## Agenda

<table>
<thead>
<tr>
<th></th>
<th>Overview</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consumer Banking</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Home Lending</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>Card</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Closing remarks</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>Notes</td>
<td>43</td>
</tr>
</tbody>
</table>
We remain focused on a consistent set of strategic priorities

- Deliver **One Chase experiences** that provide choice, security, ease, personalization, and integrated payments

- Create **interoperability** between physical and digital channels to provide seamless omni-channel experiences for our customers

- Execute **expense management strategies** while continuing to **invest** for the future

- Continue in our unwavering commitment to operate an effective and efficient **risk and control environment**

- **Protect** the Firm's systems and confidential data from internal and external threats, and **safeguard** the privacy of customers and employees

- Attract, develop, and retain the **best talent** for today and the future, harnessing the power of diversity
We have made significant progress against our commitments

<table>
<thead>
<tr>
<th>We have committed to…</th>
<th>...and have delivered on those promises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver One Chase experiences to grow share from a position of strength</td>
<td>• Relationships with ~50% of U.S. households – of which 25% have a multi-LOB relationship</td>
</tr>
<tr>
<td>Create interoperability between physical and digital channels</td>
<td>• Differentiated our customer experience with a seamless omni-channel approach</td>
</tr>
<tr>
<td>Manage expenses while continuing to invest in the future</td>
<td>• Expanded into new markets utilizing integrated physical and digital channels</td>
</tr>
<tr>
<td>Operate an effective and efficient risk and control environment</td>
<td>• Digitally opened ~1.5mm deposit accounts since Feb. 2018</td>
</tr>
<tr>
<td></td>
<td>• Reduced overhead ratio by ~4ppts since 2014</td>
</tr>
<tr>
<td></td>
<td>• Increased investments in technology and marketing by ~30% since 2016 – deployed with discipline</td>
</tr>
<tr>
<td></td>
<td>• Improved risk monitoring capabilities to enable surgical pullbacks</td>
</tr>
<tr>
<td></td>
<td>• De-risked the mortgage business</td>
</tr>
</tbody>
</table>

Note: For footnoted information, refer to slide 43
Performance targets

### Consumer & Community Banking targets

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019 outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Banking</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net charge-off rate</td>
<td>0.57%</td>
<td>0.49%</td>
<td></td>
</tr>
<tr>
<td><strong>Home Lending</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net charge-off / (recovery) rate¹</td>
<td>0.03%</td>
<td>(0.02%)</td>
<td></td>
</tr>
<tr>
<td><strong>Card Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net charge-off rate</td>
<td>2.95%</td>
<td>3.10%</td>
<td></td>
</tr>
<tr>
<td>Net revenue rate</td>
<td>10.57%</td>
<td>11.27%</td>
<td>11.50%+/-</td>
</tr>
<tr>
<td><strong>Auto</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net charge-off rate</td>
<td>0.51%²</td>
<td>0.38%</td>
<td></td>
</tr>
<tr>
<td><strong>Total CCB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>17%</td>
<td>28%</td>
<td>25%+</td>
</tr>
<tr>
<td>Overhead ratio</td>
<td>56%</td>
<td>53%</td>
<td>50%+/-</td>
</tr>
</tbody>
</table>

---

¹ Excludes the impact of purchased credit-impaired ("PCI") loans and reperforming and non-performing loan sales
² Included ~$50mm of incremental charge-offs reported in accordance with regulatory guidance related to customer bankruptcies; adjusted net charge-off rate of 0.43%

Medium-term: Modestly higher on mix

Prior year target 11.25%+/-
Continuous investment is driving strong momentum across key business drivers

<table>
<thead>
<tr>
<th>Key business drivers ($B, except ratios and where otherwise noted)</th>
<th>2018</th>
<th>YoY △</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer &amp; Community Banking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households (mm)</td>
<td>61.7</td>
<td>1%</td>
</tr>
<tr>
<td>Small businesses (mm)</td>
<td>4.2</td>
<td>5%</td>
</tr>
<tr>
<td>Active digital customers¹ (mm)</td>
<td>49.3</td>
<td>5%</td>
</tr>
<tr>
<td>Active mobile customers² (mm)</td>
<td>33.3</td>
<td>11%</td>
</tr>
<tr>
<td>Average deposits</td>
<td>$670</td>
<td>5%</td>
</tr>
<tr>
<td>Average loans</td>
<td>$478</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Consumer Banking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average deposits</td>
<td>$527</td>
<td>4%</td>
</tr>
<tr>
<td>Deposit margin³</td>
<td>2.38%</td>
<td>41 bps</td>
</tr>
<tr>
<td>Client investment assets (end of period)</td>
<td>$282</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Business Banking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average deposits</td>
<td>$130</td>
<td>7%</td>
</tr>
<tr>
<td>Average loans</td>
<td>$24</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Home Lending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total mortgage originations</td>
<td>$79</td>
<td>(19%)</td>
</tr>
<tr>
<td>Average loans</td>
<td>$242</td>
<td>2%</td>
</tr>
<tr>
<td>Total loans serviced (end of period)</td>
<td>$790</td>
<td>(3%)</td>
</tr>
<tr>
<td><strong>Credit Card</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales volume⁴</td>
<td>$692</td>
<td>11%</td>
</tr>
<tr>
<td>Average loans</td>
<td>$146</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Merchant Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merchant processing volume</td>
<td>$1,366</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Auto</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan and lease originations</td>
<td>$32</td>
<td>(5%)</td>
</tr>
<tr>
<td>Average loan and leased assets</td>
<td>$83</td>
<td>4%</td>
</tr>
</tbody>
</table>

¹ Users of all web and/or mobile platforms who have logged in within the past 90 days
² Users of all mobile platforms who have logged in within the past 90 days
³ Includes Consumer and Business Banking deposits
⁴ Excludes Commercial Card
Volume-driven growth and rate benefit drove strong top-line results for the year.

CCB revenue ($B)

- 2017: $46.5
- Volume-driven revenue growth: $3.3
- Interest rate impact\(^1\): $1.9
- Other\(^2\): $0.4
- 2018: $52.1

Note: Numbers may not sum due to rounding
\(^1\) Includes Home Lending production revenue margin compression due to increased competition in a smaller market
\(^2\) Reflects Sapphire Reserve acquisition costs, net of Card deal renegotiations
We improved our operating leverage while continuing to invest and grow

- **Revenue**
  - 2017: $46.5B
  - 2018: $52.1B
  - 2019: ~$52.1B

- **Expense**
  - 2017: $26.1B
  - 2018: $27.8B
  - 2019: ~$29B

- **Overhead ratio**
  - 2017: 56%
  - 2018: 53%
  - 2019: ~53%

- **Headcount\(^1\)**
  - 2017: ~140K
  - 2018: ~135K

\(^1\) Includes employees and contractors. 2017 excludes Commercial Card headcount. During 3Q18, ~1,200 employees transferred from CCB to CIB as part of the reorganization of the Commercial Card business.

Flat for 2020 and 2021 ex-auto lease growth.
Our investments made it easier for customers to self-serve and enabled operational efficiencies and workforce transformation, which have lowered costs.

<table>
<thead>
<tr>
<th>Reduction in cost to serve(^1) per CCB household</th>
<th>Efficiency examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Bar chart showing reduction in cost to serve per CCB household" /></td>
<td>Customer behavior shift</td>
</tr>
<tr>
<td>2014 ~146K</td>
<td>&gt;80% of transactions completed through self-service channels(^3)</td>
</tr>
<tr>
<td>2018 ~135K</td>
<td>Operational efficiencies</td>
</tr>
<tr>
<td></td>
<td>Inbound calls per household <strong>down 3%</strong>(^4,5)</td>
</tr>
<tr>
<td></td>
<td>Cost per call <strong>down 7%</strong>(^4,5)</td>
</tr>
<tr>
<td></td>
<td>Workforce transformation</td>
</tr>
<tr>
<td></td>
<td>Technology / digital headcount up <strong>2K</strong>(^+4)</td>
</tr>
<tr>
<td></td>
<td>Operations headcount down ~<strong>7K</strong>(^4)</td>
</tr>
<tr>
<td></td>
<td>Going forward, expect continued headcount reductions in operations and efficiencies in technology / digital</td>
</tr>
</tbody>
</table>

CCB’s overhead ratio has improved ~4pps from 2014 – 2018, while the cost to serve efficiency ratio\(^1\) has improved ~10pps.

Note: For footnoted information, refer to slide 44.
We have a portfolio of investments that will fuel long-term results

**Increasing efficiency**
- Technology investments in 2018 are expected to generate:
  - >$1B in annual run-rate savings\(^1\)
  - ROI\(^2\) of >2x

**Digital experience and innovation**
- Created differentiated experiences (e.g., QuickPay with Zelle\(^\circledR\), Digital Account Opening, Credit Journey\(\text{SM}\)) for 49mm active digital customers\(^3\), up 5% YoY
- Pace of product launches has accelerated over the last 12 months

**Marketing**
- Marketing investments in 2018 generated:
  - ~8mm new Card accounts, which are expected to drive ~$80B in spend\(^4\)
  - 2mm+ new Consumer Banking households and ~$15B in average deposits\(^4\)

**Branch expansion**
- Opened first 10 branches in 3 expansion markets (Boston, Washington, D.C., and Philadelphia), which alone represent a ~$400B deposit opportunity
- Regulatory approval for another 8 expansion markets, representing an additional ~$300B deposit opportunity

**Regulatory and controls**
- Continue to uplift standards – cybersecurity, KYC, and data

---

\(^1\) Reflects projected 2022 results for technology programs with active development in 2018
\(^2\) Reflects five-year cumulative pretax income excluding development costs divided by development costs for expense-reducing technology programs with active development in 2018
\(^3\) Users of all web and/or mobile platforms who have logged in within the past 90 days
\(^4\) Reflects steady-state year 3 performance for Card and year 1 performance for Consumer Banking
The power of our digital platform

Our digital platform is embedded in our customers’ daily lives…

**49mm** Active digital customers

Monthly digital logins per customer

- 2016: 7%
- 2017: 8%
- 2018: ~2x

...creating an ecosystem that drives engagement

Net Promoter Score: 10 points

Customers are more satisfied…

- All other households
- Digitally-engaged households

…more engaged…

Card spend per household: ~2x

- All other households
- Digitally-engaged households

…and have deeper Chase relationships

% with multi-LOB relationships: ~2x

- All other households
- Digitally-engaged households

Note: For footnoted information, refer to slide 45.
# Agenda

<table>
<thead>
<tr>
<th></th>
<th>Overview</th>
<th>Consumer Banking</th>
<th>Home Lending</th>
<th>Card</th>
<th>Closing remarks</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>Consumer Banking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Home Lending</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Card</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Closing remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>43</td>
</tr>
</tbody>
</table>
We have made significant progress against our priorities

**Acquire and deepen relationships**
- Grew Consumer Banking deposit & investment balances by $215B since 2014\(^1\)
- Acquired 2.5mm net new households since 2014\(^2\)

**Increase engagement**
- 75\% of new customers are mobile-active after 6 months\(^3\)
- 22mm mobile-active Consumer Banking customers, up 8\% since last year\(^4\)

**Increase efficiency**
- Lowered the variable cost per Consumer Banking household by 14\% since 2014\(^5\)
- Reduced teller transactions by 34\% since 2014\(^6\)

Note: For footnoted information, refer to slide 46
We continue to grow our business at an industry-leading pace, winning with both new and existing customers.

We are growing at an industry-leading pace…

Four year deposit growth¹
*2014 – 2018 CAGR*

<table>
<thead>
<tr>
<th></th>
<th>Chase</th>
<th>National banks</th>
<th>Super regional</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 – 2018¹</td>
<td>9.4%</td>
<td>5.3%</td>
<td>3.2%</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

#1 in deposit growth since 2014

Industry avg. growth = 4.6%

Share of new primary bank relationships in 2017 and 2018²

JPM | BAC | WFC

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23%</td>
<td>13%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Average new checking relationship balance increased 40% since 2014³

Note: For footnoted information, refer to slide 47

increase in overall customer satisfaction since 2014⁴

decrease in attrition rate since 2014⁵
Our investments in digital platforms and functionality have made it easier for customers to self-serve

**#1** largest active mobile banking customer base among U.S. banks\(^1\)  

**Everyday digital activities enabled by Chase**

- **Manage your finances with the Chase app**
  - 21 Mobile logins per month in 2018\(^2\)
  - *Up 9% since 2017*

- **Split a bill with friends using QuickPay with Zelle®**
  - 7.6mm QuickPay with Zelle® active users in 2018\(^3\)
  - *Up from 5.8mm in 2017*

- **Deposit checks with QuickDeposit\(^{SM}\)**
  - 29% Proportion of check deposit transactions through QuickDeposit\(^{SM}\) in 2018\(^4\)
  - *Up from 25% in 2017*

Note: For footnoted information, refer to slide 48
Our physical network has been critical to achieving industry-leading deposit growth

As we strengthen our self-service capabilities, customers are transacting at the teller line less often…

…but still highly value a physical presence

Average teller transactions per customer\(^1\)

\[\begin{array}{c}
\text{2014} \\
\text{2018}
\end{array}\]

(41%)

#1 Convenient branch locations are the top consideration driver for prospective switchers\(^2\)

21mm households have used a branch in the last year\(^3\)

70% of our deposit growth from 2014 – 2018 was driven by households who frequently use branches\(^4\)

We have maintained flexibility in our physical network
Over 75% of our branches could be exited within 5 years and over 85% could be extended for more than 10 years

Note: For footnoted information, refer to slide 49
We are innovating across our channels and throughout the customer lifecycle

<table>
<thead>
<tr>
<th>Open</th>
<th>Manage</th>
<th>Deepen</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Digital Account Opening reduced time to open an account to 3 – 5 minutes(^1)</td>
<td>- First retail U.S. bank to send external transfers within 15 seconds via the new Real-Time Payments network(^3)</td>
<td>- Increasing engagement and banker productivity through <strong>new tools</strong> such as Digital Meeting Scheduler</td>
</tr>
<tr>
<td>- Launching Digital Account Opening in the branch will enable bankers to optimize their time for advice</td>
<td>- ATMs can process <strong>74% of teller transactions</strong>(^4)</td>
<td>- Deepening with CCB customers through <strong>better together</strong> products</td>
</tr>
</tbody>
</table>

\(~1.5\text{mm deposit accounts} \) opened through Digital Account Opening since Feb. ‘18\(^2\)

10ppts growth in digital engagement since 2014\(^5\)

Multi-LOB engaged households contribute **2.5x higher pretax income**\(^6\)

Note: For footnoted information, refer to slide 50
We are effectively expanding our physical network to attractive new markets

Drivers of effective market expansion

✓ **Attractive markets**: Large, fast-growing expansion markets, including three of the top 10 markets, which alone represent ~$400B of industry deposits

✓ **Cross-LOB customers**: Sizable existing customer base from other LOBs with high Chase brand affinity; Card customers have a 2.2x higher offer response rate

✓ **Omni-channel**: Powerful combination of branch-driven new-to-bank acquisitions and digitally-driven deepening

✓ **Smarter footprint**: Enabled by card transaction data and new ATM capabilities

Delivering Chase to more of the U.S.

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. customers in-footprint²</td>
<td>69%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Applying this playbook to our existing network, we have grown our deposit share from 13% to 16% in top 10 markets while reducing our share of branches³

Note: For footnoted information, refer to slide 51
We are well-positioned for long-term financial success and industry outperformance

**Acquire and deepen relationships**
- Expand our physical footprint to cover 93% of the U.S. population by the end of 2022 (up from 69% before market expansion), allowing us to reach 80mm more U.S. consumers
- Continue expanding our distribution beyond the branch through Digital Account Opening

**Increase engagement**
- Scale banker digital tools and resources nationally to better connect our 26mm active digital customers with the right people to address their unique financial needs
- Utilize in-branch digital account opening efficiencies to further migrate banker time from process management to customer relationship building

**Increase efficiency**
- Deploy leaner, innovative physical formats at scale across existing and expansion markets
- Continue to migrate transactions to lower cost channels through digital enhancements and ATMs that continue to get closer to teller parity

1. 2018 U.S. population sourced from U.S. Census Bureau. Sum of population of states in which Chase currently has or will have a branch presence post market expansion
2. Consumer Bank users who were 90-day active on an online or mobile platform in December 2018
<table>
<thead>
<tr>
<th></th>
<th>Agenda</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Consumer Banking</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td><strong>Home Lending</strong></td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Card</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Closing remarks</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>Notes</td>
<td>43</td>
</tr>
</tbody>
</table>
We continue to build a high-quality, customer-focused Home Lending business

- **Maintain excellent origination credit quality**
  - We are taking a disciplined approach to growth
    - Strong portfolio credit quality (average FICO 756, average CLTV 57%)\(^1\)
    - Loan balances optimized for liquidity and capital

- **Improve quality of servicing portfolio and de-risk the business**
  - Our portfolio de-risking positions us well through the credit cycle, and we plan to maintain credit quality at this level
    - Foreclosure inventory down to ~25K in 2018 from 93K in 2014
    - Continued improvement in servicing portfolio delinquency rates from 6.23% in Dec.’14 to 3.56% in Dec.’18\(^2\)

- **Continue to focus on delivering a great customer experience…**
  - Customer satisfaction continues to improve
    - Improvement in J.D. Power rank (+3 in Originations, +4 in Servicing) between 2017 and 2018\(^3\)
    - Record high Home Lending NPS score

- **…while innovating to win with Chase primary bank customers**
  - We are investing in enhancements to deliver a differentiated home buying experience for Chase customers
    - Chase MyHome digital mortgage fulfillment experience for customers and simplified applications with Chase data prefill
    - Digital and instant customer verification pilot

---

\(^1\) Excludes Private Bank loans and mortgage loans insured by U.S. government agencies

\(^2\) Based on number of loans serviced. Includes foreclosures and second liens and excludes real estate owned (“REO”) inventory

\(^3\) Source: “U.S. Primary Mortgage Origination and Servicer Satisfaction Studies,” J.D. Power, 2017 and 2018
The home lending industry is in a state of transition

Profitability remains challenged across the industry as origination volume continues to decrease, spreads compress, and production costs rise

Note: Numbers may not sum due to rounding
Note: For footnoted information, refer to slide 52
We are being intentional in our positioning across production, servicing, and our portfolio.

### Key business drivers ($B, except ratios where otherwise noted)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>YoY Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home Lending Production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total mortgage origination volume</td>
<td>$98</td>
<td>$79</td>
<td>(19%)</td>
</tr>
<tr>
<td>Consumer origination volume</td>
<td>$40</td>
<td>$38</td>
<td>(5%)</td>
</tr>
<tr>
<td>Correspondent origination volume</td>
<td>$57</td>
<td>$41</td>
<td>(28%)</td>
</tr>
<tr>
<td>Total market mortgage origination volume</td>
<td>$1,810</td>
<td>$1,630</td>
<td>(10%)</td>
</tr>
<tr>
<td><strong>Home Lending Servicing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total loans serviced (end of period)</td>
<td>$816</td>
<td>$790</td>
<td>(3%)</td>
</tr>
<tr>
<td>Foreclosure units (K, end of period)</td>
<td>35</td>
<td>25</td>
<td>(29%)</td>
</tr>
<tr>
<td>30+ delinquency rate²</td>
<td>4.97%</td>
<td>3.56%</td>
<td>(28%)</td>
</tr>
<tr>
<td><strong>Home Lending Loans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Lending loans (average)</td>
<td>$237</td>
<td>$242</td>
<td>2%</td>
</tr>
<tr>
<td>Home Lending core loans (average)</td>
<td>$170</td>
<td>$188</td>
<td>11%</td>
</tr>
<tr>
<td>Home Lending net charge-off / (recovery) rate³</td>
<td>0.03%</td>
<td>(0.02%)</td>
<td>(5) bps</td>
</tr>
</tbody>
</table>

Note: Numbers may not sum due to rounding.

1. Source: Inside Mortgage Finance (“IMF”)
2. Based on number of loans serviced. Includes foreclosures and second liens and excludes REO inventory.
3. Excludes the impact of PCI loans and reperforming and non-performing loan sales.
We have successfully rebalanced our loan portfolio

Home Lending average loan balances ($B)

- **2014**
  - Core: $69
  - Non-core: $114
  - Total: $183

- **2016**
  - Core: $151
  - Non-core: $81
  - Total: $232

- **2018**
  - Core: $188
  - Non-core: $53
  - Total: $242

**2014 – 2018 CAGR**

- **Total**: +7%
- **Non-core**: (17%)
- **Core**: +29%

We have recalibrated our portfolio from ~40% to ~80% core between 2014 and 2018.

We will continue to manage our core and non-core loan balances to optimize liquidity and capital efficiency.

Note: Numbers may not sum due to rounding.
1. Non-core loans include runoff portfolios, which are predominantly discontinued products no longer originated and PCI loans
2. Core loans primarily include loans held in Real Estate Portfolios, as well as loans residing in Home Lending Production and Home Lending Servicing, which are predominantly prime mortgage loans repurchased from Government National Mortgage Association (“Ginnie Mae”) pools, which are insured by U.S. government agencies
3. Excludes Home Equity and Private Bank loans

% of originations retained:
- 2014: 33%
- 2016: 49%
- 2018: 44%
Portfolio credit quality continues to improve and is extremely strong...

<table>
<thead>
<tr>
<th>Home Lending¹ 30+ delinquency rate</th>
<th>Home Lending net charge-off / (recovery) rate²</th>
<th>% of Home Lending portfolio with FICO &lt; 700 and CLTV &gt; 80%³</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Q14 4Q15 4Q16 4Q17 4Q18</td>
<td>FY14 FY15 FY16 FY17 FY18 FY18</td>
<td>2014 2018</td>
</tr>
<tr>
<td>3.0%</td>
<td>0.50%</td>
<td>(~90%)</td>
</tr>
<tr>
<td>2.0%</td>
<td>0.23%</td>
<td></td>
</tr>
<tr>
<td>1.0%</td>
<td>0.11%</td>
<td></td>
</tr>
<tr>
<td>0.0%</td>
<td>0.03%</td>
<td></td>
</tr>
<tr>
<td>0.0%</td>
<td>(0.02%)</td>
<td></td>
</tr>
</tbody>
</table>

¹ Excludes PCI loans and mortgage loans insured by U.S. government agencies that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
² Excludes the impact of PCI loans and reperforming and non-performing loan sales.
³ Excludes Private Bank, PCI, and mortgage loans insured by U.S. government agencies.

Reflects the impact of Hurricanes Irma and Harvey.
…and we continue to de-risk our servicing business, which will protect us in a downturn

### 2014 – 2018 Chase servicing book activity

#### “Coming In” Dec. 2014 through Dec. 2018

<table>
<thead>
<tr>
<th>Units</th>
<th>30+ delinquency rate¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>New originations</td>
<td>~1.3mm</td>
</tr>
<tr>
<td>Acquired servicing</td>
<td>~250K</td>
</tr>
<tr>
<td>Total “in flows”</td>
<td>~1.6mm</td>
</tr>
</tbody>
</table>

#### “Going Out” Dec. 2014 through Dec. 2018

<table>
<thead>
<tr>
<th>Units</th>
<th>30+ delinquency rate¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run-off</td>
<td>~3.2mm</td>
</tr>
<tr>
<td>Sales</td>
<td>~600K</td>
</tr>
<tr>
<td>Total “out flows”</td>
<td>~3.9mm</td>
</tr>
</tbody>
</table>

### 30+ delinquency rate² for Chase servicing book vs. industry³ (%)

- **December 2014**
  - Industry: 6.50%
  - Chase: 6.26%
  - Difference: (24) bps

- **September 2018**
  - Industry: 4.75%
  - Chase: 4.03%
  - Difference: (72) bps

### Servicing cost per unit ($)⁴

- FY14: ~30%
- FY18: ~30%

Note: Numbers may not sum due to rounding
Note: For footnoted information, refer to slide 53
Despite a challenging market, we are committed to delivering for our customers

Home Lending Net Promoter Score

% of Chase mortgage customers who subsequently opened other products, by mortgage satisfaction level

Of existing Chase deposit customers who opened a mortgage:

~2x

~80%
Top 2 box

~35%
Lower deposit attrition rate

~2x
Higher investment growth rate

1 Net Promoter Score = % promoters minus % detractors. Survey started in August 2012. Survey methodology changed in 3Q14
2 Product penetration is defined as the % of new-to-Chase mortgage customers who opened a particular account within 12 months of origination
3 Customer satisfaction based on internal JPMorgan Chase methodology using a 10-point scale
4 Top 2 box represents “very satisfied”
We are deepening relationships with our core Home Lending customers, and building on our existing momentum…

We are focused on deepening relationships with our core Home Lending customers through targeted objectives to meet their unique needs.

<table>
<thead>
<tr>
<th>Households</th>
<th>New origination capture rate³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chase households with an existing Chase mortgage</td>
<td>~4mm</td>
</tr>
<tr>
<td>Chase primary bank households¹ with a non-Chase mortgage</td>
<td>~6mm</td>
</tr>
<tr>
<td>Chase primary bank households¹ who are potential first-time home buyers</td>
<td>~3mm²</td>
</tr>
</tbody>
</table>

Growth to-date with our primary bank customers has been strong.

Chase purchase mortgage originations volume by Chase primary bank households¹ ($B)

- 2016
- 2017
- 2018

~3x the growth rate of purchase market⁴ from 2016 to 2018

These core Home Lending customers represent a significant financial opportunity for Chase.

Note: For footnoted information, refer to slide 54
…by simplifying the digital mortgage process and providing differentiated experiences for Chase customers

We offer a digitally-enabled fulfillment process through Chase MyHome\(^1\) …

**Transparent**
Customers can keep track of action items and deadlines

**Connected**
Customers can use phone to take pictures of documents and upload to Chase MyHome

**Convenient**
Customers can e-sign documents

- \(\approx40\%\) of funded applications used Chase MyHome in 4Q18
- >20\% faster cycle time\(^2\)
- Customer satisfaction at record highs

… and have a foundation of differentiated solutions to deliver to Chase customers

**Prefilled applications**
- to streamline the home loan process

**Automatic verification**
- of income and employment

**Personalized pre-approved Home Lending offers**

**On-time closing guarantee**
- for home purchase loans

*These solutions will allow us to improve customer experiences and reduce costs*

---

\(^1\) Launch completed in 3Q18

\(^2\) 2018 average for Consumer purchase and refinance as compared to paper
We continue to build a high-quality, customer-focused Home Lending business

<p>| Maintain excellent origination credit quality | ✓ We are taking a disciplined approach to growth |
| Improve quality of servicing portfolio and de-risk the business | ✓ Our portfolio de-risking positions us well through the credit cycle, and we plan to maintain credit quality at this level |
| Continue to focus on delivering a great customer experience… | ✓ Customer satisfaction continues to improve |
| …while innovating to win with Chase primary bank customers | ✓ We are investing in enhancements to deliver a differentiated home buying experience for Chase customers |</p>
<table>
<thead>
<tr>
<th></th>
<th>Agenda</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Consumer Banking</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Home Lending</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Card</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Closing remarks</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>Notes</td>
<td>43</td>
</tr>
</tbody>
</table>
We are executing on a clear strategy

Build **scale** with great products and marketing

**Engage** our customers to drive profitability and lower attrition

**Deepen** relationships across the franchise
Our sustained investment in products and customer acquisition has created tremendous scale

We launched several compelling, new products…

- Freedom Unlimited® (2016)
- Sapphire Reserve® (2016)
- Ink Business Unlimited® (2018)

…and renewed and refreshed our #1 cobrand portfolio¹

- Amazon Prime® (2017)
- IHG® Rewards Club (2018)
- Marriott® (2018)
- Avios® (2018)
- Southwest® (2018)
- United® (2018)

We are operating from a position of strength

#1 in credit card spend (22% share)² and outstandings (17% share)³

~40mm active credit card accounts⁴

~8mm new accounts in 2018⁵

~9B credit card transactions in 2018

Note: For footnoted information, refer to slide 55
This scale enables strong top-line account, sales, outstandings, and revenue growth.

Active accounts

Sales volume\(^1\)

EOP outstandings

Revenue

Select examples of growth drivers

- **New products and cobrand renewals**
- **Efficient marketing and retention**
- **Investment in Ultimate Rewards\(^\circledR\)**
  - Digital and engagement enhancements
- **Proactive line management**
  - Advanced analytics
- **Pricing for value**
  - Annual fee products

---

\(^1\) Excludes Commercial Card
Importantly, our scale has also created cost efficiencies

**Increased operating leverage**

*Overhead ratio*

- 2014
- 2018
- 2019E

*(1ppt) (1ppt)*

**Improved operating efficiency**

*Contact cost per statement*¹

- 2014
- 2018

*(10%)*

**Improved marketing efficiency**

*Credit card sales generated per dollar spent on acquisition marketing*²

- 2014
- 2018

*8%*

**Reduced fraud losses**

*Fraud losses as a % of sales*³

- 2014
- 2018

*(29%)*

Note: For footnoted information, refer to slide 56
Our experience has shown the value of engaging our large customer base

**Ultimate Rewards® redeemers have higher sales and revenue, with lower attrition**¹,²

---

### Annual sales

- **None**: 2.2x
- **One**: 4.2x
- **Multiple**: 2.2x

**Multi-redeemers have**

>4x the spend of non-redeemers

### Annual revenue

- **None**: 1.4x
- **One**: 2.0x
- **Multiple**: 4.0x

**Multi-redeemers generate**

2x the revenue of non-redeemers

### 12-month attrition

- **None**: 1.6x
- **One**: 4.0x
- **Multiple**: 2.0x

**Non-redeemers are**

4x more likely to close within one year

---

¹ Defined as customers who have redeemed points through the Ultimate Rewards® portal. Non-redeemers have redeemed 0 times, single-redeemers 1 time, and multi-redeemers 2+ times in the 2-year period from Jan. '15 to Dec. '17.

² Reflects FY18 for sales and revenue; as of Dec. '18 for attrition.
We have three fundamental levers to drive engagement

**Innovative products**
*Bringing best-in-class products to our customers*

**Loyalty**
*Moving beyond points to strengthen customer loyalty*

**Experiences**
*Building everyday customer experiences*
My Chase Plan℠ will make borrowing easier for our customers

**Opportunity:**

~$250B outstandings held off-us by existing customers

---

1 Total outstanding balances on non-Chase cards by existing Chase consumer card customers; as of December 2018
My Chase Loan℠ will enable our customers to better use their existing line to borrow

For larger purchases, including non-cardable spend, with equal payments at a competitive rate

Opportunity:

~$250B outstandings held off-us by existing customers

1 Total outstanding balances on non-Chase cards by existing Chase consumer card customers; as of December 2018
Chase Offers℠ has seen tremendous engagement in the first few months.

Chase Offers℠
Providing both customers and merchants with real value

1. Chase connects customers to merchants who deliver real value through Offers.
2. Customers love getting money in their pocket and continue to frequently engage.
3. Merchants benefit from increased engagement.
4. Merchants provide more value, causing more customers to engage.

Rapidly scaled with ~7mm cards activating 25mm+ Chase Offers℠ in the 3 months since launch.

Note: Simulated screen
Credit Journey™ drives repeat customer engagement and familiarity with Chase for prospects

Credit Journey™ will deliver value for our customers and returns for the franchise

Access to your credit score and identity protection

View historical scores and see factors impacting your score

Receive tailored pre-approved offers for the full suite of Chase products

Over 15mm customers and non-customers enrolled

Note: Simulated screens. Illustrative offers
Tap to pay makes using your Chase card faster and simpler

Chase customers can “tap to pay” using contactless cards

Tap to pay has already experienced meaningful adoption

Customer adoption of tap to pay vs. digital wallet\(^1\)

- Digital wallet
- Tap to pay

\(2.4x\)

Tap to pay already exceeding digital wallet penetration for customers who have contactless cards

Note: The Contactless Symbol and Contactless Indicator are trademarks owned by and used with the permission of EMVCo, LLC.

\(^1\) Reflects percentage of Chase consumer card customers who used POS contactless functionality / digital wallets from Jan. 14, 2019 – Feb. 12, 2019, out of all customers who were shipped a contactless card before Jan. 13, 2019.
Engagement improves our ability to deepen relationships across Chase

Likelihood to adopt a second product:

Spend engagement

- Low engaged
- High engaged

Mobile activity

- Mobile inactive
- Mobile active

Credit Journey enrollment

- Not enrolled in Credit Journey
- Enrolled in Credit Journey

Card households that adopt a non-card Chase product are...

- More profitable: 2.6x more in pretax income
- More satisfied: 4pts higher NPS

...than Card-only households

Note: For footnoted information, refer to slide 57
Deepened relationships give us unique risk management advantages

Critical components of disciplined underwriting…

Detection
Improved monitoring leveraging expanded data sources

Decision
Methodical management routine and rigor

Execution
Improved reaction time and collection capabilities

Non-card Chase relationships
Data from existing deposit relationships creates a competitive advantage for risk management

…drive better risk decisions

Approval rate

\[-2.5x\]

Card NCO rate

\[-(30\%)\]

1 Full-year 2018. Card approval rate for customers <700 credit score (based on internal JPMorgan Chase score with default rate odds aligned to FICO)
2 As of December 2018: Year 3 NCO rate for Freedom and Slate card customers
We are prepared for any economic scenario with strong risk management capabilities.

New risk monitoring capabilities enable surgical pullbacks…

<table>
<thead>
<tr>
<th>Data for the example customer Jane</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
</tr>
<tr>
<td>Internal risk scores</td>
</tr>
<tr>
<td>Off-us data</td>
</tr>
<tr>
<td>On-us data trends (e.g., DDA information)</td>
</tr>
<tr>
<td>Conservative balance transfer product design</td>
</tr>
<tr>
<td>Geographic segmentation</td>
</tr>
<tr>
<td>Customer ‘balance sheet’ (e.g., debt servicing abilities)</td>
</tr>
</tbody>
</table>

…which improved portfolio NCOs with limited impact to growth

<table>
<thead>
<tr>
<th>Net charge-offs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
</tr>
<tr>
<td>2.6%</td>
</tr>
</tbody>
</table>

Based on JPMorgan Chase internal analysis

1 Based on JPMorgan Chase internal analysis
Our clear strategy, risk management, and franchise differentiators will ensure high quality growth.

We have a clear strategy to scale, engage, and deepen...

- Invest in product launches and partner renewals
- Deliver valuable customer-centric offerings
- Increase multi-product relationships
- ... and all the ingredients for sustainable success
  - Unmatched scale and distribution
  - Proprietary rewards platform
  - Full set of banking products
  - Strong brand across premium and mass
  - Best-in-class cobrand partners
  - Largest network acceptance
## Agenda

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Consumer Banking</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Home Lending</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Card</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Closing remarks</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>Notes</td>
<td>43</td>
</tr>
</tbody>
</table>
We remain focused on executing against our strategy

Deliver One Chase experiences to grow from a position of strength
- **Drive engagement** by introducing innovative lending products, strengthening customer loyalty and creating everyday customer experiences
- Expand branch network to **15 – 20 new markets**, allowing us to reach **80mm more U.S. consumers**

Create interoperability between physical and digital channels
- **Scale digital tools and resources** to better meet our customers’ financial needs
- Integrate digital platform with branch network to win with our primary bank customers

Manage expenses while continuing to invest in the future
- Continue to migrate transactions to **lower cost channels** and drive **operational efficiencies**
- Deploy a **smarter, leaner branch footprint** across existing and expansion markets

Operate an effective and efficient risk and control environment
- Take a disciplined approach to growth to remain **well positioned through the cycle**
- Continuously monitor our credit portfolios

*We will continue to invest in order to deliver the power of One Chase to our customers*
<table>
<thead>
<tr>
<th></th>
<th>Agenda</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Consumer Banking</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Home Lending</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>Card</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Closing remarks</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>Notes</td>
<td>43</td>
</tr>
</tbody>
</table>
Notes on slide 2 – We have made significant progress against our commitments

1. Source: FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC.

2. Based on 2018 sales volume and loans outstanding disclosures by peers (C, BAC, COF, AXP, DFS) and JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and JPMorgan Chase estimates for AXP’s U.S. small business sales. Loans outstanding exclude private label, AXP Charge Card, and Citi Retail Cards.

3. As of February 2019.
Notes on slide 7 – Our investments made it easier for customers to self-serve and enabled operational efficiencies and workforce transformation, which have lowered costs

1. Cost to serve defined as total CCB expense less investments, auto lease depreciation, legal losses, and FDIC surcharge. Cost to serve efficiency ratio reflects cost to serve expense divided by revenue net of auto lease income

2. Includes employees and contractors. 2014 excludes Commercial Card headcount. During 3Q18, ~1,200 employees transferred from CCB to CIB as part of the reorganization of the Commercial Card business

3. Reflects transactions within Consumer Banking in 2018

4. Reflects changes from 2014 to 2018

5. Includes calls from Consumer Banking, Credit Card, and Auto customers
Notes on slide 9 – The power of our digital platform

1. Users of all web and/or mobile platforms who have logged in within the past 90 days

2. Reflects 90-day digital logins among 90-day active users divided by three to estimate average monthly logins. Data reflects December 2016, December 2017, and December 2018 for all CCB

3. Reflects Consumer Banking. Consumer Banking household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households that are less than 12 months on book, we reduce the thresholds by 75% and track the household activity over a three-month time period. Digitally-engaged households includes Digitally-centric households and Multi-channel households. All other households includes Branch-centric households and Other households

4. Net Promoter Score = % promoters minus % detractors. Based on Net Promoter Score data collected from January through December 2018

5. Includes Consumer Banking households that had at least one credit transaction or one debit transaction in 2018. Normalized for number of customers per household

6. Multi-LOB relationship defined as 2 or more products across lines of business
Notes on slide 10 – We have made significant progress against our priorities

1. Represents average deposits and end of period investment balances
2. Includes Consumer Banking households
3. Represents Consumer Banking customers that are 90-day mobile-active six months after account opening. Includes Consumer Banking customers whose first product was a checking account opened between July 2017 and June 2018
4. Consumer Banking 90-day mobile-active users in December 2018 compared to December 2017
5. Decrease in the annual variable cost per Consumer Banking household from 2014 to 2018. Includes variable teller transaction cost (includes cost of teller FTE), cost of other transactions, variable account servicing cost, and variable risk and compliance cost
6. All teller transactions in Chase branches
Notes on slide 11 – We continue to grow our business at an industry-leading pace, winning with both new and existing customers

1. #1 in absolute deposit dollar balance growth from 2014 to 2018. Source: FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last two years for 2017 to 2018 comparison and the last 10 years for the 2014 to 2018 comparison (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC; National banks (BAC, WFC, C, USB, PNC, TD, and COF) include institutions with over $200B in total deposits as reported by the FDIC (excluding non-retail locations), Super Regional banks include remaining institutions in the top 50 based on total deposits as reported by the FDIC (excluding non-retail locations).

2. Kantar TNS (“TNS”) Retail Banking Monitor. Based on Chase footprint (28,728 surveys in 2018 and 2017). Calculations derived from the following questions (answered by 1,383 customers in 2018 and 2017): “Which is your primary bank?” and “In what year did [selected bank] become your primary bank?” Data is weighted by TNS to ensure the survey is representative of the U.S. population.

3. Represents Consumer Banking households six months after account opening. Includes Consumer Banking households whose first product was a checking account opened between July 2017 and June 2018. Balances refer to checking deposit balances for new households.

4. Consumer Banking overall satisfaction (“OSAT”) metric. Branch OSAT is based on over 600,000 customer surveys conducted after a visit to a Chase branch each year. Customers rate their visit on a 1-10 scale. OSAT score is calculated by the proportion of 9 and 10 scores.

5. Attrition rates are based on Consumer Banking households with deposit products and include households that closed all their deposit products with Chase. Attrition rate calculated by taking an average of the annualized monthly rates for the 12 months of each year.
Notes on slide 12 – Our investments in digital platforms and functionality have made it easier for customers to self-serve

1. Based on 4Q18 peer disclosure for JPM's Consumer & Community Banking, BAC's Consumer Banking, WFC's Community Banking and Citi's North America GCB segments. #1 growth in terms of incremental number of mobile users from 2017 to 2018

2. Mobile logins per month reflect 90-day logins among 90-day active users divided by three to estimate average monthly logins. Data reflects December 2017 and December 2018. Consumer Banking customers only

3. Reflects 90-day active users in December 2018 and December 2017. Consumer Banking customers only

4. Total check deposit transactions through QuickDeposit as a proportion of total check deposit transactions in 2018 and 2017. Includes deposit transactions that combine cash and check. Based on number of transactions, not number of checks. Consumer Banking customers only
Notes on slide 13 – Our physical network has been critical to achieving industry-leading deposit growth

1. Average teller transactions among all Consumer Banking customers. Represents 4Q14 and 4Q18


3. Consumer Banking households who visited a branch at least once in 2018

4. Deposit growth from 4Q14 to 4Q18. Includes multi-channel and branch-centric channel segments. Consumer Banking household channel segments are defined based on the tenure of the household as of the respective time period. For households with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For households that are less than 12 months on book, we reduce the thresholds by 75% and track the household activity over a three-month time period.
Notes on slide 14 – We are innovating across our channels and throughout the customer lifecycle

1. Median existing customer opened account via Digital Account Opening ("DAO") in ~3 minutes. Median new-to-bank customer opened account via DAO in ~5 minutes. Does not include time to open an account via in-branch DAO

2. As of February 2019

3. When customers initiate an external transfer to a Real-Time Payments (RTP) network enabled bank, they have the option to use RTP, which settles within 15 seconds

4. Proportion of 4Q18 teller transactions that were eligible to be completed at an ATM

5. Includes multi-channel and digitally-centric channel segments; Consumer Banking customer channel segments are defined based on the tenure of the customer as of the respective time period. For customers with tenure of greater than 12 months, we use the following thresholds calculated over a year: Digitally-centric – <=4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Multi-channel – >4 branch visits and 12+ digital transactions or 100+ digital log-ins or 24+ external ACH transactions per year; Branch-centric – >4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year; Other – <=4 branch visits and <12 digital transactions and <100 digital log-ins and <24 external ACH transactions per year. For customers that are less than 12 months on book, we reduce the thresholds by 75% and track the customer activity over a three-month time period

6. Analysis shows difference in full year pretax income, Jan. – Dec. 2018, for households that are engaged with 2 or more products across lines of business vs. Consumer Banking-only engaged households
Notes on slide 15 – We are effectively expanding our physical network to attractive new markets

1. FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC.

2. 2018 U.S. population sourced from U.S. Census Bureau. Sum of population of states in which Chase currently has or will have a branch presence post market expansion.

3. Reflects 2014-2018 growth in the top 10 deposit markets as of 2018. Source: FDIC 2018 Summary of Deposits survey per S&P Global Market Intelligence. Excludes non-retail branch locations and all branches with $500mm+ in deposits within the last 10 years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks). Includes all commercial banks, credit unions, savings banks, and savings institutions as defined by the FDIC.
Notes on slide 18 – The home lending industry is in a state of transition

1. Source: Inside Mortgage Finance (“IMF”)
2. Source: Freddie Mac Primary Mortgage Market Survey (“PMMS”). Represents 30-year fixed rate
3. Source: JPMorgan Chase Securitized Products Group (“SPG”) Research. Represents Fannie Mae 30-yr current coupon rate
4. Source: Reflects weighted average Retail expense for Large Banks peer group as defined by the Mortgage Bankers Association (MBA) and STRATMOR Peer Group Roundtables (PGR) program. 2018 reflects first half annualized
Notes on slide 22 – …and we continue to de-risk our servicing business, which will protect us in a downturn

1. 30+ delinquency rate for total "in flows" as of December 2018. Total "out flows" at time of transfer
2. Source: IMF. Includes all loans past due and in foreclosure
3. Industry defined as Large Servicer Delinquency Index reported by IMF
4. Driven by mix
Notes on slide 24 – We are deepening relationships with our core Home Lending customers, and building on our existing momentum…

1. Primary relationship based on internal JPMorgan Chase definition
2. Based on JPMorgan Chase internal analysis
3. Represents Chase’s percentage share of targeted customers who originated a purchase or refinance mortgage between January 2018 and November 2018. Calculation based on JPMorgan Chase internal data and CoreLogic data
4. Source: IMF
Notes on slide 28 – Our sustained investment in products and customer acquisition has created tremendous scale

1. “Credit Card Market: Cobrand Market Share by Issuer,” Phoenix, October 2018. For 1H18, based on number of accounts, total spend, and revolving balance dollars

2. Represents 2018 share of general purpose credit card (“GPCC”) spend, which excludes private label and Commercial Card. Based on company filings and JPMorgan Chase estimates

3. Represents 2018 share of loans outstandings, which excludes private label, AXP Charge Card, and Citi Retail Cards. Based on company filings and JPMorgan Chase estimates

4. Average number of active credit card accounts per month in 2018. Active defined as those that have at least one credit card sales transaction in respective month

5. Excludes Commercial Card
Notes on slide 30 – Importantly, our scale has also created cost efficiencies

1. Reflects customer service expense per statement
2. Reflects year 3 sales on domestic acquisitions. Acquisition marketing excludes media
3. Fraud losses exclude disputes
Notes on slide 38 – Engagement improves our ability to deepen relationships across Chase

1. Analysis shows difference in percentage of in-footprint, Chase consumer card-only customers, who opened a deposit relationship after 18 months, as of June 2017

2. Low-spend engagement is defined as annual spend <$5K and spend share of wallet <25% across 12 months prior to June 2017; high-spend engagement is defined as annual spend >$30K and spend share of wallet >75% across 12 months prior to June 2017

3. Defined as at least one mobile sign-on in June 2017

4. Defined as enrolled in Credit Journey in or before June 2017

5. Analysis shows difference in full year average pretax income, Jan. – Dec. 2018, for households that are engaged with 2 or more products across lines of business vs. Card-only, engaged households

6. Analysis shows difference in NPS, based on Jan. – Dec. 2018 responses, for households that are engaged with 2 or more products across lines of business vs. Card-only, engaged households