Charge. 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.

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 programs involve a balance that is funded prior to use and can be accessed via one of our payment products. We offer prepaid payment programs using any of our brands, which we support with processing products and services. Segments on which we focus include government programs such as Social Security payments, unemployment benefits and others; commercial programs such as payroll, health savings accounts, employee benefits and others; and reloadable programs for consumers without formal banking relationships and non-traditional users of electronic payments.

We also provide prepaid program management services, primarily outside of the United States, that manage and enable switching and issuer processing for consumer and commercial prepaid travel cards for business partners such as financial institutions, retailers, telecommunications companies, travel agents, foreign exchange bureaus, colleges and universities, airlines and governments.

Commercial. We offer commercial payment products and solutions that help large corporations, midsized companies, small businesses and government entities streamline their procurement and payment processes, manage information and expenses (such as travel and entertainment) and reduce administrative costs. Our offerings and platforms include premium, travel, purchasing and fleet cards and programs; our SmartData tool that provides information reporting and expense management capabilities; and credit and debit programs targeted for small businesses.

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The following chart provides GDV and number of cards featuring our brands in 2017 for select programs and solutions:

	Year Ended December 31, 2017 GDV			As of December 31, 2017 Cards	
	(in billions)	Growth (Local)	% of Total GDV	(in millions)	Percentage Increase from December 31, 2016
Mastercard Branded Programs[1,2]					
Consumer Credit	$2,289	8 %	44 %	768	6 %
Consumer Debit and Prepaid	2,369	12 %	45 %	991	14 %
Commercial Credit and Debit	583	15 %	11 %	67	16 %

[1] Excludes Maestro and Cirrus cards and volume generated by those cards.

[2] Article 8 of the E.U. Interchange Fee Regulation related to card payments, which became effective in June 2016, states that a network can no longer charges fees on domestic EEA payment transactions that do not use its payment brand. Prior to that, Mastercard collected a de minimis assessment fee in a few countries, particularly France, on transactions with Mastercard co-badged cards if the brands of domestic networks (as opposed to Mastercard) were used. As a result, the non-Mastercard co-badged volume is no longer being included. Please see “Item 7 Management’s Discussion and Analysis of Financial Condition and Results of Operations” for a further discussion.

Digital. Leveraging our global innovations capability, we are developing platforms, products and solutions in digital payments that help our customers and partners to offer digital solutions:

- Delivering better digital experiences everywhere. We work to enable digital payment services across all channels and devices. 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. Through Mastercard Send, we provide money transfer and global remittance solutions to enable our customers to facilitate consumers sending and receiving money quickly and securely domestically and around the world. These solutions allow our customers to address new payment flows with the goal of enabling the movement of money 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.

Additional Platforms. We offer commercial payment products and solutions that utilize additional payment platforms that are in addition to our core network - for example, Mastercard B2B Hub, which enables small and midsized businesses to optimize their invoice and payment processes. In addition, through our acquisition of Vocalink, we offer real-time account-based payments for ACH transactions and will be able to offer commercial solutions utilizing these capabilities. These networks enable payments between bank accounts in near real-time and have key attributes, including enhanced data and messaging capabilities, making them particularly well-suited for B2B and bill payment flows. The real-time account-based payment landscape is rapidly evolving as more markets introduce real-time account-based payment infrastructure.

Value-Added Products and Services

We provide additional integrated products and services to our customers and stakeholders, including financial institutions, retailers and governments that enhance the value proposition of our products and networks.

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Safety and Security. 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 EMV cards issued and the transaction volume on EMV cards. While this technology is prevalent in Europe, the U.S. market has been adopting this technology in recent years.
- The "Identify" layer allows us to help banks and merchants verify genuine consumers during the payment process. Examples of solutions under this layer include Mastercard Identity Check™, a fingerprint, face and iris scanning biometric technology to verify online purchases on mobile devices, and our recently launched Biometric Card which has a fingerprint scanner built in to the card and is compatible with existing EMV payment terminals
- The "Detect" layer spots fraudulent behavior and cyber-attacks and takes action to stop these activities once detected. Examples of our capabilities under this layer include our Early Detection System, Decision Intelligence and Safety Net services and technologies.
- The "Experience" layer improves the security experience for our stakeholders in areas from the speed of transactions, improving approvals for online and card-on-file payments, to the ability to differentiate good consumers from fraudsters. Our offerings in this space include Mastercard In Control®, for consumer alerts and controls and our suite of digital token services available through our Mastercard Digital Enablement Service ("MDES").

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.

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 for our customers.

Mastercard Advisors. Mastercard Advisors is our global professional services group that provides 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.

Mastercard Advisors' 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 implement actions based on these insights.

Increasingly, Mastercard Advisors has 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 that is one of our fastest growing offerings globally. 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.

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Brand

Our family of well-known brands includes Mastercard, Maestro, Cirrus and Masterpass. We manage and promote our brands 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 54 languages in 119 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. We have extended Priceless to create experiences through four platforms to drive brand preference: Priceless Cities® provides account holders across all of our regions with access to special experiences in various cities, Priceless Causes® provides account holders with opportunities to support philanthropic causes, Priceless Specials™ provides account holders with merchant offers and discounts and Priceless Surprises® provides account holders with unexpected and unique surprises.

Our Revenue Sources

We generate revenues 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 assessment fees, cross-border volume fees, transaction processing fees, 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 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 in connection with our customers' issuing and merchant acquiring businesses. In addition, we own a number of patents and patent applications relating to payments solutions, transaction processing, smart cards, contactless, mobile, biometrics, AI, security systems 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, wire transfers, electronic benefits transfers and bill payments

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. When combined, cash, checks and legacy ACH payments represent 90 percent of the $225 trillion of addressable payment flows.

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- General Purpose Payment Networks. We compete worldwide with payment networks such as Visa, American Express, JCB, China UnionPay and Discover, among others. Some of the 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 discussion of the risks related to payments system regulation and government actions that may prevent us from competing effectively for a more detailed discussion.
- 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 that are focused mostly on debit (including MIR in Russia).
- Competition for Customer Business. We compete intensely with other payments networks 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 non-financial institution partners, such as merchants, governments and mobile providers.
- Real-time Account-based Payment Systems. Through our acquisition of Vocalink, we now 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, credit 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 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. In some circumstances, these providers can be a partner or customer, as well as a competitor.
- 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
- expertise in real-time account-based payments through our Vocalink acquisition
- adoption of innovative products and digital solutions
- Masterpass global digital payments ecosystem
- safety and security solutions embedded in our networks
- Mastercard Advisors group dedicated solely to the payments industry

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- 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. 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. Actions by these organizations could influence other organizations around the world to adopt or consider adopting similar oversight. As a result, Mastercard 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, as well. Also, in the EEA, the implementation of the revised Payment Services Directive ("PSD2") will require financial institutions to provide third party payment processors access to consumer payment accounts, which may enable these processors to route transactions away from Mastercard products by offering certain services directly to people who currently use our products. PSD2 will also require a new standard for authentication of transactions, which necessitate 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.

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 and European Union legislation capping consumer credit and debit interchange fees on payments issued and acquired within the EEA. For more detail, see our risk factors in "Risk Factors-Regulations Related to Our Participation in the Payments Industry" in Part I, Item 1A. Also see Note 18 (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.

Payments System Regulation. Regulators in several countries around the world either have, or are seeking to establish, authority to regulate certain aspects of the payments systems in their countries. 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 switched transactions and other processing in terms of how we go to market, make decisions and organize our structure. Additionally, 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 Payments Systems Regulator (PSR) (which has designated us (including our Vocalink business) as a payments system subject to regulation) and the National Bank of Belgium.

Anti-Money Laundering, Counter Terrorist Financing, Economic Sanctions and Anti-Corruption. We are subject to anti-money laundering ("AML") and counter terrorist financing ("CTF") 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/CTF 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-

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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 PSD2 in the EEA require financial institutions to provide third-party payment-processors access to consumer payment accounts, enabling them to provide payment initiation and account information services directly to consumers.

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, copyright and trademark infringement and privacy.

Data Protection and Information Security. Aspects of our operations or business are subject to 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 will be subject to the pending GDPR which goes into effect in May of 2018. This law will require a comprehensive data protection and privacy program to protect the personal and sensitive data of European citizens and residents. Due to constant changes to the nature of data, regulations in this area are constantly evolving with regulatory and legislative authorities in numerous parts of the world considering 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, privacy, disclosure rules, security and marketing that would impact our customers directly.

Seasonality

See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Seasonality” in Part II, Item 7.

Financial Information About Geographic Areas

See Note 21 (Segment Reporting) to the consolidated financial statements included in Part II, Item 8 for certain geographic financial information.

Employees

As of December 31, 2017, we employed approximately 13,400 persons, of whom approximately 7,900 were employed outside of the United States.

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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 (“Mastercard International”), 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 13 (Stockholders’ Equity) to the consolidated financial statements included in Part II, Item 8.

Website and SEC Reports

Our internet address is 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. In addition, you may automatically receive email alerts and other information about Mastercard by enrolling your email address by visiting “Investor Alerts” in the investor relations section of our corporate website.

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. You may also read and copy any materials that we file with the SEC at its Public Reference Room at 100 F Street N.E., Washington, D.C. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, our filings are available electronically from the SEC at www.sec.gov.

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ITEM 1A. RISK FACTORS

Legal and Regulatory

Direct Regulation of the Payments Industry

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

Regulators increasingly seek to regulate, or establish or expand their authority to regulate, certain aspects of payments systems such as ours. Some recent examples of regulatory and legislative activity include:

- The European Union’s adoption of its Interchange Fee Regulation in 2015 regulating electronic payments issued and acquired within the EEA, including caps on consumer credit and debit interchange fees (described in more detail in the risk factors below) and the separation of brand and switching (which Mastercard implemented in 2016)
- Several jurisdictions’ creation or grant of authority to create new regulations that either have or would enable the authority to regulate or increase formal oversight over payment systems, including the United Kingdom and India (both of which have designated us as a payments system subject to regulation), as well as Brazil, Hong Kong, Mexico and Russia

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- The EEA's implementation of the revised PSD2, which requires:
  - Ø financial institutions to provide third party payment processors access to consumer payment accounts. This may enable these third party payment processors to route transactions away from Mastercard products by offering account information or payment initiation services directly to people who currently use our products.
  - Ø a different standard for authentication of transactions (strong customer authentication ("SCA"), as opposed to risk-based authentication). The new authentication standard requires additional verification information from consumers to complete transactions and may increase the number of transactions that consumers abandon if we are unable to ensure a frictionless authentication experience. An increase in the rate of abandoned transactions could adversely impact our volumes or other operations metrics.

These regulations have established, and could further expand, 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). In addition, several central banks or similar regulatory bodies around the world that 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.

As a result, 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 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. 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 debit 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, 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.

Examples of regulatory and legislative activity include:

- A Statement of Objections issued by the European Commission in July 2015 related to our interregional interchange fees and central acquiring rules within the EEA, to which we have responded and remain in discussions.
- Legislation regulating the level of domestic interchange rates that has been enacted, or is being considered, in many jurisdictions (for example, debit interchange in the United States is capped by statute for certain regulated entities).
- Merchants and consumers are also seeking interchange fee reductions and acceptance rule changes through litigation. See Note 18 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8

for more details.

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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, any changes to interregional interchange fees as a result of the European Commission's Statement of Objections 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 in us being fined and/or having to pay civil damages, the amount of which could be material.

Current regulatory activity could be extended to additional jurisdictions or products, which could materially and adversely affect our overall business and results of operations.

Regulators around the world increasingly replicate other regulators' approaches with regard to the regulation of payments and other industries. Consequently, regulation in any one country, state or region may influence regulatory approaches in other countries, states or regions. Similarly, new laws and regulations within a country, state or region involving one product may lead to regulation of similar or related products. For example, regulations affecting debit transactions could lead to regulation of other products (such as credit).

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. These include matters like interchange rates, potential direct regulation of our network fees and pricing, network standards and network exclusivity and routing agreements. Conversely, if widely varying regulations come into existence worldwide, we may have difficulty adjusting our products, services, fees and other important aspects of our business to meet the varying requirements. Either of these outcomes could materially and adversely affect our overall business and results of operations.

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.

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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. In particular, we are currently excluded from domestic switching in China and are seeking market access, which is uncertain and subject to a number of factors, including receiving regulatory approval. In 2017, People's Bank of China issued the Service Guidelines for Market Access of Bank Card Clearing Institutions, which provide some guidance on the 2016 regulations on license application and operational requirements for network operators to process domestic payments in China. We have been engaged with regulators, business partners and other stakeholders in connection with steps required to advance an application. Additionally, Russia has amended its National Payments Systems laws to require all payment systems to process domestic transactions through a government-owned payment switch. As a result, all of our domestic transactions in Russia are currently processed by that system instead of by us.
- 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, such as the Gulf Cooperation Countries in the Middle East and a number of countries in South East Asia, 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.

Regulation Related to Our Participation in the Payments Industry

Regulations that directly or indirectly affect 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 CTF 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. We have implemented a comprehensive AML/CTF 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 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

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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. 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.

- Financial Sector Oversight - In the United States, we are subject to regulation by a number of agencies charged with oversight of, among other things, consumer protection, financial and banking matters. These 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. It is often not clear whether and/or to what extent these institutions will regulate broader aspects of payment networks.
- Real-time Account-based Payment Systems – In 2017, we completed the acquisition of a controlling interest in Vocalink. In the U.K., the Bank of England has expanded its 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 could become subject to the U.K. payment system oversight regime and be 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. If our customers are disintermediated in their business, we could face diminished demand for our integrated products and services. In addition, existing or new regulations in these or other areas may diminish the attractiveness of our products to our customers.
- Regulation of Internet and Digital Transactions - Proposed legislation in various jurisdictions relating to Internet gambling and other digital areas such as cyber-security, copyright, trademark infringement and privacy could impose additional compliance burdens on us and/or our customers, including requiring us or our customers to monitor, filter, restrict, or otherwise oversee various categories of payment transactions.

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. 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 may impact our effective tax rate and tax payments. For example, the recent U.S. tax legislation enacted on December 22, 2017 represents a significant overhaul of the U.S. federal tax code. This tax legislation reduced the U.S. statutory corporate tax rate and made other changes that could have a favorable impact on our overall U.S. federal tax liability in a given period. However, the tax legislation also included a number of provisions that limit or eliminate various deductions, including interest expense, performance-based compensation for certain executives and the domestic production activities deduction, among others, that could affect our U.S. federal income tax position. We are continuing to evaluate the overall impact of this tax legislation on our operations and U.S. federal income tax position. See Note 17 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion of the TCJA. While we expect the TCJA to be favorable to the Company overall, 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 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 tax rate, tax payments, financial condition and results of operations.

Privacy, Data Protection and Security

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

We are subject to regulations related to privacy, data protection 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 products and services to meet the needs of a changing marketplace, we may expand our information profile through the collection of additional data across multiple channels. This expansion could amplify the impact of these regulations on our business. Regulation of privacy and data protection and information security often times require monitoring of and changes to our data practices in regard to the collection, use, disclosure, storage and/or security of personal and sensitive information. In addition, due to the European Parliament's passage of the GDPR and the European Court of Justice's invalidation of the Safe Harbor treaty, we are subject to enhanced compliance and operational requirements in the European Union. 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 reinterpretations 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 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, as well as the disclosure of the monitoring activities by certain governmental agencies, there has been heightened legislative and regulatory scrutiny around the world that could lead to further regulation and requirements. 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.

Litigation

Liabilities we may incur for any litigation that has been or may be brought against us 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 18 (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.

Limitations on our business resulting from litigation or litigation settlements may materially and adversely affect 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.

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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:

- Within the global general purpose payments industry, we face substantial and increasingly intense competition worldwide.
- In certain jurisdictions, including the United States, Visa has greater volume, scale and market share than we do, which may provide significant competitive advantages.
- 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, including American Express, Discover, private-label card networks and certain alternative payments systems, 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 processors 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 data privacy standards, without proper oversight we could inadvertently share too much data which could give the partner a competitive advantage.

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- 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 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 process 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 block chain 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 programs 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.

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- 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 new real-time account-based payments network in connection with our Vocalink acquisition 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 new type of payments network and with integrating this acquisition into our business. Operating a new type of payments system presents new regulatory and operational risks. English 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 payments 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 payments platform, see our risk factor in "Risk Factors - Regulation Related to Our Participation in the Payments Industry" 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. While we are leveraging Vocalink's talent and expertise, we may face challenges in adapting to the complex requirements of operating a new payments system. Operational difficulties, such as the temporary unavailability of our services or products, or security breaches on our real-time account-based payments network could cause a loss of business for these products and services, result in potential liability for us and adversely affect our reputation.

We are also working to embed the new products and technology acquired from Vocalink into our existing markets. This product convergence requires tight working relationships and integration with the people and corporate culture of Vocalink as a critical success factor. Not managing the integration successfully could result in larger-than-expected integration costs, which could be significant. If we fail to successfully embed these new technologies, we may lose existing Vocalink business and may not remain competitive in our payment technology offerings as compared to our competitors. See our risk factor in "Risk Factors - Acquisitions" in this Part I, Item 1A for more information on risks relating to the integrating our acquisitions.

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 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.

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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 in our computer systems and networks. 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 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 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 systems), 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.

We maintain an information security program, a business continuity program and insurance coverage (each reviewed by our Board of Directors and its Audit Committee), and our processing systems incorporate multiple levels of protection, in order to address or otherwise mitigate these risks. We also continually test our systems to discover and address any potential vulnerabilities. Despite these mitigation efforts, 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. These events, some of which have been high profile, typically involve external agents hacking the merchants' or third-party processors' systems and installing malware to compromise the confidentiality and integrity of those systems. 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

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toward electronic payments. In addition to reputational concerns, 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 may 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.

Financial Institution Customers and Other 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.

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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. 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 – Risks Related to Our Participation in the Payments Industry" 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.

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- 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 exposes us to risk of loss or illiquidity.

We are a guarantor of certain third-party obligations, including those of:

- principal customers, which are customers that participate directly in our programs and are responsible for their own settlement and other activities as well as those of their sponsored affiliate customers
- affiliate debit licensees

In this capacity, we are exposed to risk of loss or illiquidity:

- We may incur obligations in connection with transaction settlements if an issuer or acquirer fails to fund its daily settlement obligations due to technical problems, liquidity shortfalls, insolvency or other reasons.
- If our principal customer or affiliate debit licensee is unable to fulfill its settlement obligations to other customers, we may bear the loss.
- Although we are not obligated to do so, we may elect to keep merchants whole if an acquirer defaults on its merchant payment obligations, or to keep prepaid cardholders whole if an issuer defaults on its obligation to safeguard unspent prepaid funds.

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 overall business and liquidity. Even if we have sufficient liquidity to cover a settlement failure, we may not be able to recover the cost of such a payment and may therefore be exposed to significant losses, which could materially and adversely affect our results of operations. Should an event occur that would trigger any significant indemnification obligation which we owe to any customers or other companies, such an obligation could materially and adversely affect our overall business and results of operations.

We mitigate the contingent risk of a settlement failure using various strategies, including monitoring our customers' financial condition, their economic and political operating environments and their compliance with our participation standards. For more information on our settlement exposure and risk assessment and mitigation practices, see Note 19 (Settlement and Other Risk Management) to the consolidated financial statements included in Part II, Item 8.

Global Economic and Political Environment

Global financial market activity could result in a material and adverse impact on our overall business and results of operations.

Adverse economic trends (including distress in financial markets, turmoil in specific economies around the world and additional government intervention) have impacted the environment in which we operate. The condition of the economic environment may accelerate the timing of or increase the impact of risks to our financial performance. Such impact may include, but is not limited to, the following:

- Our customers may:
  - Ø restrict credit lines to account holders or limit the issuance of new Mastercard products to mitigate increasing account holder defaults
  - Ø implement cost reduction initiatives that reduce or eliminate payment product marketing or increase requests for greater incentives or greater cost stability

- Ø default on their settlement obligations, including as a result of sovereign defaults, causing a liquidity crisis for our other customers
- Consumer spending can be negatively impacted by:
  - Ø declining economies, foreign currency fluctuations and the pace of economic recovery, which can change cross-border travel patterns, on which a significant portion of our revenues is dependent
  - Ø low levels of consumer and business confidence typically associated with recessionary environments and those markets experiencing relatively high unemployment
- 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, 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 could impact the ability of participating financial institutions to lend to us under the terms of our credit facility.

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

A decline in cross-border activity could adversely affect our results of operations.

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. Additionally, any regulation of interregional interchange fees could negatively impact our cross-border activity, which could decrease the revenue we receive. Any such decline in cross-border activity could materially adversely affect our results of operations.

Negative trends in spending could negatively impact our results of operations.

The global payments industry depends heavily upon the overall level of consumer, business and government spending. General economic conditions (such as unemployment, housing and changes in interest rates) and other political conditions (such as devaluation of currencies and government restrictions on consumer spending) in key countries in which we operate may adversely affect our financial performance by reducing the number or average purchase amount of transactions involving our products.

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

During 2017, approximately 65% 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 May 29, 2017, which commenced the official E.U. withdrawal process. Uncertainty over the terms of the U.K.'s departure from the E.U. could cause political and economic uncertainty in the U.K. and the rest of Europe, which could harm our business and financial results.

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 clients 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. In addition, because we conduct business in and have operations in the U.K., we may need to apply for regulatory authorization and permission in separate E.U. member states. 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.

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”. Additionally, large digital companies and other technology companies who are our customers use our networks to build their own acceptance brands, which could cause consumer confusion and decrease the value of our brand. Moreover, adverse developments with respect to our industry or the industries of our customers 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. 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. Such perception and damage to our reputation could have a material and adverse effect to our overall business.

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

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- 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 9, 2018, Mastercard Foundation owned 112,181,762 shares of Class A common stock, representing approximately 10.8% 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. Mastercard Foundation is permitted to sell all of its remaining shares after May 1, 2027. 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

As of December 31, 2017, Mastercard and its subsidiaries owned or leased 167 commercial properties. We own our corporate headquarters, located in Purchase, New York. The building is approximately 500,000 square feet. There is no outstanding debt on this building. Our principal technology and operations center, a leased facility located in O'Fallon, Missouri, is also approximately 500,000 square feet. The term of the lease on this facility is 10 years, which commenced on March 1, 2009. Our leased properties in the United States are located in 10 states and in the District of Columbia. We also lease and own properties in 69 other countries. These facilities primarily consist 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 Notes 10 (Accrued Expenses and Accrued Litigation) and 18 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II
ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES
Price Range of Common Stock
Our Class A common stock trades on the New York Stock Exchange under the symbol "MA". The following table sets forth the intra-day high and low sale prices for our Class A common stock for the four quarterly periods in each of 2017 and 2016. At February 9, 2018, we had 73 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.

	2017		2016	
	High	Low	High	Low
First Quarter	$113.50	$104.01	$95.83	$78.52
Second Quarter	126.19	111.01	100.00	87.59
Third Quarter	143.59	120.65	102.31	86.65
Fourth Quarter	154.65	140.61	108.93	99.51

There is currently no established public trading market for our Class B common stock. There were approximately 307 holders of record of our non-voting Class B common stock as of February 9, 2018, constituting approximately 1.3% of our total outstanding equity.
Dividend Declaration and Policy
During the years ended December 31, 2017 and 2016, we paid the following quarterly cash dividends per share on our Class A common stock and Class B Common stock:

	Dividend per Share	
	2017	2016
First Quarter	$0.22	$0.19
Second Quarter	0.22	0.19
Third Quarter	0.22	0.19
Fourth Quarter	0.22	0.19

On December 4, 2017, our Board of Directors declared a quarterly cash dividend of $0.25 per share paid on February 9, 2018 to holders of record on January 9, 2018 of our Class A common stock and Class B common stock. On February 5, 2018, our Board of Directors declared a quarterly cash dividend of $0.25 per share payable on May 9, 2018 to holders of record on April 9, 2018 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 6, 2016, our Board of Directors approved a share repurchase program authorizing us to repurchase up to $4 billion of our Class A common stock (the "December 2016 Share Repurchase Program"). This program became effective in April 2017. On December 4, 2017, our Board of Directors approved a share repurchase program authorizing us to repurchase up to $4 billion of our Class A common stock (the "December 2017 Share Repurchase Program"). This program will become effective after completion of the December 2016 Share Repurchase Program.

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During the fourth quarter of 2017, we repurchased a total of approximately 6.9 million shares for $1.0 billion at an average price of $148.44 per share of Class A common stock. Our repurchase activity during the fourth quarter of 2017 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 [1]
October 1 – 31	2,276,450	$ 144.78	2,276,450	$ 1,935,087,778
November 1 – 30	2,314,860	150.22	2,314,860	1,587,353,507
December 1 – 31	2,353,069	150.22	2,353,069	5,233,867,141
Total	6,944,379	148.44	6,944,379	

[1] Dollar value of shares that may yet be purchased under the December 2016 Share Repurchase Program and the December 2017 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, 2017, 2016 and 2015, and the balance sheet data as of December 31, 2017 and 2016, 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, 2014 and 2013, and the balance sheet data as of December 31, 2015, 2014 and 2013, 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,				
	2017	2016	2015	2014	2013
	(in millions, except per share data)				
Statement of Operations Data:					
Net revenue	$12,497	$10,776	$9,667	$9,441	$8,312
Total operating expenses	5,875	5,015	4,589	4,335	3,809
Operating income	6,622	5,761	5,078	5,106	4,503
Net income	3,915	4,059	3,808	3,617	3,116
Basic earnings per share	3.67	3.70	3.36	3.11	2.57
Diluted earnings per share	3.65	3.69	3.35	3.10	2.56
Balance Sheet Data:					
Total assets	$21,329	$18,675	$16,250	$15,329	$14,242
Long-term debt	5,424	5,180	3,268	1,494	—
Equity	5,497	5,684	6,062	6,824	7,495
Cash dividends declared per share	$0.91	$0.79	$0.67	$0.49	$0.29

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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. This change only relates to terminology; no previously reported amounts have changed. 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.

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. Through our global payments processing network, we facilitate the switching (authorization, clearing and settlement) of payment transactions and deliver related products and services. We make payments easier and more efficient by creating a wide range of payment solutions and services using our family of well-known brands, including Mastercard®, Maestro®, Cirrus® and Masterpass®. Our recent acquisition of VocaLink Holdings Limited ("Vocalink") has expanded our capability to process automated clearing house ("ACH") transactions, among other things. As a multi-rail network, we now offer customers one partner to turn to for their payment needs for both domestic and cross-border transactions. We also provide value-added offerings such as safety and security products, information services and consulting, loyalty and reward programs and issuer and acquirer processing. Our networks 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 consumer who holds a card or uses another device enabled for payment), merchant, issuer (the account holder's financial institution) 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 branded 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 (the "GDV") of activity 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.

Business Environment

We authorize, clear and settle transactions in more than 210 countries and territories and in more than 150 currencies. Net revenue generated in the United States was 35% of total revenue in 2017 and 38% in 2016 and 39% in 2015. No individual country, other than the United States, generated more than 10% of total net revenue in any such period, but differences in market growth, economic health and foreign exchange fluctuations in certain countries can have an impact on the proportion of revenue generated outside the United States over time. While the global nature of our business helps protect our operating results from adverse economic conditions in a single or a few countries, the significant concentration of our revenue generated in the United States makes our business particularly susceptible to adverse economic conditions in the United States.

The competitive and evolving nature of the global payments industry provides both challenges to and opportunities for the continued growth of our business. Adverse economic trends (including distress in financial markets, currency fluctuations, turmoil in specific economies around the world and additional government intervention) have impacted the environment in which we operate. Certain of our customers, merchants that accept our brands and account holders who use our brands, have been directly impacted by these adverse economic conditions.

Our financial results may be negatively impacted by actions taken by individual financial institutions or by governmental or regulatory bodies. In addition, political instability or a decline in economic conditions in the countries in which we operate may accelerate the timing of or increase the impact of risks to our financial performance. As a result, our revenue or results of operations may be negatively impacted. We continue to monitor political and economic conditions around the world to identify opportunities for the continued growth of our business and to evaluate the evolution of the global payments industry. Notwithstanding recent encouraging trends, the extent and pace of economic recovery in various regions remains uncertain and the overall business environment may present challenges for us to grow our business.

For a full discussion of the various legal, regulatory and business risks that could impact our financial results, see "Risk Factors" in Part I, Item 1A.

Financial Results Overview

The following tables provide a summary of our operating results:

	Year ended December 31, 2017	Year ended December 31, 2016	Increase/(Decrease)	Year ended December 31, 2016	Year ended December 31, 2015	Increase/(Decrease)
	($ in millions, except per share data)					
Net revenue	$12,497	$10,776	16%	$10,776	$9,667	11%
Operating expenses	$5,875	$5,015	17%	$5,015	$4,589	9%
Operating income	$6,622	$5,761	15%	$5,761	$5,078	13%
Operating margin	53.0 %	53.5 %	(0.5) ppt	53.5 %	52.5 %	0.9 ppt
Income tax expense	$2,607	$1,587	64%	$1,587	$1,150	38%
Effective income tax rate	40.0 %	28.1 %	11.9 ppt	28.1 %	23.2 %	4.9 ppt
Net income	$3,915	$4,059	(4)%	$4,059	$3,808	7%
Diluted earnings per share	$3.65	$3.69	(1)%	$3.69	$3.35	10%
Diluted weighted-average shares outstanding	1,072	1,101	(3)%	1,101	1,137	(3)%

Summary of Non-GAAP Results [1]:

	Year ended December 31, 2017	Year ended December 31, 2016	Increase/(Decrease) As adjusted	Increase/(Decrease) Currency-neutral	Year ended December 31, 2016	Year ended December 31, 2015	Increase/(Decrease) As adjusted	Increase/(Decrease) Currency-neutral
	($ in millions, except per share data)							
Net revenue	$12,497	$10,776	16%	15%	$10,776	$9,667	11%	13%
Adjusted operating expenses	$5,693	$4,898	16%	16%	$4,898	$4,449	10%	12%
Adjusted operating margin	54.4 %	54.5 %	(0.1) ppt	(0.2) ppt	54.5 %	54.0 %	0.6 ppt	0.6 ppt
Adjusted effective income tax rate	26.8 %	28.1 %	(1.3) ppt	(1.3) ppt	28.1 %	23.4 %	4.6 ppt	4.7 ppt
Adjusted net income	$4,906	$4,144	18%	17%	$4,144	$3,903	6%	7%
Adjusted diluted earnings per share	$4.58	$3.77	21%	21%	$3.77	$3.43	10%	11%

Note: Tables may not sum due to rounding.

[1] The Summary of Non-GAAP Results excludes the impact of Special Items and/or foreign currency. See "Non-GAAP Financial Information" for further information on the Special Items, the impact of foreign currency and the reconciliation to GAAP reported amounts.

Key highlights for 2017 were as follows:

- Net revenue increased 16%, or 15% on a currency-neutral basis, in 2017 versus 2016, primarily driven by:
  - Ø Switched transaction growth of 17%
  - Ø Cross border growth of 15% on a local currency basis
  - Ø An increase of 10% in gross dollar volume, on a local currency basis and adjusted for the impact of the 2016 EU regulation change
  - Ø Acquisitions contributed 2 percentage points of growth

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Ø These increases were partially offset by higher rebates and incentives

- Operating expenses increased 17% in 2017 versus 2016. Excluding the impact of Special Items, adjusted operating expenses increased 16%, both as adjusted and on a currency-neutral basis, in 2017 versus 2016. The impact of acquisitions contributed 6 percentage points of growth for the twelve months ended December 31, 2017. Other factors contributing to the increase were continued investments in strategic initiatives as well as foreign exchange related charges.
- The effective income tax rate increased 11.9 percentage points to 40.0% in 2017 versus 28.1% in 2016, primarily due to the Tax Cuts and Jobs Act (the "TCJA"). Excluding the impact of the TCJA and other Special Items, the 2017 adjusted effective income tax rate improved by 1.3 percentage points to 26.8% from 28.1% in 2016 primarily due to a more favorable geographical mix of taxable earnings, partially offset by a lower U.S. foreign tax credit benefit.

Other financial highlights for 2017 were as follows:

- We generated net cash flows from operations of $5.6 billion in 2017, versus $4.5 billion in 2016.
- We repurchased 30 million shares of our common stock for $3.8 billion and paid dividends of $942 million in 2017.
- We acquired businesses for total consideration of $1.5 billion in 2017, the largest of which was VocaLink Holdings Limited ("Vocalink"), which expanded our capability, among other things, to process real-time account-based payment transactions.
- The TCJA, enacted in 2017, will reduce the U.S. corporate income tax rate from 35% to 21% beginning in 2018, imposes a one-time deemed repatriation tax on accumulated foreign earnings (the "Transition Tax") and puts into effect the migration towards a territorial tax system. While the enactment of the TCJA resulted in additional tax expense of $873 million in 2017, it is expected to have a favorable impact on our effective tax rate in future periods. See Note 17 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion of the TCJA impact.

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"). These non-GAAP financial measures exclude the impact of the following special items ("Special Items"). We excluded these Special Items as management monitors significant changes in tax law, litigation judgments and settlements related to interchange and regulation, and significant one-time items separately from ongoing operations and evaluates ongoing performance without these amounts.

- In 2017, due to the passage of the TCJA, we incurred additional tax expense of $873 million, $0.81 per diluted share, which includes $825 million of provisional charges attributable to the Transition Tax, the remeasurement of our net deferred tax asset balance 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 in additional tax expense related to a foregone foreign tax credit benefit on current year repatriations (collectively the "Tax Act Impact"). See Financial Results of this section and Note 17 (Income Taxes) to the consolidated financial statements included in Part II, Item 8 for further discussion of the TCJA.
- In 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 (the "Venezuela Charge"). See Impact of Foreign Currency of this section and Note 1 (Summary of Significant Accounting Policies) to the consolidated financial statements included in Part II, Item 8 for further discussion of the Venezuela Charge.
- In 2017, we recorded a pre-tax charge of $15 million ($10 million after tax, or $0.01 per diluted share) in provision for litigation settlements expense, related to a litigation settlement with Canadian merchants (the "Canadian Merchant Litigation Provision"). In 2016 and 2015, we recorded a pre-tax charge of $117 million ($85 million after tax, or $0.08 per diluted share) and $61 million ($45 million after tax, or $0.04 per diluted share), respectively, in provision for litigation settlements expense, related to separate litigations with merchants in the U.K. (collectively the "U.K. Merchant Litigation Provision"). See Note 18 (Legal and Regulatory Proceedings) to the consolidated financial statements included in Part II, Item 8 for further discussion of the Canadian Merchant Litigation Provision and the U.K. Merchant Litigation Provision.
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In 2015, we recorded a settlement charge of $79 million ($50 million after tax, or $0.04 per diluted share) in general and administrative expenses, relating to the termination of our qualified U.S. defined benefit pension plan (the “U.S.

Employee Pension Plan Settlement Charge”). See Note 11 (Pension, Postretirement and Savings Plans) to the consolidated financial statements included in Part II, Item 8 for further discussion of the U.S. Employee Pension Plan Settlement Charge.
In addition, we present growth rates adjusted for the impact of foreign currency, which is a non-GAAP financial measure. For 2017 and 2016, we present currency-neutral growth rates, which 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 foreign 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 foreign currency represents the effect of converting revenue and expenses occurring in a currency other than the functional currency. Our management believes the presentation of the impact of foreign currency provides relevant information.
Our management believes that the non-GAAP financial measures presented facilitate an understanding of our operating performance and provide a meaningful comparison of our results between periods. Our management uses 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.
Net revenue, operating expenses, operating margin, effective income tax rate, net income and diluted earnings per share, adjusted for Special Items and/or the impact of foreign 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 as-reported financial measures calculated in accordance with GAAP to the respective non-GAAP adjusted financial measures.

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

	Year ended December 31, 2016				
	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
	($ in millions, except per share data)				
Reported - GAAP	$5,015	53.5 %	28.1 %	$4,059	$ 3.69
U.K. Merchant Litigation Provision	(117)	1.0 %	— %	85	0.08
Non-GAAP	$4,898	54.5 %	28.1 %	$4,144	$ 3.77

	Year ended December 31, 2015				
	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
	($ in millions, except per share data)				
Reported - GAAP	$4,589	52.5 %	23.2 %	$3,808	$ 3.35
U.S. Employee Pension Plan Settlement Charge	(79)	0.8 %	0.1 %	50	0.04
U.K. Merchant Litigation Provision	(61)	0.6 %	0.1 %	45	0.04
Non-GAAP	$4,449	54.0 %	23.4 %	$3,903	$ 3.43

The following tables represent the reconciliation of our growth rates reported under GAAP to our Non-GAAP growth rates, adjusted for Special Items and foreign currency:

	Year Ended December 31, 2017 as compared to the Year Ended December 31, 2016 Increase/(Decrease)					
	Net revenue	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
Reported - GAAP	16 %	17 %	(0.5) ppt	11.9 ppt	(4)%	(1)%
Tax Act Impact	**	**	**	(13.4) ppt	21 %	22 %
Venezuela Charge	**	(3)%	1.3 ppt	0.2 ppt	3 %	3 %
Canadian Merchant Litigation Provision	**	— %	0.1 ppt	– ppt	— %	— %
U.K. Merchant Litigation Provision	**	3 %	(1.1) ppt	– ppt	(2)%	(3)%
Non-GAAP	16 %	16 %	(0.1) ppt	(1.3) ppt	18 %	21 %
Foreign currency [1]	(1)%	(1)%	(0.1) ppt	– ppt	(1)%	1 %
Non-GAAP - currency-neutral	15 %	16 %	(0.2) ppt	(1.3) ppt	17 %	21 %

	Year Ended December 31, 2016 as compared to the Year Ended December 31, 2015 Increase/(Decrease)					
	Net revenue	Operating expenses	Operating margin	Effective income tax rate	Net income	Diluted earnings per share
Reported - GAAP	11%	9 %	0.9 ppt	4.9 ppt	7 %	10 %
U.K. Merchant Litigation Provision	**	(1)%	0.5 ppt	(0.1) ppt	1 %	1 %
U.S. Employee Pension Plan Settlement Charge	**	2 %	(0.8) ppt	(0.2) ppt	(1)%	(1)%
Non-GAAP	11%	10 %	0.6 ppt	4.6 ppt	6 %	10 %
Foreign currency [1]	1 %	1 %	– ppt	0.1 ppt	1 %	1 %
Non-GAAP - currency-neutral	13%	12 %	0.6 ppt	4.7 ppt	7 %	11 %

Note: Tables may not sum due to rounding.
** Not meaningful.
[1] Represents the foreign currency translational and transactional impact.

Impact of Foreign Currency Rates

Our overall operating results are impacted by foreign 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 foreign currency. The impact of the transactional foreign currency represents the effect of converting revenue and expense transactions occurring in a currency other than the functional currency. Changes in foreign 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 foreign 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 2017, GDV on a U.S. dollar-converted basis increased 8.7%, while GDV on a local currency basis increased 8.6% versus 2016. In 2016, GDV on a U.S. dollar-converted basis increased 5.5%, while GDV on a local currency basis increased 9.1% versus 2015. Further, the impact from transactional foreign currency occurs in transaction

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processing revenue, other revenue and operating expenses when the local currency of these items are different than the functional currency.

In addition, 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. We attempt to manage foreign currency balance sheet remeasurement and cash flow risk through our foreign exchange risk management activities, which are discussed further in Note 20 (Foreign Exchange Risk Management) to the consolidated financial statements included in Part II, Item 8. Since we do not designate foreign currency derivatives as hedging instruments pursuant to the accounting standards for derivative instruments and hedging activities, we record gains and losses on foreign exchange derivatives on a current basis, with the associated offset being recognized as the exposures materialize.

We are exposed to currency devaluation in certain countries. In addition, we are subject to exchange control regulations that restrict or prohibit 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 Venezuela, due to increasing foreign exchange regulations restricting access to U.S. dollars, an other-than-temporary lack of exchangeability between the Venezuela bolivar and the U.S. dollar has 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 would transition to the cost 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). We continue to operate and serve our Venezuelan issuers, acquirers, merchants and account holders with our products and services. We do not believe this accounting change will have a significant impact on our consolidated financial statements in future periods. 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

Revenue Description

Our business model involves four participants in addition to us: account holders, merchants, issuers (the account holders' financial institutions) and acquirers (the merchants' financial institutions). We generate revenues from assessing our customers based on the GDV of activity on the products that carry our brands, from the fees that we charge our customers for providing transaction processing and from other payment-related products and services. Our revenue is based upon transactional information accumulated by our systems or reported by our customers. Our primary revenue billing currencies are the U.S. dollar, euro, Brazilian real and the British pound.

The price structure for our products and services is complex and is dependent on the nature of volumes, types of transactions and type of products and services we offer to our customers. Our net revenue can be significantly impacted by the following:

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

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We classify our net revenue into the following five categories:

1. Domestic assessments are fees charged to issuers and acquirers based primarily on the dollar volume of activity on cards and other devices that carry our brands where the merchant country and the issuer country are the same. Domestic assessments include items such as card assessments, which are fees charged on the number of cards issued or assessments for specific purposes, such as acceptance development or market development programs.
2. Cross-border volume fees are charged to issuers and acquirers based on the dollar volume of activity on cards and other devices that carry our brands where the merchant country and the issuer country are different. In general, a cross-border transaction generates higher revenue than a domestic transaction since cross-border fees are higher than domestic fees, and may include fees for currency conversion.
3. Transaction processing revenue is earned for both domestic and cross-border transactions and is primarily based on the number of transactions. Transaction processing includes the following:

- Switched transactions include the following products and services:
  - Ø 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, on behalf of the issuer approve in accordance with either the issuer's instructions or applicable rules (also known as "stand-in").
  - Ø 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. We clear transactions among customers through our central and regional processing systems.
  - Ø 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 our 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.

4. Other revenues: Other revenues consist of other payment-related products and services and are primarily associated with the following:

- Consulting, data analytic and research fees are primarily generated by Mastercard Advisors, our professional advisory services group.
- Safety and security services fees are for products and services we offer to prevent, detect and respond to fraud and to ensure the safety of transactions made on our products. We work with issuers, merchants and governments to help deploy standards for safe and secure transactions for the global payments system.
- 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. For merchants, we provide targeted offers and rewards campaigns and management services for publishing offers, as well as opportunities for holders of co-brand or loyalty cards and rewards program members to obtain rewards points faster.
- 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.
- Real-time account-based payment services relating to ACH and other ACH related services.
- We also charge for a variety of other payment-related products and services, including account and transaction enhancement services, rules compliance and publications.

5. Rebates and incentives (contra-revenue): Rebates and incentives are provided to certain of our customers and are recorded as contra-revenue.

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Revenue Analysis

Gross revenue increased 18% and 14%, or 17% and 15% on a currency neutral basis, in 2017 and 2016, respectively, versus the prior year. The increase in both 2017 and 2016 was primarily driven by 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 22% and 20% in 2017 and 2016, respectively, or 22% on a currency neutral basis in both periods. The increases in rebates and incentives in 2017 and 2016 were primarily due to the impact from new and renewed agreements and increased volumes.

Our net revenue increased 16% and 11%, or 15% and 13% on a currency neutral basis, respectively, versus the prior year.

The significant components of our net revenue were as follows:

	For the Years Ended December 31,			Percent Increase (Decrease)	
	2017	2016	2015	2017	2016
	(in millions, except percentages)				
Domestic assessments	$				