Redefining the Financial Services Industry

Matt Zames

As the firm's Chief Operating Officer, I manage a diverse group of critical firmwide operations and functions, as well as certain markets-intensive activities that are integral to our success. These include Global Technology, the Intelligent Solutions group (which drives innovation across the firm by leveraging big data and advanced analytics such as machine learning), Treasury and the Chief Investment Office, Mortgage Banking Capital Markets, Oversight & Control, Regulatory Affairs and the Chief Administrative Office, which includes Real Estate, Procurement, Military & Veteran Affairs, Compliance Operations and Strategy & Process Improvement, among others.

The Chief Operating Office (COO) has a broad and deep mandate, but this year, I want to highlight (i) our investment in technology; (ii) our approach to managing a $2.5 trillion balance sheet; and (iii) our ongoing commitment to a best-in-class culture.

Technology continues to fuel everything we do

Technology is at the core of what we do. Advances in technology make us faster and safer and drive a more engaging customer experience, differentiating our businesses today and for the future. The pace of technology change is always increasing, and we challenge ourselves to think, innovate and deliver like a technology company.

Our more than $9.5 billion technology budget demonstrates our significant, ongoing commitment to technology investment. The scale and diversity of our businesses enable us to invest wherever we see opportunity or competitive advantage to do so effectively. We will continue to grow the share of our technology budget allocated to new investment and innovation by optimizing our existing technology environment. We will also maintain a relentless focus and significant spend on cybersecurity, protecting the firm and enabling the secure introduction of new capabilities.

Optimize to innovate

2016 was a year of mobilizing a portfolio of optimization programs that increased the pace and quality of technology delivery while decreasing cost. Improving software development productivity and adopting cloud infrastructure are core elements of that strategy. We continued to improve developer productivity by enabling an agile technology workforce and automating the software development life cycle. We are also defining design standards to provide a common technical framework for development of applications of a particular type, for example, big data analytics. This will significantly reduce rework and duplication in the software development life cycle where, previously, application developers have had to create their own one-off frameworks. We anticipate that these steps ultimately will lead to a 20% efficiency gain in the development process.

Historically, we have followed a traditional "waterfall" approach to software development, with separate teams and processes for development, testing and operations. The agile approach, by contrast, is characterized by multifunctional and collaborative teams and allows frequent readjustment to project plans in response to changing requirements. Adopting this approach vastly improves software quality through its iterative nature and accelerates our ability to deliver incremental value. To put that into perspective, we are moving from software release cycles measured in quarters to cycles measured in days.

We have also made great progress toward fully automating development life cycle processes and standardizing developer toolkits. In 2016, automated code scanning and deployment tools resulted in savings of nearly 120,000 developer hours –

and, over the next few years, we expect to be able to deliver more than 90% of our software through end-to-end automation.

Attracting, retaining and developing top technology talent is paramount, and we cast a net far and wide to find the best and the brightest. In 2016, 32% of our senior hires in technology came from non-financial services firms. We had a 10:1 applicant-to-position ratio for our Technology Analyst Program, which targets graduates of global universities that have strong technology programs. Our employee training programs cover new skill sets, such as cloud and agile development. We also reinforce a strong innovation culture and atmosphere to spark new solutions through open source projects and "hackathons" in which technologists collaboratively code to solve business problems. In 2016, we hosted a firmwide global hackathon across 20 cities with over 2,500 developer participants. This led to 400 new product ideas, of which 130 were potential opportunities for patents.

We continued to pursue a hybrid cloud strategy – leveraging a next-generation internal, private cloud, as well as external, public cloud services – to further enable our developers through on-demand availability, pay-for-use and elastic scalability. In 2016, we launched a new private cloud platform called Gaia, designed to provide developers with rapid agility – so that they spend more time developing and less time provisioning infrastructure and application services. Over 5,000 developers already have begun to use Gaia. By the end of 2017, we expect to more than double the number of applications hosted on the platform.

Over the last year, we established a new Cloud Services function within Global Technology to accelerate our hybrid cloud strategy, which includes running our first applications in the public cloud in 2017. Working collaboratively with public cloud providers, we have made significant progress developing a set of solutions that meets our rigorous risk and security standards. The public cloud reduces our peak infrastructure requirements by providing compute services during temporary fluctuations in demand. The public cloud also helps reduce long-term storage costs and accelerates developer access to new cloud services.

In 2016, we invested in a new global data center strategy to consolidate our existing facilities into fewer, larger, more modular sites. In early 2017, we opened our first new state-of-the-art data center, which is the strategic model for all future builds globally. The new data centers will house our next-generation optimized infrastructure, enabling significant cost benefits. For example, hardware commoditization already has reduced our server costs by 25%. We also have introduced innovative storage offerings, decreasing the price of our lowest tier storage by 75%. We are driving additional efficiency by reducing waste and becoming smarter around technology consumption – for example, reducing over-provisioned storage and automating manual operational tasks.

Our applications are also changing. We are designing and developing applications to take full advantage of the cloud's benefits. In addition, there is growing internal and external demand for simple, self-service interfaces to our data and applications. To meet this demand, we are leveraging application programming interfaces (API) and launched an internal API store to provide access to a marketplace of secure application services to developers throughout the firm. The old world of developing and writing unique code is rapidly being replaced by reusable component pieces ("microservices") that can communicate seamlessly, dramatically reducing integration development time and driving developer efficiency. We also are expanding the APIs we offer externally to enable direct client integration and secure solutions by third-party developers – for example, the partnership with Intuit that we recently announced. By the end of 2017, we estimate our applications will generate more than 100 million internal and external API calls each day.

Advancing innovation and partnerships

As a firm, innovation is our top strategic priority. We take pride in our ability to differentiate ourselves through the development of new solutions and the adoption of emerging technology at scale.

Demand for digital-centric experiences is transforming our businesses faster than ever. Most of our digital solutions will continue to be built in-house due to competitive and strategic importance. However, we have realized the complementary benefit of partnering with fintech companies to enhance select digital products and services. As a result, our strategy is a combination of build, buy and partner in order to continue delivering the best digital products and services at scale.

We have formalized a firmwide fintech strategy and ecosystem engagement model to identify and leverage partner relationships across all of our business areas. In their letters, each of our CEOs highlights examples of how technological innovation is delivering value to their business.

Our relationships with the external technology ecosystem helped drive value across our technology focus areas, including next-generation data and analytics platforms, such as Hadoop and Spark. To maximize the impact of these new data platforms, we have doubled our big data infrastructure consistently year-over-year. We now can access and analyze data in ways that we could not have done before. For example, last year, we re-engineered our Market Risk platform, one of the largest in-memory risk analytics platforms in the world. The platform now manages over 1 billion risk sensitivities and provides visibility 17 times faster than the prior system while delivering a more granular and holistic view of the firm's risk exposure.

Within our global payments strategy, we have developed a new payments platform based on similar cutting-edge technologies. It will replace nine monolithic platforms and enhance client value through real-time cross-border payment execution and end-to-end payment status transparency. In addition, the platform will enable us to bring new products to market more quickly and offer a more configurable, flexible client experience through reusable APIs and microservices for event processing.

As we look forward, two emerging areas of innovation – robotics and machine learning – offer promising opportunities to drive new value through automation and insight.

Robotics

Robotic process automation is software that automates routine, repetitive activity that otherwise would be performed manually. Virtual "bots" are available 24/7 to efficiently execute simple processes without the risk of human error. In 2016, we established an internal center of excellence to drive best practices around a growing pipeline of robotic process automation, including systems access administration, for which we expect to automate 1.7 million requests in 2017. We have line of sight into more than $30 million run rate saves from robotic process automation in 2017, a savings that, coupled with other optimization efforts, will continue to increase substantially in the years to come. This technology has the opportunity to deliver immediate benefit in several areas across the firm, helping us to position our workforce around higher value tasks and functions.

Machine learning

Machine learning offers another exciting opportunity to drive new capabilities for the firm and our customers and clients. Machine learning technology provides insights about data without needing to pre-program algorithms. Machine learning technology actively learns from data with the goal of predicting outcomes. The more these learning algorithms are engaged, the more effective they become at identifying patterns and relationships. In 2016, we established a center of excellence within Intelligent Solutions to explore and implement a growing number of use cases for machine learning applications across the firm.

As an example, we recently introduced COiN, a contract intelligence platform that uses unsupervised machine learning to analyze legal documents and to extract important data points and clauses. In an initial implementation of this technology, we can extract 150 relevant attributes from 12,000 annual commercial credit agreements in seconds compared with as many as 360,000 hours per year under manual review. This capability has far-reaching implications considering that approximately 80% of loan servicing errors today are due to contract interpretation errors.

We also use machine learning to drive predictive recommendations for Investment Banking. Last year, we introduced the Emerging Opportunities Engine, which helps identify clients best positioned for follow-on equity offerings through automated analysis of current financial positions, market conditions and historical data. Given the initial success of the Emerging Opportunities Engine in Equity Capital Markets, we are expanding it to other areas, like Debt Capital Markets, similarly basing predictions on client financial data, issuance history and market activity.

We are initiating pilots for a broad range of machine learning use cases – from detecting anomalies for fraud and cybersecurity, to generating targeted trading strategies to share with clients, to optimizing our client-servicing channels. We are only at the very beginning of tapping the potential capabilities of machine learning and its benefits to our business.

We also are excited about the prospects of cognitive automation, which combines both robotics and machine learning technologies to mimic human judgment. Cognitive automation has the potential to automate more complex, human-like processes, such as perceiving, hypothesizing and reasoning. In 2016, we successfully piloted a virtual assistant technology to respond to employee technology service desk requests through a natural language interface. We are rolling out this technology in 2017 to help us initially triage over 120,000 service tickets, with plans to expand the capability to address even more of the 1.7 million annual employee requests.

Securing a changing landscape

Our cybersecurity strategy is focused on securely enabling new technology and business initiatives while maintaining a relentless focus on protecting the firm from cybersecurity threats. Our defensive philosophy follows a "kill chain" approach – layers of controls aligned to the multiple stages of the cyber threat life cycle (from early warning, to inbound/outbound prevention and detection, to response and recovery). We have aligned our security technology and processes to this life cycle, with a focus on a "shift left" approach – increasing our effectiveness in detecting and preventing malicious activity at the earliest points in the life cycle.

The firm continues to make significant investments in cybersecurity to enhance these defensive controls and our resilience to threats. For example, we have deployed web browser isolation technology to reduce the risk of employee compromise through phishing. Investments in security analytics, data science and automation technology will enable analysts within our Security Operations Centers to efficiently detect and respond to anomalous activity. We have adopted and continue to evolve leading-edge technology to prevent client fraud across lines of business, including risk-decisioning engines that help distinguish between good and bad activity in real time.

Through robust employee awareness and readiness programs, we continue to reinforce the idea that cybersecurity is everyone's job. We also educate our customers and clients on how to protect their assets and business from cyber threats. We broadly distribute awareness communications and conduct both in-person and web-based training in which more than 7,000 clients in Asset & Wealth Management, more than 3,000 Commercial Banking clients and over 1,900 Corporate & Investment Bank clients participated in 2016 alone. As one of the largest global financial institutions, we embrace our cybersecurity leadership responsibility to the industry. In 2016, we led the creation of the Financial Systemic Analysis & Resilience Center (FSARC) in partnership with seven of our peer banks and the U.S. government. FSARC's mission is to proactively identify, analyze, assess and coordinate activities to mitigate systemic risk to the U.S. financial system from cybersecurity threats through focused operations and enhanced collaboration.

Increasingly, our customers and clients view our cyber posture, like our fortress balance sheet, as a source of strength. We will continue to work tirelessly to identify opportunities in which the firm can leverage our cybersecurity expertise to strengthen our controls, protect our client relationships and improve the posture of the broader industry.

Liquidity and interest rate risk

The firm's Treasury and Chief Investment Office are integral to delivering on our strategic objectives, playing a primary role in overseeing our $2.5 trillion balance sheet and providing both governance and risk management expertise around interest rate and liquidity risk. We meet our objectives through our nearly $300 billion high-quality investment securities portfolio, as well as the $300+ billion of funding and liquidity sources directed by Treasury.

Most notable in 2016 was our work related to liquidity and funding in response to U.S. regulator feedback on our 2015 Resolution Plan. We introduced a comprehensive new liquidity framework to estimate available resources and liquidity needs during a resolution event – and, as part of this work, rolled out two enhanced liquidity models across our material legal entities. We further strengthened the firm's liquidity position, raising more than $50 billion of liquidity to meet the requirements of the new framework. While deposit growth in excess of loan growth drove some of this improvement, the liquidity benefit came mainly from a reduction in non-high quality liquid assets in our investment securities portfolio and an increase in Treasury-originated short- and long-term secured funding.

Our focus on optimizing the firm's balance sheet continued with rigor through 2016. We extended our optimization framework to analyze the maturity structure of our long-term debt, and we introduced the industry's first total loss absorbing capacity (TLAC) efficient callable debt structure, resulting in a larger proportion of our outstanding long-term debt being TLAC eligible. More broadly, our optimization framework helped to inform our new multi-factor equity allocation approach to better align incentives with the broader set of constraints we face. Our firmwide Asset Strategy group together with our Deposit Strategy group provide strategic cross-business focus on our deposit, lending and investment activities. These forums have and will continue to evolve our analytical frameworks and monitoring capabilities, as well as continually assess market opportunities and associated resources and risks.

2016 also saw a move higher in U.S. dollar interest rates and featured a second rate hike by the Fed in December. During the second half of 2016, three-month LIBOR increased 35 basis points to 1%, while 10-year Treasury yields increased nearly 100 basis points to 2.43%. Staying true to our disciplined risk management framework, we opportunistically added duration through our investment securities portfolio as long-end rates rose.

Market expectations have shifted as well. At the end of the second quarter of 2016, the market was expecting the Fed's interest rate on reserves to remain below 1% through the end of 2019. With recent and anticipated Fed interest rate hikes, industry expectations are now for the rate on reserves to reach 2% during 2019. And, as indicated by our $2.4 billion of "earnings-at-risk," our firm benefits greatly when rates rise, particularly short rates, which allow us to capture the full value of our significant deposit franchise.

We continue to build on the great work started in 2015 on our intraday liquidity program, with technology at the core of our advancements. We are able to monitor, in real time, the liquidity impact of over $6 trillion of transactions daily and the credit exposure across tens of thousands of intraday credit facilities, consuming up to 5,500 updates per second. This year, we introduced big data analytics, which has substantially improved our predictive capabilities around intraday drivers. We store 90 million data points covering in excess of 18 months of daily history, adding over 500,000 data points per day. We are now realizing the benefits of harnessing this vast amount of data, informing decisions internally and improving the quality of our dialogue with clients. Additionally, we are leveraging technology to further optimize approximately $1 trillion of collateral the firm has received, as well as the firm's own collateral, to provide a more integrated and dynamic operating model for collateral firmwide.

A culture of accountability

Having fortress controls remains a critical priority, but controls alone are not sufficient without the right culture. The COO will continue its leadership to reinforce our Business Principles and cultural values throughout the firm and maintain an appropriate governance framework to effectively manage our approach to conduct risk. Confirming we are getting it right requires a comprehensive set of metrics, and, over the past year, we have introduced a series of conduct measures to do just that.

Culture and Conduct Risk was reaffirmed as a strategic priority at our Operating Committee annual strategy off-site meeting in July. We recently appointed a Chief Culture and Conduct Officer for the firm to reinforce ownership of conduct risk and a consistent firmwide approach in the first line of defense. We also established a separate risk stripe for Conduct Risk so that we have disciplined and consistent oversight and a clear conduct risk management framework.

We use increasingly sophisticated detective controls to help us identify broad, as well as individual, trends in employee conduct. For example, we now have in production a Front Office Supervisory monthly report across our markets businesses globally. This tool consolidates key sales and trading metrics, such as number of canceled and amended trades and credit and market risk limit breaches, with compliance metrics, such as an employee's compliance with mandatory training and consecutive leave requirements, to give supervisors a view of their employees' behavior. We also surveil certain electronic communications and trades to identify potential misconduct, and we have implemented controls designed to prevent and detect abuses related to collusion, market misconduct or manipulation and corruption, among others.

We continue to develop our Culture and Conduct Risk Dashboard, which is reviewed with our Board of Directors and senior management. The Dashboard is a qualitative and quantitative assessment that includes key metrics and commentary related to how well-controlled we are and how well we manage risk, compliance results for our businesses and employees, Code of Conduct matters, employee survey results, and customer and client feedback/complaints for each of our businesses.

In 2017, we will continue to connect key programs, metrics and policies across the firm to identify additional opportunities – and our Board of Directors will continue to hold us accountable for this important work. Our approach is iterative, driven by our commitment to our firmwide values and ongoing communication of our standards to our employees. We engage in ongoing dialogue with our regulators, industry peers and other experts to identify and adopt best practices.

Looking ahead

I have never been more excited about the opportunities ahead. Our focus on innovation and aggressive optimization to meet new challenges will continue to result in dynamic changes to our operating model as we best position our businesses for the future. In so doing, we will maintain a relentless commitment to the highest standards of conduct and safety and soundness to protect the integrity and security of the markets in which we operate and the assets of our customers and clients.

Matt Zames
Chief Operating Officer

Consumer & Community Banking

Gordon Smith

2016 financial results

2016 was another strong year for Consumer & Community Banking (CCB). All our businesses performed well and delivered very strong results. We gained market share in each of our six business units. For the full year, we achieved a return on equity of 18% on net income of $9.7 billion and revenue of $44.9 billion.

We made meaningful progress on our 2016 priorities – a strategy we have been following consistently since we unified our Consumer businesses in 2012 under CCB:

- Deepen relationships with our customers and simplify and improve the customer experience
- Lead payments innovation by delivering solutions that address merchant and consumer needs
- Increase digital engagement by delivering differentiated experiences
- Protect the firm and its clients/customers, investors and employees from cyberattacks, as well as protect the privacy of their data and transactions
- Continue our unwavering commitment to build and maintain an effective and efficient control environment
- Execute structural expense management strategies while continuing to invest for the future
- Attract, train, develop and retain the best talent and strengthen our diversity

Simply put, our commitment to customers is at the heart of everything we do. It's what drives our work and our strong results. We know that happy customers will do more business with us and stick with us throughout their lives. For us, our goal is not only to acquire customers – it's to acquire customers who view Chase as their primary bank or credit card. We want to be our customers' first call when they are seeking financial advice.

Today, we have a relationship with almost half of all households in the U.S. We grew our customer base in 2016 by 4% to 60 million U.S. households. We are the primary bank for more than 70% of our consumer households and nearly 50% of our small businesses. Our household attrition is at record lows. And according to our 2016 Brand Health Survey, the Chase brand is at the strongest levels we have seen, ranking #1 in key categories, including consideration, which measures if survey participants would consider doing business with Chase and have a positive perception of Chase.

While we are extremely pleased with where we are, we know we have plenty of work to do. There is tremendous opportunity literally on our own doorstep. More than 80% of Chase households with a mortgage got it somewhere else. Only one-third of our customers are engaged with more than one product across Chase. And only 10% of our small business customers who have a Chase banker use us for business banking, credit card and merchant services, while 43% of small businesses need all three. We can continue to grow simply by serving our existing customers exceptionally well and earning their trust to do more business with us.

Building a strong business for the future

We have been fortunate to be in an extended, historically benign credit environment. Despite that, we have not forgotten the painful lessons of 2008 and have maintained an extremely disciplined approach to credit throughout the cycle.

In Mortgage Banking, we've increased our loan balances while improving the quality of our servicing portfolio. Today, our delinquency rate is approaching its lowest level in

2016 Performance Highlights

Key business drivers			
	$ in billions, except ratios and where otherwise noted	2016	YoY∆
Consumer & Community Banking	Households[1] (millions)	60.0	4%
	Active mobile customers (millions)	26.5	**16%**
Consumer Banking	Average deposits	$461	**11%**
	Client investment assets (end of period)	$235	7%
Business Banking	Average deposits	$110	**9%**
	Average loans[2]	$22	7%
	Loan originations	$7	8%
	Net charge-off rate	0.61%	(5) bps
Mortgage Banking	Total mortgage origination volume	$104	(3)%
	Foreclosure units (thousands, end of period)	47	**(36)%**
	Average loans	$232	**14%**
	Net charge-off rate[3]	0.10%	(8) bps
Credit Card	New accounts opened[4] (millions)	10.4	**20%**
	Sales volume[4]	$545	**10%**
	Average loans	$131	4%
	Net charge-off rate	2.63%	12 bps
Commerce Solutions	Merchant processing volume	$1,063	**12%**
Auto Finance	Loan and lease originations	$35	9%
	Average loan and leased assets	$75	**16%**
	Net charge-off rate	0.45%	7 bps

[1] Reflects data as of November 2016
[2] Includes predominantly Business Banking loans as well as deposit overdrafts
[3] Excludes the impact of purchased credit-impaired loans
[4] Excludes Commercial Card

YoY = year-over-year bps = basis points

a decade, and our foreclosure inventory is down 85% since 2012. That's important because a nonperforming loan is 25 to 30 times more expensive for us to service than one that is performing. We are continuing to evolve Mortgage Banking into a less volatile and more profitable business. In our Card business, we have been very consistent in terms of our modest exposure to the less than 660 FICO segment. And when you look at the mid-prime space, characterized as FICO scores between 640 and 720, we have the lowest share among the players in the industry. Our credit card losses remain at very low levels.

Along with credit discipline, we remain fiercely devoted to expense discipline. We reversed a trend of rising expenses with relatively flat revenue. Since 2014, we achieved $2.4 billion in structural expense reductions and improved our overhead ratio from 58% in 2014 to 55% in 2016. Importantly, during that same time period, we continued to prudently invest in our core businesses to deliver value for the long term. In particular, we've invested heavily in technology and marketing associated with new product launches, digital and payments innovation, and cybersecurity. Our investments have also improved our control environment, leading to more automated processes and better customer and employee experiences. Expense discipline is part of how we do business every day, and the work to reduce our structural expenses will continue.

Payments innovation

Payments are at the very core of what our business does for customers. We are one of the few companies that can deliver the full payment chain from merchant to consumer. The payments industry is one that is evolving rapidly with innovation and new entrants. Our strategy has been consistent:

- Build our own proprietary wallet with Chase Pay℠
- Be top of wallet in other wallets, whether that is Apple Pay™, Android Pay™, Samsung Pay™, or other embedded payment systems such as Amazon or Uber
- Have the best person-to-person (P2P) payments experience anywhere
- Create card products that our customers love, with rich reward offerings to make them top of the physical and digital wallet

The future here is still unknown as customers adopt new capabilities. But we know payments are core to what we do, and we are investing across multiple fronts to create the best payments experience for our consumer and merchant customers as technology evolves. In 2016, we achieved some key milestones in payments:

Commerce Solutions – Our Chase Commerce Solutions business has earned double-digit growth since 2012 and in 2016 surpassed a staggering *$1 trillion* in processing volume.

Chase Pay – We introduced Chase Pay, our payment solution that provides benefits to both customers and merchants. Chase Pay has unique features other payment methods don't and has the Chase brand and security behind it. Several large retailers, including WalMart, Starbucks and Best Buy, have partnered with us to offer Chase Pay to their customers. It's early, but we're already seeing promising results and expect 2017 to show continued strong momentum.

Person-to-person payments – Chase QuickPay℠ has been an industry leader with 94 million transactions in 2016. The number of households using QuickPay has gone up 30% in just the past year. As strong as it is, we took an important step to make it even better. We worked with 20+ other financial institutions on a solution called Zelle that speeds up P2P real-time payments between banks.

Sapphire Reserve℠ – This past year, our team noticed an important insight from our customers: People are traveling differently. They want to feel more like locals than tourists, and the shared economy has revolutionized the travel industry. When choosing a credit card, customers want a card that rewards them more for doing what they love to do and helps them discover the future of travel. We created Sapphire Reserve with one of the strongest point programs in the industry. And while we knew we had designed a superb card, frankly, even we were surprised by the sensation it became. We exceeded our annual target of customers in less than two weeks.

Sapphire Reserve has introduced Chase to an exciting and passionate customer base with average FICO scores above 785 and an average deposit and investment wallet of over $800,000. Even more exciting, the majority of our new Sapphire Reserve customers are millennials. That is significant because millennials make up the majority of our new deposit accounts today, and their wealth is expected to grow at the fastest rate of all generations over the next 15 years. Since we are more than a credit card company and given our new customers' strong satisfaction and engagement with their Sapphire Reserve cards, we are confident they will also choose Chase to do more of their banking, investments and loans.

New card launches – While receiving less hype than Sapphire Reserve, we've also introduced several other popular cards. Chase Freedom Unlimited℠ simplified our cash-back proposition by offering customers 1.5% cash back on everything they buy. And not to be outdone, Ink Business Preferred℠ and our Amazon Prime℠ card also earned a very strong customer reception. Together, these cards have contributed to our momentum. In 2016, we saw new accounts up 20%, card sales volume up 10% and outstandings up 8%.

Digital

We think we can confidently say that Chase is the digital leader in the industry. We have the #1 rated mobile banking app, #1 ATM network and #1 most visited banking portal in the U.S. This is important because, increasingly, digital is a critical driver in why customers choose to do business with Chase. Banking no longer is a sometimes activity – customers engage with us every day. More than 26 million customers are active on our mobile app today. Digital also drives tremendous loyalty. Households that use our digital channels have credit and debit spend levels over 90% higher than those that don't. Customers who are digitally engaged have higher satisfaction and retention rates, spend more and have far lower transaction costs.

Advancing our digital and technology capabilities is job #1, but we are also paying close attention to the emerging technologies in our industry. Many new fintech companies are mastering ways to simplify the customer experience. Those we meet with have huge respect for the Chase brand, and they envy our scale and distribution. In cases where we think their solutions will improve the customer experience quickly, we partner with them. A few of those 2016 partnerships have worked out very well:

- **Chase Business Quick Capital**® – A partnership with OnDeck to provide fast funding to small businesses using Chase underwriting standards
- **Chase Digital Mortgage**℠ – A partnership with Roostify that helps our customers manage the mortgage process online or on mobile
- **Chase Auto Direct**℠ – A partnership with TrueCar that allows customers to shop for and finance the specific car they want online and simply pick it up at the dealership

We continue to study and meet with new players to evaluate which partnerships could benefit our customers.

Chase in the community

Chase's 5,258 branches are the face of our firm to local communities. Roughly two-thirds of our customers visit a Chase branch four times a quarter on average. Our branches are located in the fastest growing markets in the country, and we are outpacing our competitors wherever we compete.

If you visit our branches regularly, you will see how they have changed. There are fewer teller lines and more options for customers who choose to self-serve. There are more private spaces and conference rooms for customers to meet with a banker and privately discuss transactions. And the branches just look better. Most branches are refreshed roughly every six to seven years to update the technology and brand experience.

We know one thing that will drive a customer crazy is a long teller line. Since 2014, we've reduced total teller transactions by ~130 million and increased self-service/digital transactions by ~180 million. That's great progress, but we still can do more. In 2016, 70% of our 400 million teller transactions could have been performed through a self-service channel. We continue to work with our customers to help them understand how to complete transactions on their own if they so choose.

And as transaction volumes come down, we will rationalize our branch footprint. We have been opening branches in higher growth areas and consolidating those with less foot traffic. As a result, we reduced our net branches by about 150 in the past year. However, by being smart about where we open branches, even in markets where we consolidated, we still grew share.

Our branches also are advice centers for many of our 4 million small businesses. There are few things more gratifying than watching a small business owner turn an idea into a sale and then sales into a business. Since 2012, our share of business customers who use Chase as their primary bank grew from 6% to 9%. We improved our Net Promoter Score by 38%. And since 2014, average deposits are up by 21% and loans by 13%.

At Chase, we take very seriously the role our business plays in helping customers make the most of their money. Our goal is to offer products, advice and tools to help them make the best choices. It's such a privilege to be in the business of banking and payments. We are honored to be part of our customers' lives in a way that few businesses are.

On behalf of the more than 130,000 employees in Consumer & Community Banking, thank you for your investment in us.

Gordon

Gordon Smith
CEO, Consumer & Community Banking

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

- Consumer relationship with almost half of U.S. households
- #1 in primary bank relationships within our Chase footprint
- Consumer deposit volume has grown at more than twice the industry average since 2012
- #1 most visited banking portal in the U.S. – chase.com
- #1 rated mobile banking app
- #1 ATM network in the U.S.
- #1 credit card issuer in the U.S.
- #1 U.S. co-brand credit card issuer
- #1 in total U.S. credit and debit payments volume
- #2 merchant acquirer
- #2 mortgage originator and servicer
- #3 bank auto lender

2016 West Coast Bus Tour

Every summer, we go out on the road to meet with our employees and ask for their feedback. They tell us what they are hearing from our customers and give us ideas on how we can make our Chase customer experience even better. We've made many customer improvements as a result of our bus tours, and we have a lot of fun along the way.

Corporate & Investment Bank

Daniel Pinto

During a year of significant volatility, the Corporate & Investment Bank (CIB) consistently delivered for its clients. Throughout 2016, we increased or maintained our leading positions by avoiding complacency, reinforcing our culture of meeting the highest standards and attracting the best talent in the industry.

By adhering to those principles, the CIB achieved impressive results in 2016. Record earnings of $10.8 billion were up 34% compared with 2015, and our $35.2 billion in total revenue reflects a gain of 5% over the previous year. That performance produced a superior return on equity (ROE) of 16% on a capital base of $64 billion.

Providing clients with capital and liquidity during volatile market conditions has become even more essential in recent years. As some competitors retrenched and signs of decreasing liquidity emerged, we remained supportive and accessible. Our global scale, complete product set and the strength of our balance sheet, underpinned by our sound risk management practices, enabled us to consistently serve clients, a factor in driving wallet share increases across our already top-ranked businesses.

We don't take our leadership for granted, though. Despite our leading franchises, we continue to look beneath the surface of our businesses, ask the critical questions and make improvements where necessary. We are committed to staying ahead of the curve and embracing the technological changes affecting our industry in the face of competitors, both new and traditional.

By investing in scalable platforms and innovative trading tools and improving the overall experience, we are serving clients better, faster and more efficiently than ever before. More important, while we drove annual expenses down to $19 billion by staying disciplined, we still kept investing for the future. The market share gains we experienced in 2016 were supported by the CIB's profitability and our willingness to make strategic investments in innovation that will bolster our growth for years to come.

The past year demonstrated once again that there will always be unpredictable global events. One unknown is the ultimate outcome of negotiations between the U.K. and the EU. We are fortunate to have options in terms of locations and legal entities that will allow us to serve clients seamlessly during the transition. We will need to make adjustments, but our commitment to clients in the U.K. and the EU is as strong as ever.

By continually improving, adapting and being prepared, we are better able to respond. That's what our clients have come to expect, and we know that their success is the foundation for ours.

Strengthening investment banking leadership

Investment banking has always been about deep, long-standing relationships and solutions. Clients want consistent coverage, good ideas and global capabilities. We have an exceptional Investment Banking franchise that consistently ranks #1 globally. That success continued in 2016 with an 8.1% share of the global fee wallet.

We take immense pride in our people and the talent at J.P. Morgan, and our #1 standing is mainly due to the fact that we have the industry's best bankers. Still, there are sectors and geographies in which we can always improve. Since 2014, we have hired approximately 60 investment bankers, about 40 of whom were managing directors, who brought experience and relationships that will help bring J.P. Morgan's full suite of solutions to even more clients.

Our bankers represent a franchise that has a full range of global capabilities. Our Debt Capital Markets team retained its hold at the top of the global debt league tables. Its expertise and the firm's ability to deliver capital in scale for complex financings set us apart.

One standout deal of the year was evident in J.P. Morgan's role as the lead financial advisor to Dell Inc. and Silver Lake Partners on Dell's $67 billion acquisition of EMC Corporation, the largest technology transaction in history. In addition, J.P. Morgan served as global financing coordinator on Dell's $49.5 billion of committed financing associated with this transaction.

We also remain a leading source of debt capital for U.S. nonprofit and governmental entities, specifically states, municipalities, hospitals and universities. Last year, J.P. Morgan raised $90 billion of credit and capital for these important clients.

In 2016, we also were the top equity underwriter. Despite a difficult environment for initial public offerings (IPO) and a significantly smaller industry wallet, J.P. Morgan was the only global bank to gain share last year. Our bankers led 343 deals, more than any other bank. J.P. Morgan was a global coordinator and sponsor on the Postal Savings Bank of China's $7.6 billion IPO, the largest equity deal of the year and the largest IPO since the 2014 deal for Alibaba, in which J.P. Morgan acted as global coordinator. That 2016 deal underscored once again our ability to execute large transactions around the world by connecting regional issuers with global investors.

In order to grow, clients have often searched for merger and acquisition (M&A) opportunities to transform their companies. They look to trusted advisors who understand their companies and sectors and can provide the strategic insights to help them expand.

Our global team of M&A bankers works together to coordinate quickly and often, enabling J.P. Morgan to identify timely trends and opportunities across industries and borders. After record M&A volume in 2015, overall activity was down in 2016, but J.P. Morgan advised on more deals than any other bank and ranked #2 in wallet share globally. The firm's North America M&A wallet share grew by 60 basis points since the end of 2015.

Having top franchises across M&A, debt and equity gives us real-time, global market insights. Windows of opportunity in both M&A and capital markets can open and close quickly. Having expertise across product areas allows us to be timely and provide our clients with the best solutions to further their growth strategies. That's how we build trust.

Our Investment Banking franchise also enjoys a strong partnership with Commercial Banking (CB) that sets us apart from all other competitors. Its Commercial and Industrial franchise is a leading bank to nearly 18,000 clients. As those businesses grow and flourish, many need capital and advisory services from the Corporate & Investment Bank.

In 2016, the CIB led more than 800 capital markets transactions for CB clients and generated a record $2.3 billion of gross investment banking revenue. Despite that already impressive pipeline of shared client business, we think the potential magnitude over time could reach $3 billion.

Another developing partnership for the CIB is the potential to work with J.P. Morgan Asset & Wealth Management and its client base of family offices. We think there is more opportunity to offer these large investors participation in CIB transactions relevant to their investment goals.

Investments and scale in the global markets

We believe that having global scale, a complete platform and operational excellence are essential to having a best-in-class, profitable franchise. In 2016, our Markets business (Fixed Income and Equities) finished the year with a combined $21.0 billion in revenue, a year-over-year increase of 15%.

We have always believed that providing clients with a global and diverse Markets business leads to a higher and more resilient ROE. In 2016, each one of our major Fixed Income businesses produced a ROE above the cost of capital. More important, the marginal contribution that each business provides to the larger Fixed Income franchise is much greater. The costs to run our Markets business are mostly fixed so operating leverage gives us upside when market growth occurs, which is what we saw last year. Even Commodities, which didn't meet its cost of capital in 2015, in part because of ongoing simplification efforts, produced a good return in 2016.

Since 2010, the Fixed Income industry revenue pool has contracted from $157 billion to $114 billion. However, because of our scale, continuous investments and risk discipline, we were able to increase our market share over the seven-year period from 8.6% to 12.0%.

Our Equities and Prime Services businesses, major areas of focus for us, also gained share during that seven-year period. Our market share increased from 6.9% to 10.1%, and we are now ranked #2, even as the global wallet declined by $6 billion during that stretch. We had record revenue and balances in prime brokerage last year. It's an area where we committed to invest in order to complete our platform, and the progress is evident across all segments. In fact, since 2014, we have grown synthetic revenue by 48% and cash revenue by 12% within our prime brokerage business, bringing the two segments more into balance. Our leading equity derivatives franchise grew revenue by 26% even while the industry revenue pool shrunk by 5%.

We've also made great strides in cash equities. No doubt about it, we were late to the game when it came to investing in low-touch, electronic trading about a decade ago. But by taking advantage of our profitability and committing ourselves to significant, ongoing technology investments, we now are a leading equities franchise and are driving the changes of tomorrow. Between 2014 and 2016, the overall cash equities industry revenue pool fell by 18%, yet our revenue decreased by only 4%, helped by a 31% jump in low-touch revenue. The technology investments we made helped preserve our share in a declining market and positioned us for growth as we continue to onboard clients faster and build best-in-class electronic trading tools.

We are proud to be a perennial leader in Fixed Income and pleased with the progress we've made in Equities, but there is still more to do. Across the Markets businesses, we track 31 subproduct and geographic categories. In 2012, we held a top three leadership position in 61% of those categories. In 2016, we improved our standing by having a top three leadership position in 77% of those same categories. The bulk of those leadership improvements came from investments we made in Asia, where we have completed or enhanced some pieces of our global platform.

We feel very good about our Markets business. Global scale and a complete platform have never been more critical. We have many competitive advantages in Markets, but it is essential we continue to invest and proactively think about disruption on our own terms.

Adapting to the new market structure

Technology is rapidly reshaping the Markets landscape, positively altering how our clients trade and how we communicate with them. As the technology advances, we have the resources and the will to embrace behavioral shifts and build offerings around them. We fundamentally believe that clients should have the ability to choose how they want to trade with us rather than be constrained by the technologies we, or they, happen to have. Our Markets Execution group is dedicated to making sure clients can seamlessly and confidently engage with us anytime, anywhere, now and in the future.

Whether it was the U.K.'s referendum to exit the EU, the results of the U.S. presidential election or the uncertainty of China's growth rate, the CIB's technology, our scale and operational excellence enabled clients to trade through turbulent markets. In the case of the U.K. referendum, as results were tallied, J.P. Morgan smoothly handled record volume in currency trading, at one point processing 1,000 tickets per second as investors scrambled and adjusted their positions around the world.

While impressive, years of technology investments and proper risk discipline prepared us for an event such as the U.K. referendum. Our profitable Markets business, which generated an overall ROE of 17% last year, enables us to invest in innovation and the client experience. Eighty-three percent of notional FX trading is now done electronically. We have seen a $100 million trade done on a mobile phone, and on peak days in 2016, $200 billion in FX was traded through our electronic channels, including our own J.P. Morgan Markets platform, which provides a range of services from research to pre- and post-trade reporting.

The electronic evolution is advancing, and the investments we've made, and will continue to make, already are proving their merit to our clients.

Transforming transaction banking

Our commitment to technological advancement also has helped us make significant progress in Treasury Services (TS) and Custody & Fund Services (CFS). As businesses that provide vital services to clients, both have benefited from the extensive resources we've allocated to them.

To give a sense of the scale and importance of these two franchises, we hold and protect more than $20 trillion in assets under custody and securely process $5 trillion in payments every day.

Global companies know how vital these functions are in terms of safeguarding their financial operations and enabling their businesses to run smoothly.

Clients of both Treasury Services and Custody & Fund Services increasingly demand real-time access to their balances, intraday liquidity and ever faster processing capabilities. They are turning to us to deliver innovative products, alert them to fraudulent transactions, and track their finances across multiple currencies and countries. The goal is to give clients real-time information on their complex, global portfolios with easy-to-use, seamless technology.

Clients look to these critical services to be faster and more accessible than ever before, which is why we have invested so heavily in these businesses.

There's more to do, but our efforts haven't gone unnoticed. Greenwich Associates recently named

J.P. Morgan's ACCESS Online℠ the top-ranking cash management portal globally, as well as in North America.

Our commitment to technology and delivery of innovative solutions were also important factors behind BlackRock's decision to award us a CFS mandate with $1.3 trillion in assets under management last year, the biggest custody transaction in history. Clients are rewarding us with new and incremental business; the bank has increased business with existing custody clients by 10% in 2016, and the forward pipeline is strong. Overall, the bank serves about 2,500 custody clients in more than 100 markets. The faith that clients have in our capabilities is a validation of our investments and reflects our ability to collaborate across areas, such as Sales, Products, Technology and Operations.

By 2017, TS is expected to increase its technology budget by 12% vs. 2014 with investments that include automating and streamlining the account opening process, digitizing document exchanges and expanding virtual branches. We're also continually investing in cybersecurity capabilities to guard against fraud, malevolent attacks on our operations and other intrusions. We believe that by 2017, these improvements will help reduce operating expenses by 13% vs. 2014, while client operating balances jumped by 15% in just the last two years.

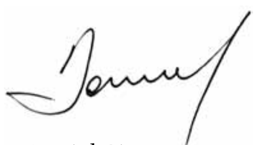
Similarly, Custody & Fund Services will increase its technology budget by 30% vs. 2014 while driving down operating expenses by 12%. Using technology-driven solutions, CFS is enhancing its stability and enabling the business to grow in a more scalable way.

After a few years of tightening controls and upgrading systems, we are now winning more business and attracting talented bankers and technologists who are excited about our willingness to invest in and build new technologies.

Building for the future

We view last year as a transitional period in the financial markets. If the global economy continues improving, that should have a positive impact on client activity and gross domestic product (GDP) growth in the U.S. and in many of the developed and emerging market economies. Estimates are that emerging markets ultimately will account for 70% of future GDP growth compared with its present share of worldwide GDP of 40%. If and when that shift occurs, J.P. Morgan will be prepared to serve the next generation of multinationals and to foster their development through the financing capabilities that we are uniquely able to offer.

We will continue to build new products and make it easier for clients to work with us, from onboarding to day-to-day trading and through the simplification of our processes. We have great assets, and no other bank is better positioned to deliver them to the global corporations of today or the ones sure to come into being in the next decades. But whether they're long-established multinationals or startups looking to gain their own foothold in the global markets, we will never forget that they are at the center of what we do.



Daniel Pinto
CEO, Corporate & Investment Bank

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

- The CIB had record earnings of $10.8 billion on $35.2 billion of revenue, producing an ROE of 16% on a capital base of $64 billion.
- We retained our #1 ranking in global Investment Banking fees with an 8.1% market share, according to Dealogic.
- The CIB had $19 billion of expenses, down $2.8 billion since 2014.
- The CIB continued investing to embrace technology in order to offer clients a broader array of trading platforms in which to transact with J.P. Morgan.
- The CIB's leadership and role as a trusted partner to our clients helped drive the firm's total merger and acquisition share to 8.6%, up from 6.4% in 2012, a gain of more than 200 basis points.
- In our Markets business, despite a significantly smaller industry revenue pool compared with 2010, the CIB's Fixed Income market share rose to 12.0% in 2016, up from 8.6% during the same time frame.
- The Treasury Services business supports approximately 80% of the global Fortune 500, including the world's top 25 banks, and handles $5 trillion in payments per day.
- Custody & Fund Services has more than $20 trillion in assets under custody; during the past year, it increased business with existing clients by 10%.

Commercial Banking

Doug Petno

Across our company, our clients are at the center of everything we do. In 2016, this meant supporting our energy clients as they weathered one of the worst sector downturns in 30 years. With oil prices down almost 75%, the industry has felt tremendous stress. During this time, we stood by our clients and have provided meaningful advice and much-needed capital. As many banks stepped away, we continued to demonstrate leadership in the industry, adding over 30 clients to our energy portfolio and extending more than $1 billion in new loan commitments last year.

It was our disciplined client selection and deep sector expertise that gave us the confidence and resolve to provide unwavering support during this significant downturn. I'm incredibly proud of our entire energy team for their relentless focus, leadership and hard work. We believe it is this enduring client commitment and our long-term view that set us apart in the industry.

2016 was a terrific year for Commercial Banking (CB) in so many ways, and our performance highlighted the strength and potential of our franchise. I'm excited to share our 2016 results, the investments we are making and our expectations for the future.

2016 performance

For the year, Commercial Banking delivered strong financial results, with record revenue of $7.5 billion, $2.7 billion of net income and a return on equity of 16%. Notably, we absorbed incrementally higher capital and substantial investments in our platform and capabilities while maintaining strong returns and operating efficiency in the business.

Our partnership with the Corporate & Investment Bank (CIB) continues to thrive and is a key differentiator for our business. Being able to provide strategic insights and leading capital markets and advisory capabilities distinguishes us from every other commercial bank. In 2016, we delivered record gross investment banking revenue of $2.3 billion, up 5% from the prior year. This outstanding partnership accounted for 40% of the firm's North American investment banking fees, and we believe there is tremendous opportunity to grow.

Loan growth across our business was also outstanding, ending the year with record loan balances of $189 billion, up $21 billion from the prior year. Loans in our Commercial & Industrial franchise reached a new record, up 9% from the prior year, and loans in our Commercial Real Estate businesses completed another fantastic year, with record originations of $37 billion.

Staying true to our proven underwriting standards, we have remained highly selective in growing our loan portfolio. Despite pressures in the energy and commodities sectors, 2016 marked the fifth straight year of net charge-offs of less than 10 basis points. As we begin 2017, credit fundamentals across CB are quite strong, but we remain disciplined and focused. We are monitoring all new activity carefully and know that this will serve us well over time.

What's not in our financial results also tells a great story. We have made significant investments to build a fortress risk and compliance framework for our business. Moreover, we have executed a significant portion of our regulatory and control priorities and are committed to set the standard in the industry. This progress has allowed us to focus on improving our processes to deliver a better client experience. It is an ongoing priority, and we will continue to invest in safeguarding our clients and our business.

Investing in our franchise to better serve our clients

As strong as our business is, we are certainly not standing still. We are executing a multi-year transformation across CB, with a clear focus on bringing greater value to our clients.

Last year, we invested more than we ever have on technology, data and our key product capabilities. Looking forward, we will direct even more resources in 2017 to enhance our wholesale payments platforms, build upon our market-leading digital capabilities, use data to better manage risks, and drive improvements across critical processes like credit delivery and client onboarding. This is an effort with no finish line – through continuous innovation, we will seek better ways to serve our clients and extend our competitive advantages.

Improving the client experience through enhanced digital delivery

Given the rapidly increasing consumer and wholesale client expectations, we are focused on leading the industry in our digital and mobile capabilities. Our mission is to deliver greater speed, convenience, simplification, transparency and mobile access. We are working hand in hand with our partners in Consumer & Community Banking (CCB) and CIB to leverage their experience and technology investment in this area.

In 2016, we joined CCB to launch a new digital platform that is specifically tailored to meet the needs of small and midsized companies. It works across desktops, tablets and mobile devices to provide an integrated experience across all of our products and services. We are excited that this new platform will help us bring innovative functionality to our clients.

Expanding our footprint to reach more clients

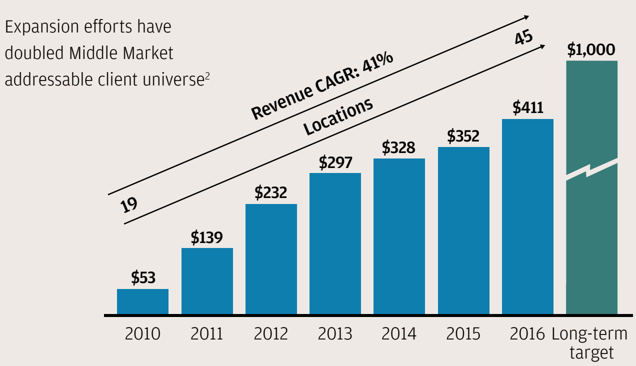
Expanding our client base and building deeper client relationships remain top priorities for CB. During 2016, we made significant progress in executing our long-term growth strategy – opening offices in eight new markets and hiring over 100 bankers across our business. These long-term investments are bringing us much closer to our clients. We made 20,000 more client calls last year than we did in 2015, and this focus will continue to drive opportunity for us in the coming years.

Our Middle Market business in California is a great example of the progress we've made so far and the tremendous potential we see in our expansion markets. It's an extremely exciting market for us as it represents the sixth largest global economy. Our team entered California following the Washington Mutual acquisition in 2008, and we now have 13 offices across the state. We are delighted with our progress as we have added more than 450 clients, and we are growing with discipline, maintaining fantastic credit performance with essentially zero net charge-offs.

Since 2010, our Middle Market team has opened 45 offices in major markets, including Los Angeles, San

Total Expansion Market Revenue[1]

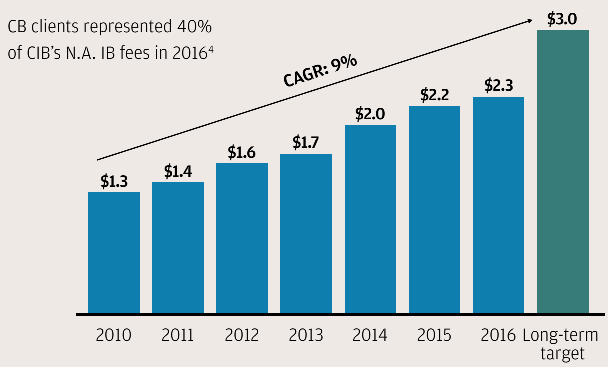
$ in millions



	2010	2011	2012	2013	2014	2015	2016	2010-2016 CAGR
Clients (#)	820	1,100	1,360	1,470	1,670	1,970	2,220	18%
Loans EOP ($B)	$1.6	$4.4	$6.8	$8.2	$8.8	$10.7	$12.6	41%
Deposits ($B)	$1.3	$3.0	$4.7	$6.0	$7.8	$8.2	$8.2	36%

Commercial Banking Gross Investment Banking Revenue[3]

$ in billions



[1] Prior years' financials have been revised to conform to current presentation

[2] Analysis based on Dun & Bradstreet data for companies headquartered in Metropolitan Statistical Areas with revenue between $20 million and $500 million; excludes high-risk industries and industries not aligned to Middle Market

[3] Represents total firm revenue from investment banking products provided to CB clients

[4] Does not include fees from Fixed Income and Equity Markets products, which are included in Commercial Banking gross investment banking revenue

CAGR = Compound annual growth rate EOP = End of period N.A. IB = North America Investment Banking

Francisco, Boston, Miami and Washington, D.C. We are in 48 of the top 50 markets in the U.S., and by the end of 2017, we will be in all 50. Through these efforts, we have organically built a nice-sized bank with over 2,200 clients, $13 billion of loans and $8 billion of deposits. Our Middle Market expansion strategy is a significant growth opportunity – one in which we believe will reach $1 billion in revenue over time.

Our opportunity

As we look forward, our strategic priorities are clear. We are going to continue to drive innovation and strengthen our business processes to improve the client experience, operate with fortress principles and have the best team in all of our markets to serve our clients. We remain committed to growing with discipline and will continue to take a long-term view with our business and our clients, investing for their success and ours.

With these priorities guiding us, I'm excited by the future and the potential of our business. We see enormous opportunity across our franchise as the investments we have made over the last several years have set a solid foundation. Expanding our footprint and adding new bankers puts us in front of a tremendous number of potential clients. Moreover, the enhancements we are making in our platform and capabilities give us confidence in our ability to compete and add differential value to our clients.

Our success depends completely on our people. They are knowledgeable, dedicated and deeply embedded in the communities they serve. I'm excited by the enthusiasm they show every day and am proud to work with such an incredible team. As always, we are optimistic about the U.S. economy and our clients' role in driving growth and opportunity for CB. If we stay true to our proven strategy, we believe this team will continue to deliver strong results for our shareholders.

Douglas Petno
CEO, Commercial Banking

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

Performance highlights

- Delivered record revenue of $7.5 billion
- Grew end-of-period loans 13%; 26 consecutive quarters of loan growth
- Generated return on equity of 16% on $16 billion of allocated capital
- Continued superior credit quality – net charge-off ratio of 0.09%

Leadership positions

- #1 U.S. multifamily lender[1]
- #1 in Perceived Customer Satisfaction, *CFO* magazine's Commercial Banking Survey, 2016
- Top 3 in Overall Middle Market, Large Middle Market and Asset Based Lending Bookrunner[2]
- Winner of Greenwich Associates' Best Brand Awards in Middle Market Banking – overall, loans or lines of credit, cash management, trade finance and investment banking, 2016
- Recognized in 2016 by Greenwich Associates as #1 cash management overall satisfaction and #1 cash management market penetration in the $20 million-$500 million footprint

Business segment highlights

- Middle Market Banking – Added more than 700 new clients
- Corporate Client Banking – Record gross investment banking revenue[3]
- Commercial Term Lending – Record originations of more than $20 billion
- Real Estate Banking – Completed its best year ever with record originations over $10 billion
- Community Development Banking – Originated over $1 billion in new construction commitments, financing more than 10,000 units of affordable housing in 90+ cities

Firmwide contribution

- Commercial Banking clients accounted for 40% of total North American investment banking fees[4]
- Over $130 billion in assets under management from Commercial Banking clients, generating more than $460 million in Investment Management revenue
- $475 million in Card Services revenue[3]
- $2.8 billion in Treasury Services revenue

Progress in key growth areas

- Middle Market expansion – Record revenue of $411 million; 24% CAGR since 2011
- Investment banking – Record gross revenue of $2.3 billion; 10% CAGR since 2011
- International Banking – Revenue[5] of $285 million; 8% CAGR since 2011

[1] SNL Financial based on Federal Deposit Insurance Corporation data as of 12/31/16
[2] Thomson Reuters as of year-end 2016
[3] Investment banking and Card Services revenue represents gross revenue generated by CB clients
[4] Calculated based on gross domestic investment banking revenue for syndicated and leveraged finance, M&A, equity underwriting and bond underwriting
[5] Overseas revenue from U.S. multinational clients

CAGR = Compound annual growth rate

Asset & Wealth Management

Mary Callahan Erdoes

The major geopolitical events of 2016, namely the U.S. presidential election and Brexit, surprised many as the outcome of these two major votes had been deemed improbable. As such, market reactions were volatile and unsettling to many.

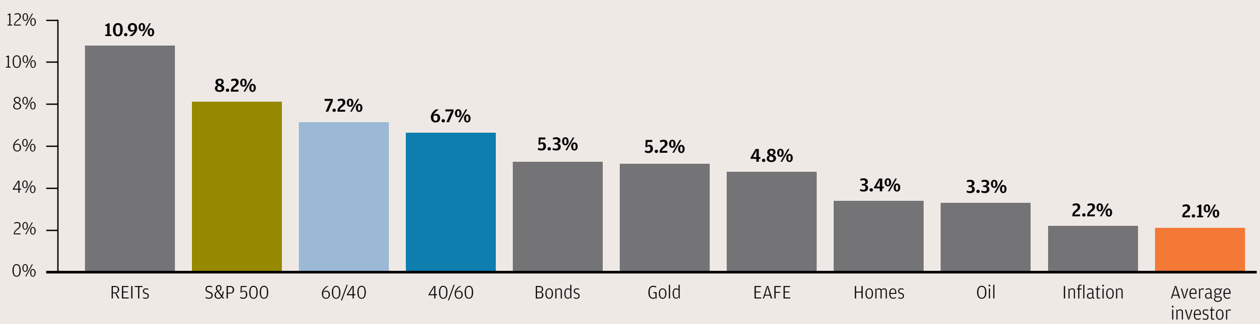
The emotional response to such events often makes it difficult to objectively reassess and position portfolios. For 180 years – through countless political challenges and conflicts – J.P. Morgan Asset & Wealth Management (AWM) has brought its fiduciary mindset to help clients navigate portfolios. Over these many decades, we have institutionalized our insights and passed on the cumulative wisdom and knowledge of those before us to incoming generations.

Perhaps the two most important investment lessons passed on through these centuries are around long-term focus and diversification. Diversification across and within asset classes helps clients avoid overexposure to a particular region or asset class, protecting their portfolios from significant drawdowns and enabling them to be nimble and take advantage of market opportunities when they arise. When investors make emotional decisions related to current events, the benefits of long-term investing and properly diversified portfolios can be eroded.

Instead of focusing on proper long-term, diversified investment portfolios, today's debate is centered more on how to invest. Questions relating to "active vs. passive" investing and "humans vs. computers" have taken over the headlines.

We believe proper portfolio construction should include both active and passive strategies, depending on a client's time horizon and risk profile. We also believe advisors and technology need to work together. Clients want to choose how, when and from where they interact with us – whether it's through online platforms, on the phone or face to face. The person-to-person interaction becomes even more important as our clients' lives grow more complex and they require more comprehensive advice.

20-Year Annualized Returns by Asset Class (1996–2015)



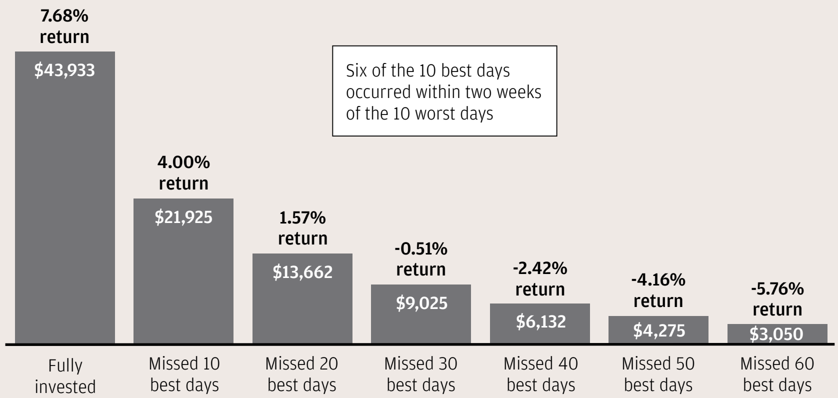
Source: J.P. Morgan Asset Management; Dalbar Inc.

Indexes used are as follows: REITs: NAREIT Equity REIT Index; EAFE: MSCI EAFE; Oil: WTI Index; Bonds: Barclays U.S. Aggregate Index; Homes: median sale price of existing single-family homes; Gold: USD/troy oz; Inflation: CPI; 60/40: A balanced portfolio with 60% invested in S&P 500 Index and 40% invested in high-quality U.S. fixed income, represented by the Barclays U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/15 to match Dalbar's most recent analysis.

Source: "Guide to the Markets" — U.S. data are as of December 31, 2016

Returns of S&P 500

Performance of a $10,000 investment between January 2, 1997 and December 31, 2016



Source: Prepared by J.P. Morgan Asset Management using data from Morningstar Direct. Returns based on the S&P 500 Total Return Index. For illustrative purposes only. Past performance is not indicative of future returns

As stewards of our clients' wealth, our mission at J.P. Morgan is to help clients of all types get, and stay, properly invested. Our clients span the entire spectrum – from retail investors working with our Chase branch network, to wealthy individuals or families working with our Private Bank, to sophisticated institutional investors working with our Asset Management business.

We have direct relationships with 60% of the world's largest pension funds, sovereign wealth funds and central banks and 50% of the world's wealthiest individuals and families. We also deliver our insights and advice to more than 1 million U.S. families through Chase Wealth Management.

These clients can choose to work with any firm they wish. They turn to J.P. Morgan because they know we will be there for them when they need us most and that we will always put their interests first.

World-class investment performance

While trust is the primary reason clients choose J.P. Morgan, our superior investment performance is also critically important to the compounding of clients' wealth. In 2016, 83% of our 10-year, long-term mutual fund assets under management (AUM) ranked in the top two quartiles.

Our market-leading performance spans asset classes – 90% of assets for multi-asset solutions and alternatives, 84% for equity and 77% for fixed income ranked in the top two quartiles over the 10-year period. This outstanding track record has resulted in 140 of our equity strategies and 41 of our fixed income strategies receiving a four- or five-star ranking from Morningstar.

This consistent performance also has led to clients entrusting J.P. Morgan with more of their assets. Over the past five years, we ranked #2 in total inflows among our large public peers, with an average of $82 billion annually and $408 billion cumulatively.

A diverse and balanced business mix driving strong financial performance

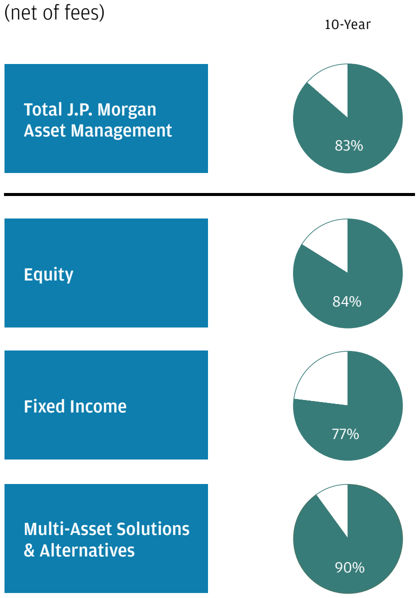
Much like the portfolios we manage, our business is diversified across asset classes, regions and client types. That diversity, coupled with our proven track record, has led to strong financial performance for AWM.

In 2016, we delivered $12 billion in revenue and record pre-tax income of $3.5 billion. We also reached a record $2.5 trillion in total client assets. These numbers have consistently grown over the past five years, with a 5% compound annual growth rate (CAGR) for revenue and client assets and a 7% rate for pre-tax income.

In addition, clients are increasingly using us for their primary banking services. Wealth Management deposits grew to $290 billion in 2016 and recorded an impressive 19% CAGR over the past decade. In credit, our $121 billion in loan balances, including mortgages, represent a 15% CAGR over the past 10 years. Our focus on strong risk management has helped us do that while maintaining charge-off rates that are among the lowest in the industry.

% of 2016 J.P. Morgan Asset Management AUM Over Peer Median[1]

(net of fees)



[1] For footnoted information, refer to slide 17 in the 2017 Asset & Wealth Management Investor Day presentation, which is available on JPMorgan Chase & Co.'s website at jpmorganchase.com/corporate/investor-relations/event-calendar.htm, under the heading JPMorgan Chase 2017 Investor Day, Asset & Wealth Management, and on Form 8-K as furnished to the SEC on February 28, 2017, which is available on the SEC's website at www.sec.gov

Never stop investing in people and technology

We work hard to make J.P. Morgan a place where our people can have long and successful careers. We have a history of investing in our people at every level, from the thousands of training sessions and leadership development courses to our continuous work on talent mobility.

Over the past five years, we've increased our front-office spend by 14% to ensure we have the right people with the right skills in the right roles. As a result of this commitment to developing our talent, we proudly maintained a top talent retention rate of over 95%.

One of the best ways we can invest in our people is by also investing in our technology. Our emphasis is on having a technology platform that allows us to automate and improve processes while, at the same time, helps our advisors to serve clients more quickly and efficiently, as well as focus on the value-added client work.

We have successfully reduced our legacy technology footprint and error rates and significantly increased our spend on forward-looking initiatives. These efforts include building out an enhanced digital wealth management platform that will launch later this year and introducing new client management systems for our advisors.

Asset & Wealth Management — difficult to replicate

One of the keys to our success has been our ability to bring to the table a unique combination of a two-century heritage and a focus on continuous investment, innovation and improvement. That means clients can have confidence that we will be there for them over the long term and also know that we have the foresight to adapt and innovate to help them through whatever the future brings.

The long-term focus of this business is part of what makes AWM so difficult to replicate. A franchise with a 10-year investment performance track record, a 50-year relationship with a state pension fund and a 100-year relationship with a multi-generational family cannot be built overnight. The culture of our firm – both what we do and how we do it – is equally special and one of our greatest competitive advantages.

When you combine our AWM capabilities with the world's leading investment, consumer and commercial banks, our story is even more powerful and enables us to bring the best the firm has to offer to help solve our clients' most important issues.

I am so proud to be part of this great firm and our AWM business. Our commitment to you, our shareholders, is that we will continue to do first-class business in a first-class way so that we can create even more value for you and for our clients.

Mary

Mary Callahan Erdoes
CEO, Asset & Wealth Management

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

Business highlights

- Fiduciary mindset ingrained since mid-1800s
- Positive client asset flows every year since 2004
- Revenue of $12 billion
- Record $2.5 trillion in client assets
- Record pre-tax income of $3.5 billion
- Record average loan balances of $113 billion
- Record average mortgage balances of $29 billion
- Retention rate of over 95% for top senior portfolio management talent

Leadership positions

- #1 Global Asset Management (*Euromoney*, February 2017)
- #1 Institutional Money Market Fund Manager Worldwide (iMoneyNet, December 2016)
- #1 Private Bank Overall in North America (*Euromoney*, February 2017)
- #1 Private Bank Overall in Latin America (*Euromoney*, February 2017)
- Best Asset Management Company for Asia (*The Asset*, May 2016)
- Best Infrastructure Manager of the Year (*Institutional Investor*, May 2016)
- Top Pan-European Fund Management Firm (Thomson Reuters Extel, June 2016)
- Best Large-Cap Core Equity Manager of the Year (*Institutional Investor*, May 2016)
- #3 Hedge Fund Manager (*Absolute Return*, September 2016)

Corporate Responsibility

Peter Scher

At JPMorgan Chase, we understand that the success of our firm is directly linked to the success of our communities. For us, corporate responsibility is a strategic imperative. By giving more people the opportunity to share in the rewards of a growing economy, we help build the foundation for more prosperous communities – and, in the process, help secure our firm's long-term future.

The importance of corporate responsibility is reflected in its integration throughout our operations. Our long-term initiatives and programs – backed by significant human and financial capital and informed by our firm's expertise – are among the most externally visible indicators of the seriousness of our intent. So, too, are the ways in which we actively leverage our core business in service to our communities, deploying the capital and the credit that fuel economic growth.

Bolstering these investments is the tremendous dedication of our people to serve our communities, including the hundreds of employees who applied to the JPMorgan Chase Service Corps, our highly selective program that embeds top-performing employees with many of our nonprofit partners. That so many of our people eagerly throw their hats in the ring to leave their jobs, families and, in some cases, their countries for three weeks to lend their skills to our communities speaks volumes about who we are as a firm.

Underpinning this ethos is a conviction that firms like ours have not only a responsibility and a vested interest in helping solve the challenges facing our communities but also a vital contribution to make. The private sector's capabilities, ingenuity and assets have time and again demonstrated their capacity to drive transformative change.

JPMorgan Chase has answered this call by reimagining our approach to corporate responsibility. Based on our experience around the world, we have developed and refined a model that is informed by data and based on evidence about what's most effective at driving inclusive growth. Our conclusion: Arm people with the skills needed for today's high-quality jobs; provide small businesses – particularly minority-owned and community-based ones – with capital and resources; invest in community development that revitalizes not only urban cores but also surrounding neighborhoods; and give households the tools and resources to manage their financial health. Taken together, these are four fundamental pillars of opportunity – and the focus of our efforts.

Our model also reflects what we have learned are the essential ingredients for creating lasting impact. Critically, it must include a deliberate focus on strengthening the underlying organizations and systems that are needed to empower communities to deliver on – and sustain – change. Equally, it depends on forging meaningful partnerships across the public, private and nonprofit sectors – and then actively leveraging our unique capabilities.

Of course, every company has different assets and experiences to contribute – from Google's initiatives that harness its employees' passion for technology to give back to their communities to IBM's pioneering skilled volunteerism program that demonstrates what can be achieved when firms lend their people's expertise. Regardless of what we bring to the table, all of us can – and must – embrace the obligation to be a positive force for progress and opportunity in our communities.

Peter Scher
Head of Corporate Responsibility
and Chairman of the
Greater Washington Region

A MODEL FOR IMPACT

Driving inclusive growth

More people must have access to opportunity and the chance to move up the economic ladder, particularly in the world's cities, where the benefits of revitalization are not reaching everyone. To achieve this mission, we have reimagined our approach to corporate responsibility. We are leveraging our firm's data, global scale, talent and resources to invest in key drivers of inclusive growth: financial health, jobs and skills, neighborhood revitalization and small business expansion.

We continually test, learn and iterate in order to create more widely shared prosperity and to strengthen the underlying systems needed to deliver sustainable change.

A MODEL IN ACTION

Jobs and skills

Helping people get the skills they need to compete in today's labor market is critical for expanding access to opportunity and promoting economic mobility. Yet even as the global economy improves, people around the world are being left behind.

To help address this challenge, JPMorgan Chase is investing $325 million over five years to provide adults and young people around the world with critical support, education and training to build in-demand skills while providing employers with the workforce they need to grow and compete in today's economy. As part of these efforts, JPMorgan Chase launched New Skills for Youth in 2016, a $75 million global initiative to expand high-quality, career-focused education programs that lead to well-paying jobs and long-term careers.

New Skills for Youth is expanding opportunity for young people through two approaches: a multimillion dollar competition, in collaboration with the Council of Chief State School Officers, which seeks to incentivize U.S. states to grow and strengthen their career and technical education systems; and, through global innovation sites, the development of career-focused education programs in cities and school districts around the world.

Communities engaged in 2016:

- Forty-three states and the District of Columbia submitted proposals to participate in the first phase of the competitive program. Of these 44 submissions, we selected 24 states and the District of Columbia and then committed a total of $2.5 million to help them plan and implement long-term career-readiness programs. These states represent half of all K-12 enrollments in the U.S.
- In the second phase of the program in January 2017, we selected 10 states and committed a total of $20 million to help them execute the career-readiness plans they developed during phase one of the initiative. Through ongoing engagement by JPMorgan Chase, these 10 states will have the opportunity to collaborate and learn from each other, receive targeted technical assistance to address their specific challenges, and access lessons, best practices and other research drawn from the initiative.
- Additionally, we have committed a total of $10.5 million to Denver, Detroit and New Orleans to develop and expand innovative apprenticeship models and career-focused programs that equip high school students with the skills and education they need to pursue well-paying, long-term careers.

Neighborhood revitalization

Our community development efforts focus on creating vibrant communities and neighborhoods that offer residents access to opportunity through partnerships, innovative financing and data to address the key drivers of inequality.

Launched in 2016, PRO Neighborhoods, our $125 million, five-year initiative, seeks to identify and support solutions for creating economic opportunity in disadvantaged neighborhoods around the country. PRO Neighborhoods promotes collaboration across sectors and community-based innovators to ensure that economic growth does not stop at commercial corridors but extends into a city's neighborhoods.

This initiative focuses on three key areas: convening and supporting Community Development Financial Institution (CDFI) collaboratives to work together to address specific community development challenges; providing seed capital that enables partners to develop and preserve affordable housing; and funding research on land use, housing trends and shifting demographics to identify data-driven neighborhood solutions.

In October 2016, JPMorgan Chase announced $20 million for five community development organizations working to create economic opportunity in five U.S. cities: Atlanta, Chicago, Detroit, Miami and New York.

Small business expansion

Small businesses are vital engines of job growth and economic stability in the neighborhoods they serve.

They also have the potential to play a major role in lowering unemployment rates in distressed neighborhoods. Yet many low- and moderate-income small businesses lack access to vital resources needed for success.

Through our efforts in Detroit, we have learned that supporting underserved entrepreneurs is essential to the city's transformation. These insights led us to refine and sharpen our focus on helping underserved entrepreneurs connect with capital to drive sustainable, widespread and inclusive growth.

In October 2016, JPMorgan Chase more than doubled the size of the global Small Business Forward program, committing $75 million over the next three years to connect underserved small businesses with capital, targeted technical assistance and support networks to help them grow faster, create jobs and strengthen local economies.

As part of these efforts, JPMorgan Chase partnered with LiftFund and committed $4.6 million to support the launch of LiftUP, a new web-based small business lending program to increase access to capital for underserved minority- and women-owned small businesses in the southern U.S. LiftUP will provide small businesses faster access to affordable small business loans, reducing lending approval time from an average of five weeks to four days.

Additionally, JPMorgan Chase partnered with the Association for Enterprise Opportunity and committed $1.9 million to support the advancement of a new technology-enabled platform that will serve as an industry utility connecting small businesses with CDFI lenders when the owners are unable to qualify for traditional loans.

Data and analysis

Almost two years ago, we established the JPMorgan Chase Institute: a global economic think tank dedicated to delivering data-rich analyses for the public good. The Institute utilizes our proprietary data, augmented by firmwide expertise and market access, to provide insights on the global economy and offer innovative analyses to advance economic prosperity.

In 2016, the Institute uncovered fresh insights on:

- Household income volatility, particularly in the wake of extraordinary payments;
- The impact of the online platform economy as a way for consumers to manage this volatility and the slowing participation growth within the online platform economy;
- Consumers' response to the sustained drop in the price of fuel;
- Small business cash flow and cash reserves ("cash buffer days") they have on hand to weather financial volatility;
- The economic impact of Daylight Savings Time;
- The role of unemployment insurance and the financial decisions households make after receiving it;
- Nearly a full year of the Local Consumer Commerce Index, measuring consumer spending growth in 15 U.S. cities and in aggregate.

2016 HIGHLIGHTS AND ACCOMPLISHMENTS

JPMorgan Chase received *Euromoney*'s 2016 **World's Best Bank for Corporate Social Responsibility** award for our commitment and innovative approach to addressing economic opportunity around the world.

- JPMorgan Chase's $100 million commitment to Detroit announced in 2014, half of which we are investing in two CDFIs — to fund and catalyze further investment in housing, commercial and manufacturing — has supported more than $270 million in such projects, created or preserved over 800 units of housing and created nearly 800 jobs.
- Announced nine financial services innovators as winners of the second competition of the Financial Solutions Lab aimed at identifying solutions that help consumers prepare for, and weather, financial shocks. Each winner received $250,000 in capital to enhance and scale the availability of their products and services. More than 70 of our employees leveraged their expertise and networks to help the Lab winners improve their products and increase their reach. To date, the Financial Solutions Lab has supported 18 fintech companies offering innovative financial products to help more than 1 million Americans improve their financial health.
- Engaged over 1,800 young people in summer jobs and other work-related experiences in 21 cities across the U.S.
- Underwrote more than $5 billion in green, social and sustainability themed bonds and facilitated over $1.9 billion of capital for renewable energy projects in the U.S.
- Committed to strengthening apprenticeship systems around the world through a $9 million investment by supporting the development of innovative apprenticeship models in high-growth fields; expanding existing high-quality programs to serve young people from disadvantaged backgrounds; and bolstering the case for private investment in apprenticeship through first-of-its-kind research measuring the employer return on investment for apprenticeship programs.
- The talent and expertise of our people are key components of our model for impact and are central to all of our efforts. In 2016, 50,000 of our employees volunteered more than 325,000 hours of their time. And through the JPMorgan Chase Service Corps, 64 employees applied their skills and expertise to help our nonprofit partners expand their capacity, contributing more than 9,600 hours with an approximate market value of $1.4 million.