Welcome

Warren Kneeshaw
Executive Vice President, Investor Relations
Agenda

8:30 a.m.  Welcome  Warren Kneeshaw

8:35 a.m.  Capitalizing on our opportunity  Ajay Banga

8:50 a.m.  Global Products & Innovation
            Consumer – driving exceptional experiences  Michael Miebach, Jess Turner
            Commercial – solutions for every business payment  Michael Miebach
            At the forefront of real-time payments  Paul Stoddart

9:50 a.m.  Advancing trust and securing the ecosystem  Ajay Bhalla

10:05 a.m.  Data & Services as a force multiplier  Kevin Stanton

10:20 a.m.  Break

10:35 a.m.  Go-to-market updates
            US  Craig Vosburg, Linda Kirkpatrick, Ron Shultz
            Europe  Mark Barnett
            Government engagement  Michael Froman, Tim Murphy

11:35 a.m.  Financial perspective  Sachin Mehra

11:55 a.m.  Q&A session

12:30 – 2:30 p.m.  Lunch and product showcase

12:45 – 2:00 p.m.  Breakout sessions - Europe, North America, Regional: AP/LAC/MEA, B2B/Real-time payments, Digital, Services

12:45 – 1:15 p.m.  Session 1
1:30 – 2:00 p.m.   Session 2
Mastercard management presenters

Ajay Banga  
President and Chief Executive Officer

Michael Miebach  
Chief Product Officer

Jess Turner  
Executive Vice President, North America Products & Innovation

Paul Stoddart  
President, New Payment Platforms

Ajay Bhalla  
President, Cyber & Intelligence Solutions

Kevin Stanton  
Chief Services Officer

Craig Vosburg  
President, North America

Linda Kirkpatrick  
Executive Vice President, Merchants and Acceptance

Ron Shultz  
Executive Vice President, New Payments Flows

Mark Barnett  
Division President, U.K., Ireland, Nordics & Baltics

Michael Froman  
Vice Chairman and President, Strategic Growth

Timothy Murphy  
General Counsel

Sachin Mehra  
Chief Financial Officer

Warren Kneeshaw  
Executive Vice President, Investor Relations
Additional breakout sessions hosts and management attendees

James Anderson  
Executive Vice President, Commercial Products

Gilberto Caldart  
President, International

Dimitrios Dosis  
President, Advisors

Carlo Enrico  
President, Latin America & Caribbean

Michael Fraccaro  
Chief People Officer

Sherri Haymond  
Executive Vice President, Digital Partnerships

Francis Hondal  
President, Loyalty & Engagement

Jorn Lambert  
Executive Vice President, Digital Solutions

Ling Hai  
Co-President, Asia Pacific

Ed McLaughlin  
President, Operations & Technology

Carlos Menendez  
President, Enterprise Partnerships

Javier Perez  
President, Europe

Blake Rosenthal  
Executive Vice President, Acceptance Solutions

Raj Seshadri  
President, U.S. Issuers
Forward looking statements

Today’s presentation may contain, in addition to historical information, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995.

These forward-looking statements are based on our current assumptions, expectations and projections about future events which reflect the best judgment of management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by our comments today. You should review and consider the information contained in our filings with the SEC regarding these risks and uncertainties.

Mastercard disclaims any obligation to publicly update or revise any forward-looking statements or information provided during today’s presentations.

Any non-GAAP information contained in today’s presentations is reconciled to its GAAP equivalent in the appendices at the end of this presentation.
Capitalizing on our opportunity

Ajay Banga
President and Chief Executive Officer
Our strategy

Grow

CORE
Credit
Debit
Commercial
Prepaid
Digital-physical convergence
Acceptance

Diversify

CUSTOMERS AND GEOGRAPHIES
Financial inclusion
New markets
Businesses
Governments
Merchants
Digital players
Local schemes/switches

Build

NEW AREAS
Data analytics
Consulting
Marketing services
Loyalty
Cyber and Intelligence
Processing
New payment flows

ENABLED BY BRAND, DATA, TECHNOLOGY AND PEOPLE
The transformation of Mastercard

**Product diversification**
- Consumer credit centric
- Strong debit growth
- Prepaid leadership
- Fast-growing commercial solutions

**Growth in services**
- Early fraud tools
- Managed services
- Card benefits
- Full suite of cyber solutions
- Data analytics
- Loyalty platforms
- Processing assets

**New payment flows**
- Virtual cards
- ACH infrastructure and application assets
- Cross-border account to account capabilities

---

1. Gross dollar volume as reported; Mastercard branded only
## Staying ahead of the trends

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Trends</th>
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</thead>
<tbody>
<tr>
<td>Digital-first solutions</td>
<td>Streamlined user experience</td>
</tr>
<tr>
<td>Multi-rail provider</td>
<td>Demand for choice</td>
</tr>
<tr>
<td>Drive innovation; foster developer ecosystem</td>
<td>Emergence of new technologies</td>
</tr>
<tr>
<td>Cyber &amp; intelligence solutions; AI focused</td>
<td>Heightened cybersecurity threats</td>
</tr>
<tr>
<td>Data analytics solutions; privacy by design</td>
<td>Focus on data and privacy</td>
</tr>
<tr>
<td>Proactive engagement model</td>
<td>New players emerging</td>
</tr>
<tr>
<td>Support governments’ digital ecosystems</td>
<td>Regulatory oversight and nationalism</td>
</tr>
</tbody>
</table>
Significant opportunity across multiple payment flows

Market size by payment flow
Volume in $ trillions

- **Cash & Check**
- **ACH**
- **Carded**

<table>
<thead>
<tr>
<th>Payment Flow</th>
<th>Volume in $ trillions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCE</td>
<td>$50(^1)</td>
</tr>
<tr>
<td>B2B/G2B</td>
<td>$125</td>
</tr>
<tr>
<td>P2P/B2C/G2C</td>
<td>$60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$235(^1)</td>
</tr>
</tbody>
</table>

- **Cash & Check**: $12T of non-purchase consumption
- **Carded**: $13T of non-PCE card purchases in China

Note: Figures may not sum due to rounding.

Mastercard’s multi-layered approach

Applications
- Consumer Credit
- Consumer Debit
- Pay by Account
- Point-of-sale financing

Services
- Bill Pay
- Prepaid
- Micro payments / Kionect
- Mastercard Send Cross-border / Transfast

Infrastructure
- Cyber & Intelligence – fraud solutions, AI
- Data & Services – Loyalty, Advisors, data analytics
- Processing – Gateway, Prepaid Management
- Cards, Real-time payments/ACH, Blockchain

P2M
- SME, T&E, P-card, Fleet
- Virtual cards
- Mastercard Track™
  - Trade Directory
  - B2B Hub
  - Business Payment Service

B2B / G2B
- Mastercard Send™

P2P / B2C / G2C
Creating shareholder value

Currency-neutral 5-Year CAGR % through 2018

<table>
<thead>
<tr>
<th>Revenue Type</th>
<th>CAGR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenue</td>
<td>15%</td>
</tr>
<tr>
<td>EPS</td>
<td>23%</td>
</tr>
</tbody>
</table>

1. Excludes special items as defined in Appendix A. Refer to Appendix A for non-GAAP reconciliation.

2. Source: Factset – based on initial investment of $100 on 9/1/09 through 8/30/19; MA stock price of $20.07 on 9/1/09 vs. $281.37 on 8/30/19.
Key takeaways

- Significant opportunity ahead
- Anticipating trends and building solutions to meet evolving requirements
- Differentiating with services
- Providing choice to our customers
- Doing well by doing good
- Executing on strategy and well positioned for long-term growth
Global Products & Innovation

Michael Miebach
Chief Product Officer

Jess Turner
Executive Vice President,
North America Products & Innovation
Our product strategy – differentiate with experience, choice, and relevance

**Grow, Diversify, Build**

<table>
<thead>
<tr>
<th>Who</th>
<th>What</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diverse partners</td>
<td>Best-in-class experiences</td>
<td>Enable our partners</td>
</tr>
<tr>
<td>Consumers</td>
<td>Payment choice &amp; flexibility</td>
<td>Multi-rail network</td>
</tr>
<tr>
<td>Businesses</td>
<td>Locally relevant solutions</td>
<td>New tech &amp; business models</td>
</tr>
</tbody>
</table>
## One-stop shop across payment flows

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer Cards</strong> (Credit, Debit, Prepaid, Tokenization, Secure Remote Commerce)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bill Pay</strong> (RPPS Biller Directory, Transactis, Nets Corporate Services Bill Pay&lt;sup&gt;1&lt;/sup&gt;)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Person-to-Person &amp; Disbursement</strong> (Mastercard Send™)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Core Commercial</strong> (SME, T&amp;E, P-Card, Fleet, Prepaid)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Accounts Payable Commercial</strong> (Virtual Cards, Mastercard Track™ incl. Payment on Delivery)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acceptance</strong> (Contactless, QR, Tap on Phone, Vyze)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Real-Time Payments Applications</strong> (Pay by Account)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Cross-Border</strong> (Mastercard Send, Transfast)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Open Banking</strong> (Connect, Protect, Resolve, Nets Corporate Services Open Banking&lt;sup&gt;1&lt;/sup&gt;)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Real-Time Payments Infrastructure</strong> (Regional Expansion incl. Nets Corporate Services&lt;sup&gt;1&lt;/sup&gt;)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Market size</strong></td>
<td>$50T&lt;sup&gt;2&lt;/sup&gt;</td>
<td>$125T</td>
<td>$60T</td>
</tr>
</tbody>
</table>

<sup>1</sup> Mastercard announced an agreement to acquire the majority of Nets’ Corporate Services business, subject to regulatory and other conditions

<sup>2</sup> Includes $12T of non-purchase consumption

Sustainable momentum with strong results

<table>
<thead>
<tr>
<th></th>
<th>1H19 GDV(^1)</th>
<th>2018 market share trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Credit</td>
<td>+9%</td>
<td>▲</td>
</tr>
<tr>
<td>Consumer Debit</td>
<td>+14%</td>
<td>▲</td>
</tr>
<tr>
<td>Prepaid</td>
<td>+19%</td>
<td>▲</td>
</tr>
<tr>
<td>Commercial(^2)</td>
<td>+13%</td>
<td>▲</td>
</tr>
</tbody>
</table>

1. Local currency growth versus 1H18. Gross dollar volume as reported, Mastercard branded only
2. Includes commercial credit and debit
Consumer – driving exceptional experiences
Innovating to provide best-in-class consumer experiences

Heightened **consumer expectations**

- Personalization
- Privacy
- Digital-first
- Choice & flexibility

Delivered by our partners, enabled by Mastercard

Focus on **digital commerce** within P2M

>4x

Global digital commerce growth vs. total retail

1. Retail sales projected by eMarketer, 2019

©2019 Mastercard
Digital commerce – solving for digital-physical convergence

1. Digital transactions are growing at an unprecedented pace

2. Digital and physical continue to come together in everyday life

3. Technology, in particular AI, connectivity, IoT and new interfaces, will have a profound impact on commerce
Tokenization – enabling all forms of digital payment

Issuers

Tokenization

Consumers

Use cases

Merchants

Interfaces

- CREDENTIAL ON FILE
- COMMERCE PLATFORMS
-/devices
- GUEST CHECKOUT
- E-COMMERCE
- IN-APP
- NFC
- QR
- TEXT
- VOICE
Secure Remote Commerce – reinventing guest checkout

Optimizing Secure Remote Commerce with Mastercard

- **Acceptance** powered by **merchants** and **payment services providers**
- **No static passwords**
- **Interoperable** with tokenization and authentication standards
- **Integrated** with Mastercard technologies, enabling our partners to **scale** and **differentiate**
Mastercard Digital Wellness – serving today’s digital-first customer

**Built on standards**

- EMVCo Secure Remote Commerce
- EMVCo Tokenization
- EMVCo 3DS 2.0

**Powered by Mastercard**

- Mastercard Secure Remote Commerce
- Mastercard Digital Enablement Service (MDES)
- NuData
- Cyber Readiness Institute
- Global Cyber Alliance

PROVIDES MERCHANTS EASY ACCESS TO OUR PRODUCTS & SERVICES
Debit Mastercard – enabling digital commerce

Upgrading debit portfolio

Debit card mix

Maestro

- AP
- LAC
- EUR

Debit Mastercard

2016
Q2 2019

Driving consumer experience with Debit Mastercard

- Consistent e-commerce and mobile-commerce experience
- Digital wallet enabled for contactless and in-app use
- Global acceptance
- Greater access to value-added services

Yielding results

Consumer spend with Debit Mastercard

capturing up to $2x$
Prepaid – innovating to grow our leading position

**Distributing through new, digital-first customers**

- Gig economy
- Digital "giants"
- Fintechs

**Empowering new consumers**

- Underserved
- Mobile banking

**Vertical expansion**

- Real-time payroll

**Use case expansion**

- Digital wallets & marketplaces
- Digital banking

**ENABLING OUR DIVERSE SET OF PARTNERS THROUGH INTEGRATED, END-TO-END PLATFORMS**
Bill Pay – platform to address additional consumer flows

Targeting global bill pay opportunity and improving experience across the ecosystem

"I can view all my bills in one app, and pay how I want"

"Customers are spending more time in our app"

Pay in-app, in real time
- API integration
- Payment choice
- Dynamic messaging
- User directory

"It’s cheaper and more efficient to process bill payments"

Enabled by...
1. Mastercard announced an agreement to acquire the majority of Nets’ Corporate Services business, subject to regulatory and other conditions
Commercial – solutions for every business payment
Comprehensive commercial card solutions

Small business cards

New capabilities, e.g. Mastercard Receipt Management

Efficiency and simplicity for small & medium enterprises

Travel & Purchasing cards

Platform-based services, e.g. Smart Data

Smarter, safer cards for corporates & governments

Virtual cards

Supplier experience enhancements, e.g. Straight-Through Processing

Digitized payables & receivables

SBERBANK
GSA
itemize
Oversight
versapay
Addressing pervasive pain points in accounts payable

A significant B2B opportunity

Market size by payment flow
Volume in $ trillions

~$110T

Accounts payable flows primarily addressable with account-based payments

Accounts payable pain points

• Lack of visibility into supplier payment preference and acceptance conditions

• Managing cash flow due to inability to enforce payment terms

• Limited remittance data associated with a payment makes reconciliation difficult

• Limited automation due to lack of established common standards

1. Includes $12T of non-purchase consumption
Mastercard Track™ – modernizing the B2B ecosystem

### Addressing pain points in B2B commerce

- Tackling systemic challenges in B2B payments
- Solving complexities adjacent to payments
- Vast improvements to the way buyers and suppliers conduct trade at scale

### Mastercard Track architecture

- **Global**
- **Multi-rail**
- **Data-rich**
- **Scale through partners**
## Mastercard Track™ – expanding our suite of solutions

### Existing...

<table>
<thead>
<tr>
<th>Mastercard Track Trade Directory</th>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Over 200 million business entities</td>
<td>• Supplier risk management</td>
</tr>
<tr>
<td></td>
<td>• 170 countries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mastercard Track B2B Hub</th>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Accounts payable outsourcing service for mid-market customers</td>
<td>• Accounts payable automation</td>
</tr>
<tr>
<td></td>
<td>• Distributed by customer bank</td>
<td></td>
</tr>
</tbody>
</table>

### New...

**Mastercard Track Business Payment Service**
Mastercard Track™ Business Payment Service – launching an open-loop commercial payment service

**Buyers**
- Large
- Mid-market
- Small

**Buyer agents**
- Banks
- Specialty players
- B2B networks

**Supplier agents**
- Banks
- Specialty players
- B2B networks

**Suppliers**
- Large
- Mid-market
- Small

**Mastercard Track Business Payment Service**
- Buyer/supplier directory
- Supplier payment rules
- Rich remittance data

*SINGLE CONNECTION ENABLES ACCESS TO MULTIPLE PAYMENT TYPES, GREATER CONTROL, AND RICHER DATA TO OPTIMIZE B2B TRANSACTIONS FOR BUYERS AND SUPPLIERS*
Payment on Delivery – use case on real-time payment rails

Mastercard Track™ Business Payment Service
- Supplier payment rules
- Rich remittance data

Real-time payments / ACH

“Powered by Mastercard Track™ Business Payment Service”

Buyer
Local restaurant

Buyer agent
Restaurant’s bank

“Powered by Mastercard Track™ Business Payment Service”

Supplier agent
Wholesaler’s ERP vendor

Supplier
Liquor wholesaler

“I can manage all of my invoices and payments electronically”

“My driver no longer has to wait for payment and can make more deliveries”
### Mastercard Send™ – fast, secure B2C disbursements

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
<th>Partner examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instant, scalable payments</strong></td>
<td>• Faster funds availability for recipients</td>
<td>esurance</td>
</tr>
<tr>
<td><strong>Trusted services &amp; security</strong></td>
<td>• Superior user experience drives loyalty and engagement</td>
<td>EVOLVE bank &amp; trust</td>
</tr>
<tr>
<td><strong>Global reach</strong></td>
<td>• Avoidance of check and wire fees for payers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Transparent payment status</td>
<td></td>
</tr>
</tbody>
</table>
At the forefront of real-time payments

Paul Stoddart
President, New Payment Platforms
The real-time ACH infrastructure opportunity is expanding.
## Our full-service approach

### Infrastructure

Underlying payment technology and rails

### Applications

End-user solutions to connect more senders and recipients

- **Managed services & hubs**
  - P2M
  - B2B / G2B
  - P2P / B2C / G2C

### Services

Capabilities that enhance real-time payments and facilitate adoption

- Consulting
- Data analytics
- Fraud solutions
Nets provides complementary value

**Infrastructure**
- Larger markets
- Sophisticated & customized

**Applications**
- US Bill Pay (C2B)
- Transactis
- Pay by Account (P2M)

**Services**
- Suite of services & analytics
- Can be provided across technologies

**Mastercard + Nets**
- Smaller markets
- Fast deployment
- Region-specific capabilities

**Result**
- Extended global coverage
- Industry-leading solutions

---

1. Mastercard announced an agreement to acquire the majority of Nets’ Corporate Services business, subject to regulatory and other conditions.
Infrastructure – real-time connectivity, worldwide reach

Live or signed in
11/50 Top GDP markets...

...representing
30%+ Global GDP^2...

and supporting
60%+ World population

1. Mastercard announced an agreement to acquire the majority of Nets’ Corporate Services business, subject to regulatory and other conditions
2. World Bank national accounts data, and OECD National Accounts data files
Applications – addressing a range of use cases

Applications

Partners

Built on real-time payments infrastructure

1. Mastercard announced an agreement to acquire the majority of Nets’ Corporate Services business, subject to regulatory and other conditions.
Extending our cross-border capabilities

Providing our partners broad reach through a single API connection

Consumers → Banks → Consumers

Businesses → Banks → Businesses

Governments → Banks → Governments

125+ countries
150 currencies
300+ banks & financial institutions

ENABLED BY CARDS, REAL-TIME PAYMENTS/ACH AND BLOCKCHAIN
Services – scaling through new flows

<table>
<thead>
<tr>
<th>Financial crime solutions</th>
<th>Reporting &amp; analytics</th>
<th>Consulting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent</td>
<td>Report</td>
<td>Strategy</td>
</tr>
<tr>
<td>Trace</td>
<td>Benchmark</td>
<td>Optimization</td>
</tr>
<tr>
<td>Account alert</td>
<td>Predict</td>
<td>Financial crime</td>
</tr>
<tr>
<td>Verify identity</td>
<td>Classify</td>
<td>Risk &amp; resiliency</td>
</tr>
</tbody>
</table>

>100 real-time payment services contracts executed since 2015
Future frontiers – emerging commerce ecosystems

- Card payments
- Card services
- New payment flows
- New payment services
- Beyond payments
Key takeaways

Building innovative products for our diverse partners and their customers

Enabling scalable digital solutions

Supporting all forms of payment with our multi-rail network

Powering choice, convenience and security
Advancing trust and securing the ecosystem

Ajay Bhalla
President, Cyber & Intelligence Solutions
Rapidly changing world presents new opportunities & risks

**Digital convergence & IoT**
- Weak built-in security

**Exponential growth in data**
- Concerns over data security and privacy

**Age of AI**
- Disrupting industries and crime

**Digitally native generation**
- Expects experience comes with security
Cybersecurity needs of our stakeholders are evolving

Consumers
- Impacted by data breaches – looking for control and trusted brands

Merchants
- Protecting against cyber attacks while optimizing customer experience

Businesses
- Seeking expertise and solutions to mitigate threats and reduce risk

Financial Institutions
- Increasingly targeted by cyber criminals; investing heavily to stay secure

Governments
- Introducing and enforcing cyber laws to protect critical infrastructure
A multi-layered strategy that advances trust

**Prevent**
Secure the physical world, the digital world and the IoT

**Identify**
Identify genuine consumers and devices

**Detect**
Stop cyberattacks, reduce fraud

**Experience**
Physical and digital experiences that grow commerce

Artificial Intelligence
Powers products and enables customers

Governments  | Banks  | Merchants  | Consumers

Cards  | Real-time payments  | Beyond payments
Securing the ecosystem and unlocking new opportunities

**Recent successes**

- **EMV chip**
  - Digital EMV
  - **88%**
    - Card transactions chip enabled

- **SecureCode**
  - Identity Check
  - **3.5 billion**
    - SecureCode authentications

- **Safety Net**
  - Decision Intelligence
  - **$10 billion**
    - Saved in attempted cyber attacks

- **Contactless**
  - Biometrics
  - **22%**
    - Transactions are contactless

**Future focus**

- **Securing the Internet of Things**
- **Collaborating on Digital Identity**
- **Detecting cyber vulnerabilities automatically**
- **Embedding AI for every solution**

---

1. As of July 2019
4. As of year-end 2018; contactless transactions as a percentage of card-present transactions, excluding Venezuela
Growth strategy accelerated by acquired capabilities

**Internet of Things**

**NuData Security**
- Behavioral biometrics
- Block bots/synthetic ID
- Trust devices in the IoT

**Intelligence everywhere**

**Brighterion**
- Globally scalable
- Ultra high speed
- Unique proprietary IP

**Digital experience**

**ethoca**
- Collaborative platform
- Eliminate chargebacks
- Quick resolution
Key takeaways

- Ensuring ecosystem security
- Creating sources of differentiation
- Delivering new sources of growth
Data & Services as a force multiplier

Kevin Stanton
Chief Services Officer
Data & Services - end-to-end value proposition

- Differentiated by Mastercard data, brand, network
- Recurring-revenue focused

- Best-in-class delivery efficiency
- AI-enabled

Fully plugged into other Mastercard capabilities
Our strategy

**Grow**

**CORE**
- Credit
- Debit
- Commercial
- Prepaid
- Digital-physical convergence
- Acceptance

**Diversify**

**CUSTOMERS AND GEOGRAPHIES**
- Financial inclusion
- New markets
- Businesses
- Governments
- Merchants
- Digital players
- Local schemes/switches

**Build**

**NEW AREAS**
- Data analytics
- Consulting
- Marketing services
- Loyalty
- Cyber and Intelligence
- Processing
- New payment flows

**ENABLED BY BRAND, DATA, TECHNOLOGY AND PEOPLE**
Mastercard strategy – drill-down on services

**Build**
- Incremental revenue opportunity
- Fast growing
- Pursuing recurring revenues

**Diversify**
- New geographies
- New industry verticals

**Grow**
- Differentiate in deals
- Portfolio performance
- Embedded
Diversify – case studies

New geographies | Latin America

- Retail, financial services behemoth
- 100+ locations, ~3M cards
- Portfolio conversion to spur growth
- Leveraged
  - Marketing Services
  - Consulting Services
  - Analytics
  - Labs as a Service
  - Test & Learn
- Developed mass-market footprint in market

New industry verticals | Healthcare

- Large healthcare network
- 1 of ~600 in the US alone
- Optimize revenue management, marketing, clinical-care quality
- Leveraged
  - Test & Learn platform
  - Industry-specific veneer
  - Scalable
  - Beachhead for other services and core
- Access to new customers and revenue pools
## Grow – case studies

### Differentiate in deals | Australia

- 9M+ customers
- Improve spend and engagement
- Holistic solution leveraging Analytics, Consulting Services, Marketing Services, Test & Learn, and Labs-as-a-Service
- 2M+ cards converted, key in winning deal

### Portfolio performance | Italy

- ING
  - 400,000 cards converted
  - Improve activation, launch installments
  - Leveraged Consulting, Analytics, Marketing Services
  - 19% uplift in activation

### Embedded | UK

- HSBC
  - 14.5M customers
  - Embedded
    - Loyalty: Pay with Rewards, LoungeKey, Boingo Wifi
    - Marketing Services
    - Consulting Services
    - Security Services
Key takeaways

- Fast-growing, incremental revenue opportunity
- Accelerating entry into new markets and verticals
- Core growth force multiplier
Go-to-market update: US

Craig Vosburg  
President, North America

Linda Kirkpatrick  
Executive Vice President, Merchants and Acceptance

Ron Shultz  
Executive Vice President, New Payments Flows
The US market has significant room for growth

2018 market size by payment flow
Volume in $ trillions

<table>
<thead>
<tr>
<th>Payment Method</th>
<th>Volume in $ trillions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash &amp; Check</td>
<td>$14</td>
</tr>
<tr>
<td>ACH</td>
<td>$22</td>
</tr>
<tr>
<td>Carded</td>
<td>$19</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$55</strong></td>
</tr>
</tbody>
</table>

The US market has significant room for growth.

Note: Figures may not sum due to rounding.

1. Includes approximately $4T in non-purchase consumption.


Largest Mastercard market
(2018 data)

- % total revenue: 33%
- % total GDV: 30%
- GDV growth: 10%
- PCE growth: 5%
Executing against five strategic priorities to drive growth

Expand product distribution
Growing market share in all products

Grow acceptance
Increasing quantity and quality of acceptance end points

Win in digital
Partnering to enable seamless and secure digital payments

Scale services
Delivering added value to customers

Address new payments flows
Capturing B2B, P2P, and B2C flows

GROW

DIVERSIFY

BUILD
Three drivers of market share growth

**Enhance value propositions**
Develop compelling core value propositions for consumers and small businesses:

- lyft
- salesforce essentials
- BOXED
- FANDANGO
- intuit
- Postmates

**Optimize portfolios**
Drive growth by increasing:
- Cardholder acquisitions
- Activation
- Spend
- Transaction approval rates

**Win new business**
Goldman Sachs
BANK OF AMERICA
Capital One
Lyft
Citi
PayPal
Bass Pro Shops
Cabela's
houzz
Sallie Mae
AIRFRANCE
KLM Royal Dutch Airlines
Winning in co-brand

Mastercard Differentiators

Our Partnership  Differentiated Data & Analytics  Products & Innovation  Priceless Experiences
Expanding acceptance in a safe and seamless way

**US network reach**

- 2014: 8M
- 2017: 20M
- 2018: 48M

Incremental network endpoints:
- 30M
- 37M

Traditional acceptance locations:
- 8M
- 10M
- 11M

**Network upgrades**

- **EMV**
  - ~65%¹
  - US volume EMV enabled

- **Contactless**
  - ~60%¹
  - US card-present volume originates at contactless-enabled merchants

¹ As of June 2019
Source: Kaiser Associates and Mastercard analysis
Diversifying acceptance solutions to fuel partner success

- Enhancing next gen security
- Driving innovation at the point of sale
- Delivering value-added services
- Enabling new flows

Brighterion
NuData Security
ethoca
vyze
APT
TRANSACTIS
TRANSFAST
VOCALINK
Mastercard

Payment Gateway Services
Partnering to enable and secure the digital ecosystem

- Securing and streamlining guest checkout
- Scaling card-on-file tokenization
- Enabling digital wallets

EXCEPTIONAL CUSTOMER EXPERIENCE
LEADING SAFETY AND SECURITY
Value-added services as a differentiator in the US

**Data & Services**
- Used by over 700 customers
- Over 60% of top co-brand issuers use APT

**Loyalty & Innovation**
- Over 70 million accounts managed on loyalty platform
- Over 40 innovation partnerships conducted in 2019

**Safety & Security**
- Over 1B\(^1\) transactions handled daily
- Tens of millions\(^2\) of dollars in fraud losses saved annually

---

**DIFFERENTIATING THE CORE BUSINESS**
**DRIVING INCREMENTAL REVENUE**

---

1. Global transactions, including payment and non-payment transactions, on Decision Management Platform
2. Estimate based on Mastercard analysis
# Momentum in capturing new payment flows

<table>
<thead>
<tr>
<th>Examples</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virtual cards</strong></td>
<td>Single use card primarily for B2B / supplier payments</td>
</tr>
<tr>
<td><strong>Mastercard Send™</strong></td>
<td>Domestic and cross-border disbursement</td>
</tr>
<tr>
<td><strong>Mastercard Track™ payment on delivery</strong></td>
<td>Real-time buyer/supplier receipt billing and payment platform</td>
</tr>
<tr>
<td><strong>Bill Pay Exchange</strong></td>
<td>Digital consumer bill presentment and payment platform (includes real-time payment option)</td>
</tr>
</tbody>
</table>
Key takeaways

- Significant opportunities for ongoing growth
- Increasing market share and accelerated revenue growth
- Expanding through value-added services and by capturing new payment flows
Go-to-market update: Europe

Mark Barnett
Division President, U.K., Ireland, Nordics & Baltics
Europe – a diverse and dynamic region with strong growth

2018 market size by payment flow
Volume in $ trillions

- **Cash & Check**
  - $13
- **ACH**
  - $31
- **Carded**
  - $16
  - $60

### European region
- Population: 900M
- # of countries: 56
- # of languages: 24
- PCE growth: 6%

### Mastercard Europe
- % total GDV: 29%
- GDV growth: 19%
- Market share increasing over the last 3 years

Note: Figures may not sum due to rounding
1. Includes approximately $2T in non-purchase consumption
2. Data for 2018
3. 2018 gross dollar volume as reported; Mastercard branded only. Growth rates on a local currency basis.
New market forces are changing the payments landscape

New opportunities and challenges

- Regulation
- Digitalization
- Competition

- PSD2
- GDPR
- Nationalism
- E-Commerce
- Digital-only issuers
- Frictionless experiences
- Traditional
- Domestic schemes
- New and evolving
Making Open Banking more secure, efficient and scalable

Open Banking Ecosystem

Solutions for Third Parties
- Open Banking Connect

Ecosystem (two-sided) Solutions
- Open Banking Resolve

Solutions for Financial Institutions
- Open Banking Protect
We have a clear strategy

Grow
- Everyday spend
- Cross-border and e-commerce
- Acceptance
- Digital roadmap

Diversify
- Partner with governments
- Deepen engagement with merchants
- Continue to lead with fintechs
- Strengthen local presence

Build
- Real-time payments to penetrate new payment flows
- Open banking solutions
- Increased B2B payments penetration

ENABLED BY OUR SOLUTIONS SELLING APPROACH
The UK: a case study

<table>
<thead>
<tr>
<th>Product lines</th>
<th>Consumer</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Consumer Card Solutions (Credit, Debit, Prepaid, Link)</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Core Commercial Solutions (SME, T&amp;E, P-Card)</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Accounts Payable Commercial (Virtual cards)</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Person-to-Person (Mastercard Send™ / Send to Account / PayM)</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Bill Pay (Overlay service)</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Real-Time Payments (Faster Payments, Pay by Bank, MITS, Open Banking)</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Acceptance (Contactless, QR, PIN on Glass)</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Banks

Fintechs

New payment flows
Key takeaways

- Strong growth potential
- Digital and Open Banking solutions to address market needs
- Multi-rail solutions providing choice to customers
- Focused strategy to drive long-term growth
Go-to-market update: Government engagement

Michael Froman
Vice Chairman and President, Strategic Growth

Tim Murphy
General Counsel
Engagement with government is critical

Sizable business opportunity with flows still based in cash and checks...

...and strong interest in consulting services and new technologies

Becoming an indispensable partner...

...complementing our efforts to mitigate nationalism

Social benefits, pensions and payroll disbursed by governments to citizens

Government spend with business, including procurement and travel

Indirect channels of payments, like public transit

Source: McKinsey Payment Data and Mastercard analysis
Our government approach focuses on three priorities

- Helping governments deliver services efficiently
- Promoting inclusive growth
- Supporting governments in advancing their digital ecosystems
Government engagement mitigates nationalism

Nationalism is not new and is here to stay...

...but is a challenge we’ve proven we can navigate...

- Strong growth in nationalism markets
- Partnerships with national champions

...with some important new trends...

- Evolving approach to trade presents challenges and opportunities
- On-soil switching mandates
- Data localization requirements

...and Mastercard is responding proactively:

1. Enhanced government coverage
2. Leveraging new capabilities in ACH
3. Focusing on “showing up local”
4. Investing in public policy
Our commitment to sustainability and commercially sustainable social impact

Environmental stewardship

Inclusive growth

Inspired workforce

Ethical and responsible standards

Financial security

Inclusive economic development

Future of workers

Data for good
Financial perspective

Sachin Mehra
Chief Financial Officer
Our business has diversified

<table>
<thead>
<tr>
<th>Product diversification – debit/prepaid/commercial mix$^1$</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50%</td>
<td>57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services as a % of net revenue</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16%</td>
<td>26%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of net revenue generated outside of the US</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61%</td>
<td>67%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of total transactions that we switch</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>49%</td>
<td>56%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contactless transactions$^2$</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1%</td>
<td>22%</td>
</tr>
</tbody>
</table>

---

1. Debit/prepaid/commercial share of total GDV volumes
2. Contactless transactions as a percentage of card-present transactions, excluding Venezuela
2019 business drivers

<table>
<thead>
<tr>
<th>Growth (local currency)</th>
<th>As-reported</th>
<th></th>
<th>Switched</th>
<th>Q2</th>
<th>Aug QTD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worldwide GDV¹</td>
<td>11%</td>
<td>13%</td>
<td>15%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>US GDV</td>
<td>7%</td>
<td>10%</td>
<td>12%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Rest-of-world GDV</td>
<td>13%</td>
<td>14%</td>
<td>18%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Switched transactions²</td>
<td>17%</td>
<td>18%</td>
<td>18%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Cross-border volume²</td>
<td>13%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td></td>
</tr>
</tbody>
</table>

1. Gross dollar volume as reported; Mastercard branded only
2. Growth rates normalized to eliminate the effects of differing switching days between periods
2019 full-year financial outlook – reiterated

- **Net revenue**
  - Low-teens growth

- **Operating expenses**
  - High-end of high-single-digits growth

- **Effective tax rate**
  - ~19%

---

1. 2019 forecast versus 2018 results (currency-neutral, excluding acquisitions). Refer to Appendix B for reconciliation of non-GAAP measures.
2. Excluding special items as defined in Appendix B. Refer to Appendix B for reconciliation for non-GAAP measures.
Investment priorities

**Grow**

**CORE**
- Network
- Acceptance
- Digital: Tokenization, Secure Remote Commerce
- Commercial

**Diversify**

**CUSTOMERS AND GEOGRAPHIES**
- Digital players
- Emerging markets: India, China, MEA, LAC
- Governments

**Build**

**NEW AREAS**
- B2B
  - Real-time payments and applications
- Cross-border B2B and P2P
  - Cyber solutions
  - Data analytics
  - Open banking

**TO SUPPORT GROWTH OVER THE SHORT, MEDIUM AND LONG TERM**
### Economic model of new applications

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Direct Per transaction</th>
<th>Direct Ad valorem</th>
<th>Indirect Card GDV / Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Pay</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Pay by Account</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Point-of-sale financing</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Account-to-account cross-border</td>
<td>✓</td>
<td>✓</td>
<td>(FX related)</td>
</tr>
<tr>
<td>Mastercard Track™</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ethoca</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
## Capital planning priorities

<table>
<thead>
<tr>
<th><strong>Strong balance sheet</strong></th>
<th>Preserve strong balance sheet, liquidity and credit ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long-term business growth</strong></td>
<td>Invest in strategy-led organic and inorganic opportunities</td>
</tr>
<tr>
<td><strong>Return excess capital to shareholders</strong></td>
<td>Return excess capital with bias toward share repurchases</td>
</tr>
<tr>
<td><strong>Capital structure</strong></td>
<td>Migrate to a more normalized mix of debt and equity over time</td>
</tr>
</tbody>
</table>
Return of capital

- Share repurchase
- Dividends

$3.9 $4.2 $4.3 $4.7 $6.0 $6.0
$0.5 $0.7 $0.8 $0.9 $1.0 $1.0

$3.4 $3.5 $3.5 $3.8 $4.9 $5.0

$36+ billion\textsuperscript{1}
returned to shareholders since IPO

Note: Table may not sum due to rounding
1. Includes $7.5 billion prior to 2014
2. Year-to-date through August 30, 2019
Long-term revenue growth potential

PCE
$50T$\textsuperscript{1}

-5\% annual growth\textsuperscript{2}
4-5\% annual secular shift\textsuperscript{2}

New flows
$185T$

B2B/G2B: $125T$
B2C/P2P/G2C: $60T$

Market Volume / Transactions opportunity

Services Mix
Pricing
Share

Revenue growth potential

Low double-digits to mid-teens


1. Includes $12T of non-purchase consumption
2. Currency-neutral, adjusted for available market
2019 – 2021 performance objectives\(^1\) – reiterated

<table>
<thead>
<tr>
<th>Metric</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net revenue CAGR %</td>
<td>Low-teens</td>
</tr>
<tr>
<td>Annual operating margin</td>
<td>Minimum 50%</td>
</tr>
<tr>
<td>EPS CAGR %</td>
<td>High-teens</td>
</tr>
</tbody>
</table>

### Highlights

- Grow core consumer and commercial solutions, build acceptance and increase share
- Expand service offerings and grow them faster than the core
- Invest in B2B / new payment flows
- Assumes annual PCE growth of 4-5% (i.e. no significant downturn)

---

1. All figures are on a currency-neutral basis. Amounts exclude impact of acquisitions made after the beginning of 2019, special items (as defined in Appendix C) and gains/losses on equity investments. Refer to Appendix C for reconciliation of non-GAAP measures.
Final thoughts

- Significant opportunity ahead
- Investments focused on key growth opportunities
- Offering broad set of applications, services and infrastructure to meet market requirements
- Executing on strategy
- Continuing to return excess capital to shareholders
- Well positioned for long-term growth
Appendices
## Appendix A – non-GAAP reconciliation

($ in millions, except per share data)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>CAGR</th>
<th>CAGR Currency-neutral ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net revenue</td>
<td>$9,832</td>
<td>$9,441</td>
<td>$9,667</td>
<td>$10,776</td>
<td>$12,497</td>
<td>$14,950</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Operating income - as reported</td>
<td>$4,503</td>
<td>$5,106</td>
<td>$5,078</td>
<td>$5,761</td>
<td>$6,622</td>
<td>$7,282</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Special items ²</td>
<td>95</td>
<td>-</td>
<td>140</td>
<td>117</td>
<td>182</td>
<td>1,128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted operating income</td>
<td>$4,598</td>
<td>$5,106</td>
<td>$5,218</td>
<td>$5,878</td>
<td>$6,804</td>
<td>$8,410</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>Operating margin - as reported</td>
<td>54.2%</td>
<td>54.1%</td>
<td>52.5%</td>
<td>53.5%</td>
<td>53.0%</td>
<td>48.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special items ²</td>
<td>1.1%</td>
<td>-%</td>
<td>1.4%</td>
<td>1.1%</td>
<td>1.4%</td>
<td>7.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted operating margin</td>
<td>55.3%</td>
<td>54.1%</td>
<td>54.0%</td>
<td>54.5%</td>
<td>54.4%</td>
<td>56.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAAP diluted EPS</td>
<td>$2.56</td>
<td>$3.10</td>
<td>$3.35</td>
<td>$3.69</td>
<td>$3.65</td>
<td>$5.60</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>Special items ²</td>
<td>0.05</td>
<td>-</td>
<td>0.08</td>
<td>0.08</td>
<td>0.92</td>
<td>0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-GAAP diluted EPS</td>
<td>$2.61</td>
<td>$3.10</td>
<td>$3.43</td>
<td>$3.77</td>
<td>$4.58</td>
<td>$6.49</td>
<td>20%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Note: Table may not sum due to rounding

1. Adjusted for both the translational and transactional foreign currency impact
2. Special items:
   - Impact of the following: 2013: U.S. Merchant Litigation Settlement of $95 million pre-tax ($0.05 per diluted share); 2015: the termination of the U.S. employee pension plan of $79 million pre-tax ($0.04 per diluted share) and U.K. Merchant Litigation Provision of $61 million pre-tax ($0.04 per diluted share); 2016: the U.K. Merchant Litigation Provision of $117 million pre-tax ($0.08 per diluted share); 2017: Deconsolidation of Venezuela subsidiaries of $167 million pre-tax ($0.10 per diluted share) and Canadian Merchant Litigation Provision of $15 million ($0.01 per diluted share); 2018: litigation provisions of $12.18 million pre-tax ($0.96 per diluted share) related to a fine by the European Commissions of $654 million, U.S. merchant class litigation and the filed and anticipated opt-out U.S. merchant cases of $237 million, and settlements with U.K. and Pan-European merchants of $237 million.
3. Impact of the following: 2017: net tax expense from related to the Transition Tax of $873 million ($0.81 per diluted share) and 2018: net tax benefit of $75 million (($0.07) per diluted share) comprised of a $90 million benefit related to the carryback of foreign tax credits due to transition rules, offset by a net $15 million expenses related to the true-up of the 2017 transition rules.
### Appendix B – non-GAAP reconciliation

#### 2019 full-year financial outlook

<table>
<thead>
<tr>
<th></th>
<th>2019 vs. 2018 Increase / (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Net revenue</strong></td>
</tr>
<tr>
<td></td>
<td>High end of low double-digits</td>
</tr>
<tr>
<td><strong>Special items</strong></td>
<td>****</td>
</tr>
<tr>
<td><strong>Foreign currency</strong></td>
<td>2%</td>
</tr>
<tr>
<td><strong>Acquisitions</strong></td>
<td>0 - (1)%</td>
</tr>
<tr>
<td><strong>Non-GAAP growth, excluding acquisitions</strong></td>
<td>Low-teens</td>
</tr>
</tbody>
</table>

**Net applicable.

1. U.S. GAAP – 2019 forecast versus 2018 reported results
2. Impact of special items related to 2018 provisions for litigation ($1,112M pre-tax)
3. Impact of foreign currency calculated by remeasuring the future period’s results using the current period’s exchange rates for both the translational and transactional impacts on operating results
4. Impact of 2019 acquisitions which closed through the end of August. This excludes the pending acquisition of the majority of Nets’ Corporate Service business, which is subject to regulatory and other conditions
Appendix C – non-GAAP reconciliation
Long-term performance objectives

<table>
<thead>
<tr>
<th></th>
<th>2019-2021 3-Year CAGR Increase/(decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net revenue</td>
</tr>
<tr>
<td>GAAP</td>
<td>Low-teens</td>
</tr>
<tr>
<td>Special items²</td>
<td>**</td>
</tr>
<tr>
<td>Acquisitions³</td>
<td>(0-1)%</td>
</tr>
<tr>
<td>Foreign currency⁴</td>
<td>1%</td>
</tr>
<tr>
<td>Non-GAAP – currency-neutral</td>
<td>Low-teens</td>
</tr>
</tbody>
</table>

** Not applicable.
1. Based on 2018 pro forma EPS utilized to measure 3-year diluted EPS target performance (2019-2021). Refer to Appendix D.
2. Impact of special items relates to litigation provisions ($0.96 per diluted share), offset by a net tax benefit ($0.07 per diluted share).
3. Impact of 2019 acquisitions which closed through the end of August. This excludes the pending acquisition of the majority of Nets’ Corporate Service business, which is subject to regulatory and other conditions.
4. Impact of foreign currency for both the translational and transactional impacts.
Appendix D – non-GAAP reconciliation

2018 full-year EPS

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>2018 Diluted Earnings Per Share GAAP</strong></td>
<td>$5.60</td>
</tr>
<tr>
<td>Litigation provisions²</td>
<td>0.96</td>
</tr>
<tr>
<td>Tax act³</td>
<td>(0.07)</td>
</tr>
<tr>
<td><strong>2018 Diluted Earnings Per Share Non-GAAP</strong></td>
<td><strong>$6.49</strong></td>
</tr>
</tbody>
</table>

** Not applicable.
1. Full-year EPS utilized to measure 3-year EPS target performance (2019-2021)
2. Impact of the 2018 provisions for litigation ($1,008M after tax)
3. Impact of the 2018 tax benefits ($75M)