Dear Fellow Shareholders,

Jamie Dimon,
Chairman and
Chief Executive Officer

2020 was an extraordinary year by any measure. It was a year of a global pandemic, a global recession, unprecedented government actions, turbulent elections, and deeply felt social and racial injustice. It was a year in which each of us faced difficult personal challenges, and a staggering number of us lost loved ones. It was also a year when those among us with less were disproportionately hurt by joblessness and poverty. And it was a time when companies discovered what they really were and, sometimes, what they might become.

Watching events unfold throughout the year, we were keenly focused on what we, as a company, could do to serve. As I begin this annual letter to shareholders, I am proud of what our company and our tens of thousands of employees around the world achieved, collectively and individually. As you know, we have long championed the essential role of banking in a community — its potential for bringing people together, for enabling companies and individuals to reach for their dreams, and for being a source of strength in difficult times. Those opportunities were powerfully presented to us this year, and I am proud of how we stepped up. I discuss these themes later in this letter.

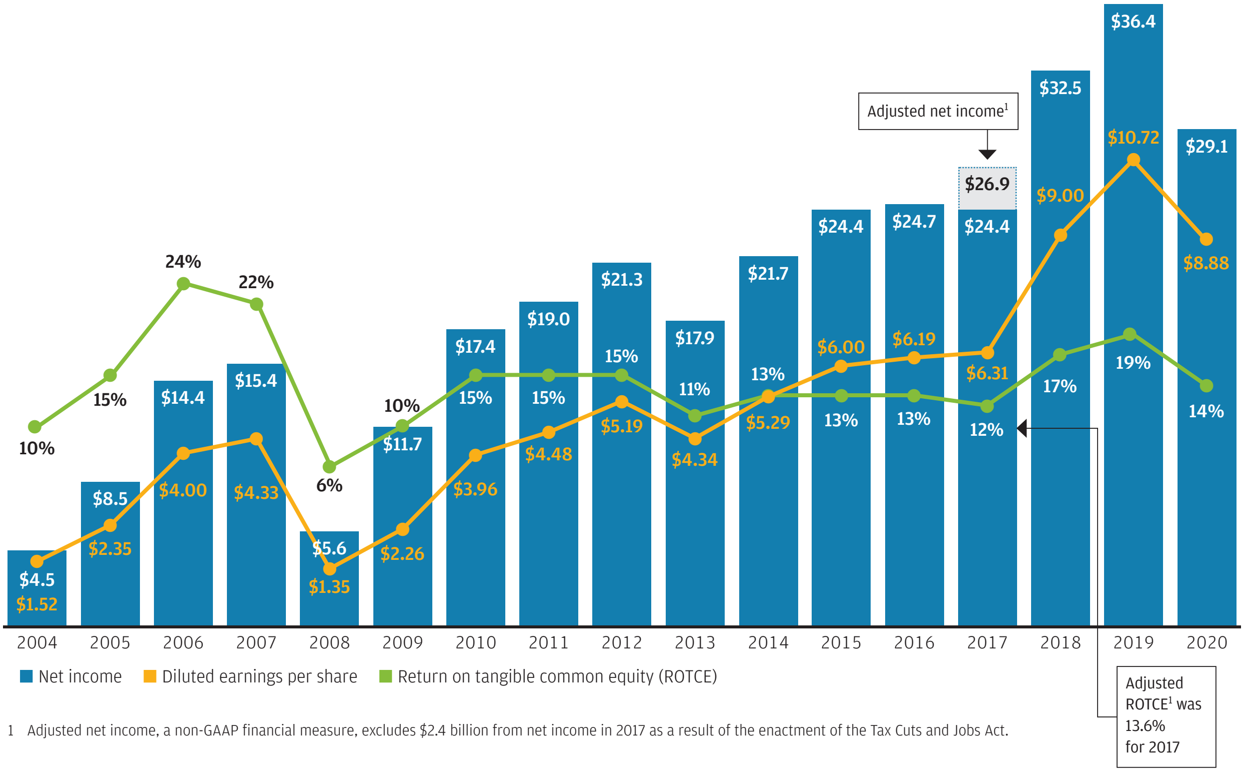
As I look back on the last year and the last two decades — starting from my time as CEO of Bank One in 2000 — it is remarkable how much we persevered and have accomplished, not only in terms of financial performance but also in our steadfast dedication to help clients, communities and countries throughout the world. 2020 was another strong year for JPMorgan Chase, with the firm generating record revenue, as well as numerous other records in each of our lines of business. We earned $29.1 billion in net income on revenue of $122.9 billion versus $36.4 billion on revenue of $118.5 billion in 2019, reflecting strong underlying performance across our businesses offset by additional reserves under new accounting rules. We generally grew market share across our businesses and continued to make significant investments in products, people and technology, all while maintaining credit discipline and a fortress balance sheet. In total, we extended credit and raised $2.3 trillion in capital for businesses, institutional clients and U.S. customers.

JPMorgan Chase stock is owned by large institutions, pension plans, mutual funds and directly by individual investors. However, it is important to remember that in almost all cases, the ultimate beneficiaries are the individuals in our communities. More than 100 million people in the United States own stock, and a large percentage of these individuals, in one way or another, own JPMorgan Chase stock. Many of these people are veterans, teachers, police officers, firefighters, healthcare workers, retirees or those saving for a home, school or retirement. Your management team goes to work every day recognizing the enormous responsibility that we have to perform for our shareholders.

While we don't run the company worrying about the stock price in the short run, in the **long run** our stock price is a measure of the progress we have made over the years. This progress is a function of *continual* investments in our people, systems and products, in good and bad times, to build our capabilities. Whether looking

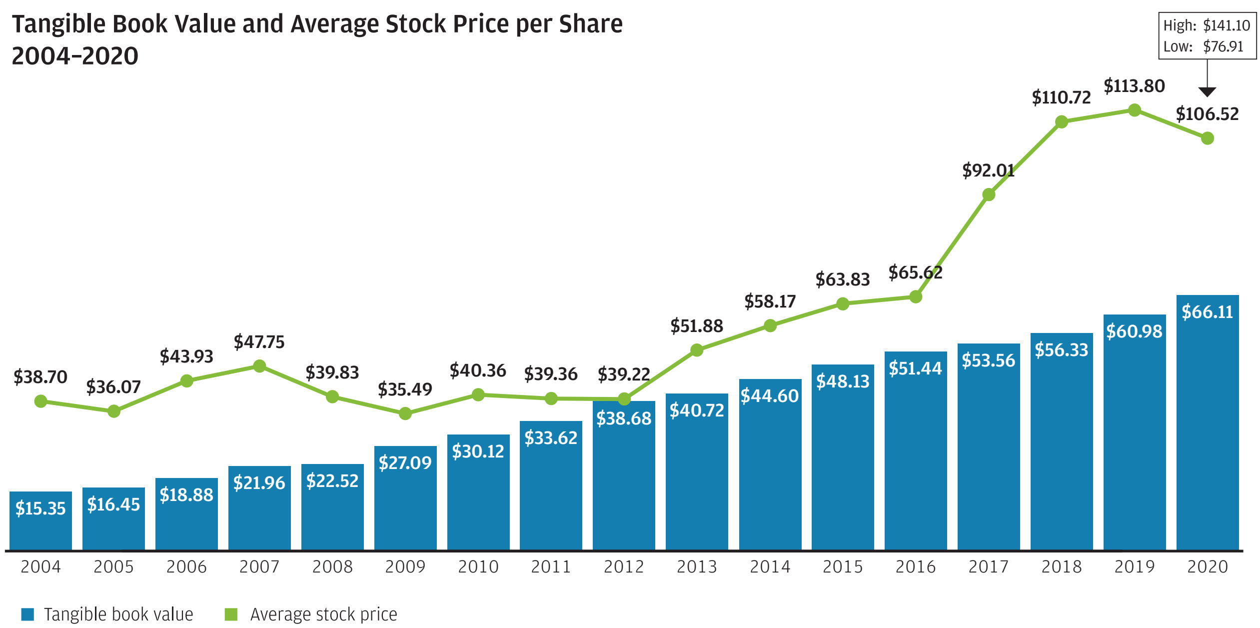
Earnings, Diluted Earnings per Share and Return on Tangible Common Equity 2004–2020

($ in billions, except per share and ratio data)



1 Adjusted net income, a non-GAAP financial measure, excludes $2.4 billion from net income in 2017 as a result of the enactment of the Tax Cuts and Jobs Act.

Tangible Book Value and Average Stock Price per Share 2004–2020



Stock total return analysis

	Bank One	S&P 500 Index	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2020)[1]			
Compounded annual gain	11.9%	6.5%	4.1%
Overall gain	928.1%	268.0%	128.8%

	JPMorgan Chase & Co.	S&P 500 Index	S&P Financials Index
Performance since the Bank One and JPMorgan Chase & Co. merger (7/1/2004–12/31/2020)			
Compounded annual gain	10.4%	9.7%	3.7%
Overall gain	412.0%	362.0%	82.3%
Performance for the period ended December 31, 2020			
Compounded annual gain/(loss)			
One year	(5.5)%	18.4%	(1.8)%
Five years	17.2%	15.2%	11.1%
Ten years	14.7%	13.9%	10.8%

These charts show actual returns of the stock, with dividends reinvested, for heritage shareholders of Bank One and JPMorgan Chase & Co. vs. the Standard & Poor's 500 Index (S&P 500 Index) and the Standard & Poor's Financials Index (S&P Financials Index).

1 On March 27, 2000, Jamie Dimon was hired as CEO of Bank One.

back over five years, 10 years or since the JPMorgan Chase/Bank One merger (approximately 15 years ago), these investments mean our stock has significantly outperformed the Standard & Poor's 500 Index and the Standard & Poor's Financials Index. These important investments will also drive our company's future prospects and position it to grow and prosper for decades.

We have consistently described to you, our shareholders, the basic principles and strategies we use to build this company — from maintaining a fortress balance sheet, constantly investing, nurturing talent, fully satisfying regulators, and continually improving risk, governance and controls to serving customers and clients while lifting up communities worldwide.

Adhering to these principles allows us to drive good organic growth and properly manage our capital (including dividends and stock buybacks), which we have consistently demonstrated over the past decades. All of this is shown in the charts in this introduction. In addition, we urge you to read the CEO letters in this Annual Report, which will give you a lot more specific detail about our businesses and what our plans are for the future.

Client Franchises Built Over the Long Term

Consumer & Community Banking

	2006	2019	2020
Active digital customers (M)	4.9	52.5	55.3
Active mobile customers (M)	–	37.3	40.9
Active mobile customers growth rate	NM	12%	10%
% of digital payment transactions[1]	<25%	64%	72%
% of digital payment volume[1]	<30%	58%	62%
# of branches	3,079	4,976	4,908
Average Consumer Banking deposits ($B)[2]	$152	$548	$657
Average Business Banking deposits ($B)	$37	$136	$175
Average Consumer & Business Banking deposits ($B)	$189	$684	$833
Average Business Banking loans ($B)	$13	$24	$38
Client investment assets ($B)	~$80	$501	$590
Deposits market share[3]	3.6%	9.3%	9.8%
# of top 50 Chase markets where we are #1 (top 3)	11 (25)	14 (40)	14 (41)
Business Banking primary market share[4]	5.1%	9.4%	9.5%
Credit card sales ($B)	$257	$763	$703
Debit card sales ($B)	NA	$352	$379
Debit & credit card sales volume ($B)	NA	$1,114	$1,081
Credit card loans ($B, EOP)	$153	$169	$144
Credit card sales market share[5]	16%	22%	22%

- Serve >63 million U.S. households including 4.3 million small business relationships
- 55 million active digital customers[6], including 41 million active mobile customers[7]
- #1 primary bank within Chase footprint[8]
- #1 U.S. credit card issuer based on sales and outstandings[9]
- #4 mortgage servicer[10]
- #2 bank auto lender[11]
- Provided customer assistance to ~2.0M accounts, representing balances of ~$83B[12]
- #1 PPP lender on a dollar basis

Corporate & Investment Bank

	2006	2019	2020
Global investment banking fees[13]	#2	#1	#1
Market share[13]	8.7%	8.9%	9.2%
Total Markets revenue[14]	#8	#1	#1
Market share[14]	6.3%	11.4%	12.9%
FICC[14]	#7	#1	#1
Market share[14]	7.0%	11.6%	13.1%
Equities[14]	#8	co-#1	co-#1
Market share[14]	5.0%	11.0%	12.3%
Assets under custody ($T)	$13.9	$26.8	$31.0
Average deposits ($B)[15]	$190	$465	$611
Daily payment processing ($T)[16]	NA	>$7	>$8
Average daily security purchases and sales ($T)	NA	$2.3	$2.7
Average total deposits ($B)	NA	$516	$655

- >80% of Fortune 500 companies do business with us
- Presence in over 100 markets globally
- #1 in global investment banking fees for the 12th consecutive year[13]
- Consistently ranked #1 in Markets revenue since 2012[14]
- J.P. Morgan Research ranked as the #1 Global Research Firm[17]
- #1 in USD payments volume[18]
- #2 custodian globally[19]

Commercial Banking

	2006	2019	2020
# of top 75 MSAs with dedicated teams	36	67	67
Bankers	1,203	2,101	2,020
New relationships (gross)	NA	1,706	1,856
Average loans ($B)	$53.6	$207.9	$218.9
Average deposits ($B)	$73.6	$172.7	$237.8
Gross investment banking revenue ($B)[20]	$0.7	$2.7	$3.3
Multifamily lending[21]	#28	#1	#1

- 137 locations across the U.S. and 30 international locations
- Credit, banking and treasury services to ~18K Commercial & Industrial clients[22] and ~33K real estate owners and investors
- 17 specialized industry coverage teams
- #1 traditional Middle Market Bookrunner in the U.S.[23]
- 23,000 affordable housing units financed in 2020[24]

Asset & Wealth Management

	2006	2019	2020
U.S. Private Bank (*Euromoney*)[25]	#1	#1	#1
Ranking of 5-year cumulative net client asset flows[26]	NA	#2	#2
China inbound funds AUM[27]	NA	#6	#3
Global Funds AUM ($T)	$0.3	$0.6	$0.8
Global active long-term fund AUM market share[28]	1.8%	2.5%	2.7%
Global Institutional AUM ($T)	$0.5	$1.1	$1.3
Global Private Bank client assets ($T)[29, 30]	$0.5	$1.4	$1.6
U.S. ultra-high-net-worth client assets market share[31]	NA	11%	12%
Average loans ($B)[29]	$26.5	$147.4	$166.3
Average deposits ($B)[29]	$50.6	$135.3	$162.0
# of Global Private Bank client advisors[29, 30]	1,506	2,419	2,462

- 80% of 10-year JPMAM long-term mutual fund AUM performed above peer median[32]
- 183 4/5-star rated funds[33]
- Business with 56% of the world's largest pension funds, sovereign wealth funds and central banks
- Positive client asset flows across all regions, segments and products
- 63% of Asset Management AUM managed by female and/or diverse portfolio managers[34]

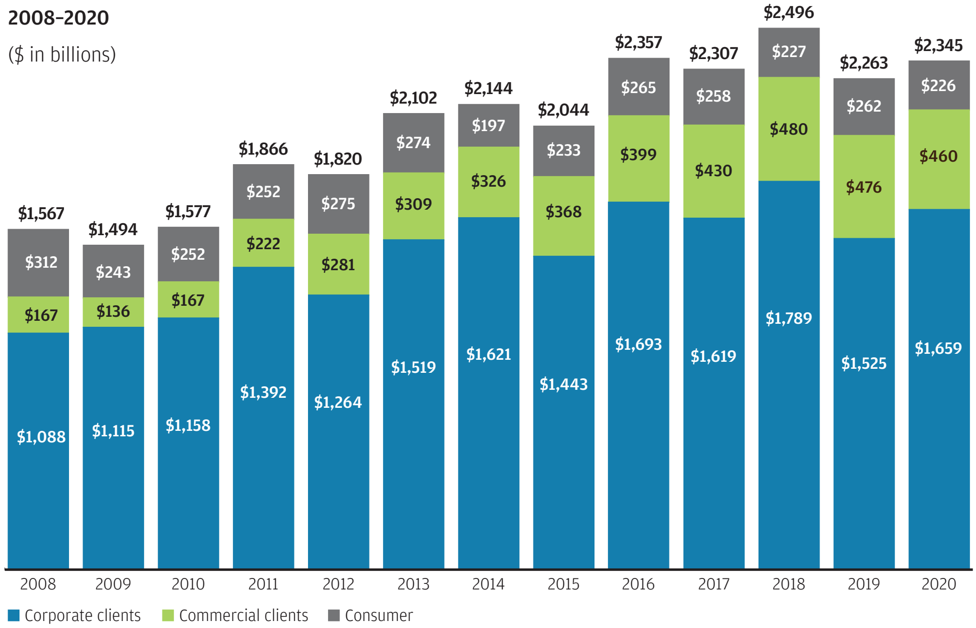
NM = Not meaningful
NA = Not available
FICC = Fixed Income, Currencies and Commodities
MSAs = Metropolitan statistical areas
USD = U.S. dollar
EOP = End of period
PPP = Paycheck Protection Program
AUM = Assets under management
B = Billions
T = Trillions
M = Millions
K = Thousands

For footnoted information, refer to page 67 in this Annual Report.

New and Renewed Credit and Capital for Our Clients

2008–2020

($ in billions)

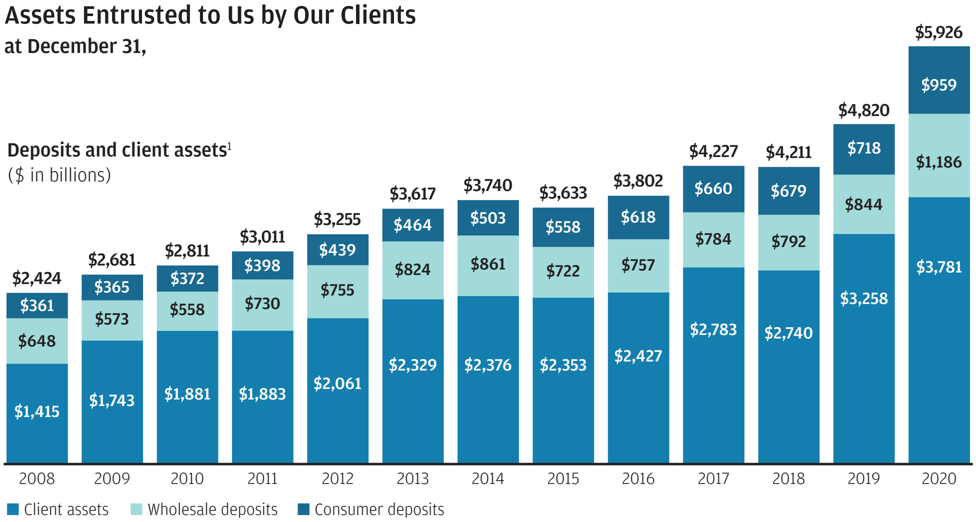


Assets Entrusted to Us by Our Clients

at December 31,

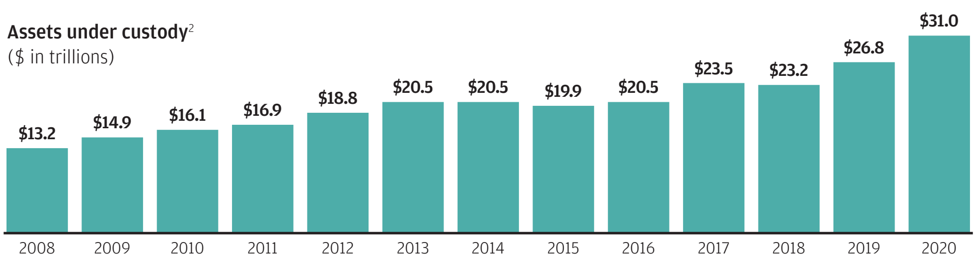
Deposits and client assets[1]

($ in billions)



Assets under custody[2]

($ in trillions)



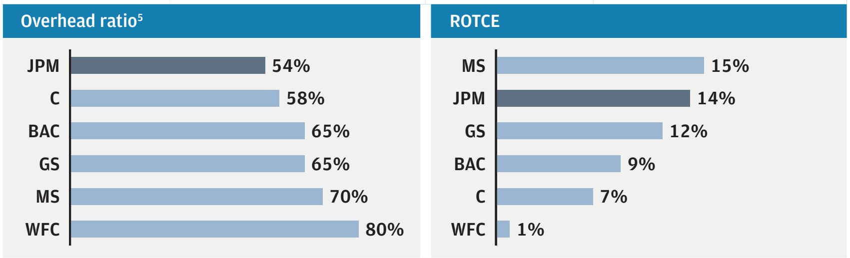
1 Represents assets under management, as well as custody, brokerage, administration and deposit accounts.

2 Represents activities associated with the safekeeping and servicing of assets.

JPMorgan Chase Is in Line with Best-in-Class Peers in Both Efficiency and Returns

	Efficiency		Returns	
	JPM 2020 overhead ratio	Best-in-class peer overhead ratio[1]	JPM 2020 ROTCE	Best-in-class peer ROTCE[2, 3]
Consumer & Community Banking	**55%**	**49%** COF-CB & DC	**15%**	**17%** BAC-CB
Corporate & Investment Bank	**48%**	**53%** C-ICG	**20%**	**16%** MS-IS
Commercial Banking	**41%**	**39%** USB-C & CB	**11%**	**15%** PNC
Asset & Wealth Management	**70%**	**60%** CS-PB & TROW	**28%**	**34%** UBS-GWM & MS-IM

JPMorgan Chase compared with peers[4]



ROTCE = Return on tangible common equity

For footnoted information, refer to page 67 in this Annual Report.

Our Fortress Balance Sheet
at December 31,

	2008		2020	
CET1	7.0%[1]	+610 bps	13.1%[2]	2020 Basel III Advanced is 13.8%, or 18.7%, excluding $385B of operational risk RWA[3]
Tangible common equity	$84B	+$118B	$202B	
Total assets	$2.2T	+$1.2T	$3.4T	
RWA	$1.2T[1]	+$0.4T	$1.6T[2]	2020 Basel III Advanced is $1.5T, including $385B of operational risk RWA[3]
Liquidity	~$300B	+~$1,137B	$1,437B	>~$450B of cash, ~$400B of UST, and ~$250B of US agency securities; reported HQLA is $697B[4]

1 CET1 and RWA reflect the Tier 1 common ratio and risk weighted assets under the Basel I measures.
2 Reflects the Basel III Standardized measure, which is the firm's current binding constraint.
3 Operational risk RWA is a component of RWA under the Basel III Advanced measure.
4 Represents quarterly average HQLA included in the liquidity coverage ratio. Total reported eligible HQLA excludes average excess eligible HQLA at JPMorgan Chase Bank, N.A. that are not transferable to nonbank affiliates. Refer to Liquidity coverage ratio on page 103 for additional information.

B = Billions
T = Trillions
bps = basis points

CET1 = Common equity Tier 1 ratio. Refer to Regulatory capital on pages 92-98 for additional information
RWA = Risk-weighted assets
Liquidity = HQLA plus unencumbered marketable securities, includes excess liquidity at JPMorgan Chase Bank, N.A.
HQLA = High-quality liquid assets include cash on deposit at central banks and high-quality liquid securities as defined in the LCR rule (predominantly U.S. Treasuries, U.S. government-sponsored enterprises and government agency mortgage-backed securities, and sovereign bonds)
LCR = Liquidity coverage ratio
UST = United States Treasuries

If you look deeper, you will find that our success and accomplishments are founded on our commitment to our shareholders. Shareholder value can be built only if you maintain a healthy and vibrant company, which means doing a good job taking care of your customers, employees and communities. Conversely, how can you have a healthy company if you neglect any of these stakeholders? As we have learned in 2020, there are myriad ways an institution can demonstrate its compassion for its employees and its communities while still upholding shareholder value.

Ultimately, the basis of our success is our people. They are the ones who serve our customers and communities, build the technology, make the strategic decisions, manage the risks, determine our investments and drive innovation. Whatever your view is of the world's complexity and the risks and opportunities ahead, having a great team of people — with guts and brains and enormous capabilities who can navigate personally challenging circumstances while dedicating themselves to professional excellence — is what ensures our prosperity, now and in the future.

Within this letter, I discuss the following:

Business Roundtable's Statement on the Purpose of a Corporation

In August 2019, Business Roundtable released the below Statement on the Purpose of a Corporation, signed by 181 CEOs, including Jamie Dimon, then chair of the association. This statement repositioned the definition of corporate success as serving shareholders principally to endorsing a modern standard of corporate responsibility: to serve all stakeholders — customers, employees, suppliers, communities and shareholders.

Americans deserve an economy that allows each person to succeed through hard work and creativity and to lead a life of meaning and dignity. We believe the free-market system is the best means of generating good jobs, a strong and sustainable economy, innovation, a healthy environment and economic opportunity for all.

Businesses play a vital role in the economy by creating jobs, fostering innovation and providing essential goods and services. Businesses make and sell consumer products; manufacture equipment and vehicles; support the national defense; grow and produce food; provide health care; generate and deliver energy; and offer financial, communications and other services that underpin economic growth.

While each of our individual companies serves its own corporate purpose, we share a fundamental commitment to all of our stakeholders. We commit to:

- Delivering value to our customers. We will further the tradition of American companies leading the way in meeting or exceeding customer expectations.
- Investing in our employees. This starts with compensating them fairly and providing important benefits. It also includes supporting them through training and education that help develop new skills for a rapidly changing world. We foster diversity and inclusion, dignity and respect.
- Dealing fairly and ethically with our suppliers. We are dedicated to serving as good partners to the other companies, large and small, that help us meet our missions.
- Supporting the communities in which we work. We respect the people in our communities and protect the environment by embracing sustainable practices across our businesses.
- Generating long-term value for shareholders, who provide the capital that allows companies to invest, grow and innovate. We are committed to transparency and effective engagement with shareholders.

Each of our stakeholders is essential. We commit to deliver value to all of them, for the future success of our companies, our communities and our country.

Released: August 19, 2019

I. THE CORPORATE CITIZEN: THE PURPOSE OF A CORPORATION

We need to build and maintain a healthy and vibrant company, over the long run, to be able to deal with the uncertainties of life, to invest, to innovate and to grow. To be healthy and vibrant, a company must do many things well: It must do a great job for customers; attract, develop and retain talented employees; and serve its communities.

It is vital that we do all of these things, as the failure to perform any one of them with excellence could lead to the failure of all. Over the years, we have extensively described the efforts we make to take care of our customers and our employees. The purpose of this section is to describe our corporate responsibility efforts in more detail and explain their importance.

To be healthy and vibrant – and to create long-term shareholder value – a company must be financially successful ***over the long run***.

The problem with the American public's impression of "shareholder value" is that too many people interpret it to mean short-term, rapacious profit taking – which, ironically, is the last thing that leads to building real, long-term shareholder value. And when they hear the word "fiduciary," they think we are standing behind our lawyers.

Obviously, companies have fiduciary responsibilities. However, legal and fiduciary language does not represent how most CEOs and boards actually run their companies. We should not be buttonholed by the debate about whether there are "fiduciary" reasons to think of "shareholder value" narrowly and to the exclusion of those who work at the company, our clients and communities. When most CEOs and board members wake up each morning, they worry about all of the things that they need to do right to build a successful company. A company is like a team. We must do many things well to succeed, and, ultimately, that leads to creating shareholder value.

1. Businesses must earn the trust of their customers and communities by acting ethically and morally.

To a good company, its reputation is everything. That reputation is earned day in and day out with every interaction with customers and communities. This is not to say that companies (and people) do not make mistakes – of course they do. Often a reputation is earned by how you deal with those mistakes.

While all businesses are different, there are some fundamentals: good products, fair and transparent pricing, thoughtful and responsive service, and continuous innovation. Great companies constantly set high standards, acknowledge their mistakes and properly discipline or dismiss bad actors.

Great companies are strict about having fair dealings with their customers. I have always loved that Home Depot's company policy is not to raise lumber prices in the immediate aftermath of a hurricane, regardless of whether it can. (I want to remind readers that banks essentially did not raise the price of credit when they renewed loans during the financial crisis.) Pricing to customers should be what's fair – not what a company can get away with.

Banks, in particular, have to be rigorous about standards. Unlike many companies that will simply sell you a product if you can pay for it, banks must necessarily turn customers down or enforce rules that a customer may not like (for example, covenants). This makes open and transparent dealings even more important. When I hear examples of people doing something that is wrong because they could be paid more, it makes my blood boil – and I don't want them working here. And I can't believe it when I hear about a company, or a hedge fund, causing loans and a company to default so they can trigger credit default swap hedges – it's completely unethical.

We must always strive, particularly in tough times, to earn the trust of our customers and communities.

2. Being a responsible community citizen locally is critical, and it is easy to understand why.

If you live in a small town and run a corner bakery, it is very easy to understand the value of being a responsible community citizen. Most businesses on "Main Street" keep the sidewalk in front of their store clean so people don't slip and fall. They often participate in the community by supporting local sports teams or religious institutions. A bakery or a restaurant will often donate surplus food at the end of the day to a local homeless shelter. Most businesses understand that everyone doing their part to make the community a better place is both the moral thing to do and a driver of better commercial outcomes for the town.

When JPMorgan Chase enters a community, we take great pride in being a responsible citizen at the local level – just like the local bakery. We lend to and support local businesses. We help customers with banking, lending and saving. And our local corporate responsibility efforts and philanthropic programs (examples of which are described in the following features in this section) help make these communities stronger.

3. Being a responsible community citizen nationally, or globally, is more critical and more complex.

Most people consider corporate responsibility to be merely enhanced philanthropy. This is understandable. But it is far harder to understand what being a responsible community citizen means in terms of macro corporate responsibility. While we are devoted to philanthropy – we spend $330 million a year on these efforts – corporate responsibility is far more than that.

JPMorgan Chase takes an active role in large-scale public policy issues. We are fully engaged in trying to solve some of the world's biggest issues – climate change, poverty, economic development and racial inequality – and the accompanying features that follow describe the extensive efforts we are making. With well-designed policies, we think these problems can all be solved. In the last section of this letter, I detail certain policy issues, which – if forcefully and effectively addressed – would be great for America and the world at large. We engage at this level because companies (like ours) have an extraordinary capability to help. We help not just with funding but with developing strong public policy, which can have a greater impact on society than the collective effect of companies that are responsible community citizens locally. This year, for example, our *Policy*Center published research based on the actual experiences of our customers and communities, showing how new policies could drive a more inclusive economic recovery and help small businesses. JPMorgan Chase has always recognized that long-term business success depends on community success, and that is one of the reasons for our enduring achievement. When everyone has a fair shot at participating – and sharing – in the rewards of growth, the economy will be stronger, and our society will be better.

We also believe that businesses' extraordinary capabilities are even more powerful when put to use in collaboration with governments' capabilities, particularly when seeking to solve our biggest economic and societal ills at the local level. As Washington, D.C., and central governments around the world struggle with partisan gridlock and an inability to get big things done, local communities are coming up with some of the best ideas to make civic society work for more people. Mayors, governors, educators, major employers, entrepreneurs, community leaders and nonprofits are making serious progress developing innovative approaches that address our greatest challenges, but their work often flies under the radar. We must elevate these thoughtful ideas and find ways to share them with others facing similar situations, enabling more communities to benefit from proven, localized solutions. After businesses have had success with some of these efforts locally, they can be adopted across the country and, in fact, around the world.

Our effort is substantial and permanent and has support throughout the company.

Importantly, these civic efforts are supported by senior leadership and are managed by some of our best people (these initiatives are not an afterthought and are sustainable). For our part, we are making significant, long-term, data-driven business and philanthropic investments. And while we try to be creative, we analyze everything, including philanthropy, based on measurable results.

Executing Our Corporate Purpose

We go to great lengths to be there for our clients, customers, employees and communities. Moreover, this unwavering commitment has been a hallmark of our company since its founding. During this time of corporate self-reflection, it's important to understand and reaffirm the magnitude of our contributions.

Helping Clients and Customers in 2020

- We extended credit and raised capital totaling $2.3 trillion for consumers and clients of all sizes around the world, including some of the industries and communities most affected by the pandemic's economic fallout. This includes critical financing for companies such as Boeing and its 145,000 employees. J.P. Morgan helped them raise $25 billion to help fund their ongoing operations as the pandemic led to less air travel.

- We provided consumers with $226 billion in credit to help them afford some of their most important purchases, including new homes and vehicles. This included more than $32 billion to help customers in underserved communities purchase a new home.

- We raised $1.1 trillion in capital for corporations and non-U.S. government entities and offered $865 billion in credit for corporations. For example, we helped Meals on Wheels build a new 36,000-square-foot commercial kitchen and food production facility to help maintain good nutritional health of older adults with limited financial resources.

- We raised $103 billion in credit and capital for nonprofit and U.S. government entities, including states, cities, hospitals and universities. This included funding for NewYork-Presbyterian Health System — which saw a significant increase in patients as a result of COVID-19 — to help them acquire vital medical supplies and equipment and to bring on additional staff.

- We committed more than $45 billion in lending and investments to support community development, affordable housing and small business growth in underserved communities across the United States. This included Eden Housing, a nonprofit that provides low-income residents with safe, modern and affordable housing in California's Bay Area.

- We provided more than $18 billion in credit to small businesses around the country, as well as more than $32 billion in funding ($28 billion excluding Small Business Administration (SBA) safe harbor refunds) under the SBA's Paycheck Protection Program (PPP). For example, we helped Kids Klub Child Development Centers — which offer preschool, daycare and after-school programming — revamp their centers to enable care for essential workers' children.

- We provided critical development financing and attracted additional investment, such as funding through our new development finance institution (DFI) to support sustainable development. In 2020, the DFI mobilized $140 billion toward these goals — helping, for example, with Uzbekistan's first local currency issuance in international markets to finance the country's health, education and transport sectors and with the Republic of Georgia's debut green bond to support that country's access to water, power and sanitation.

- We raised $12 billion in capital and credit to help finance infrastructure projects across the United States. This included $1.3 billion in credit assistance to New York City's Metropolitan Transportation Authority to help deal with the serious impacts of COVID-19 on the city's transportation system and $800 million in capital for Michigan's Department of Transportation to help rebuild the state's roads and bridges.

- We designed branches, products, services and digital solutions to help clients and customers better manage their financial daily lives, with particular focus on underserved communities and families. Examples include low-cost, low-fee accounts, such as Chase Secure Banking℠, and financial tools, such as Chase Credit Journey and Chase Autosave. In 2020, we continued to open new branches in new markets across the United States with 30% opening in low- to moderate-income communities by 2023.

Helping Communities

- We have supported and continue to support a range of community initiatives — from assisting underserved small businesses outside of Paris to facilitating skills training for high-growth jobs in India to helping residents of Harlem increase savings and reduce debt. In 2020, we provided more than $500 million in low-cost loans, equity and philanthropic grants to address immediate needs brought on by the COVID-19 crisis, drive an inclusive recovery and advance racial equity. These efforts will help 1.3 million individuals receive financial coaching, enable 172,000 people to enroll in jobs and skills training programs, assist 64,000 underserved small businesses and create or preserve 43,000 affordable housing units.

- We have committed employee time and talent to tackling communities' greatest challenges. In 2020, employees participated in nearly 50 Service Corps programs to help local nonprofits; mentored hundreds of Black and Latinx young men as part of The Fellowship Initiative; and supported local organizations focused on racial equity.

- We are dedicated to addressing climate change and sustainability around the world. In 2020, the firm committed to finance and facilitate $200 billion to drive action on climate change and advance sustainable development, including renewable energy, cleaner water and waste management; improve access to housing, education and healthcare; and promote infrastructure, innovation and growth around the globe.

Supporting Employees

- We have taken extensive steps to support our employees, who are our greatest strength. We offer 300 accredited skills and education programs and have helped 15,000 employees (to date) assess their skills, which may lead to opportunities for career mobility at the firm. And we have been increasing wages for thousands of employees, including branch and customer service employees, to between $16 and $20 an hour, depending on where they work in the United States, while providing an annual benefits package worth about $13,000.
- As part of our strategy to diversify our talent pipeline, we have implemented a range of changes to expand opportunities for individuals with a criminal background. In 2020, we hired approximately 2,100 people with a criminal background — roughly 10% of our new hires in the United States. And through the JPMorgan Chase *Policy*Center, we are advancing federal and state policies that help qualified workers with an arrest or conviction record compete for employment in federal agencies and with federal contractors. We are reforming Federal Deposit Insurance Corporation (FDIC) hiring rules and setting up automatic record clearing for eligible offenses to help individuals move on from their record. We also supported a measure signed into federal law in 2020 restoring access to Pell Grants for incarcerated individuals, which allows them to pursue postsecondary education in prison and increase employment opportunities after their release.

Our $30 Billion Path Forward Commitment

JPMorgan Chase introduced The Path Forward in October 2020, committing $30 billion over the next five years to address the key drivers of the racial wealth divide, reduce systemic racism against Black and Latinx people, and support employees. The firm has made tangible progress to date.

Promote and expand affordable housing and homeownership for underserved communities

- **Helping Black and Latinx families buy homes and refinance loans:** Our Home Lending business has committed to helping an additional 40,000 Black and Latinx families buy a home over the next five years, with the firm dedicating $8 billion in mortgages for this purpose. The firm is committing up to $4 billion in refinancing loans to help an additional 20,000 Black and Latinx households achieve lower mortgage payments. In addition, the firm is working to improve key home lending products and offerings: A $5,000 grant, for example, will help cover closing costs and down payments for people buying a home in 6,700 minority communities in the United States.
- **Expanding affordable housing in underserved communities:** The firm's inaugural $1 billion social bond builds on its strategy to use its business expertise to create opportunity for underserved communities. The bond's co-managers solely comprise minority- and women-owned businesses, as well as service-disabled, veteran-owned firms.

Grow Black- and Latinx-owned businesses

- **Helping small businesses thrive:** A $350 million, five-year global commitment underscores our dedication to grow Black-, Latinx- and women-owned businesses among other underserved small businesses, help address the racial wealth divide and create a more inclusive recovery from the COVID-19 pandemic. This ambitious endeavor combines low-cost loans, equity investments and philanthropy and will help reduce barriers to capital for underserved small businesses to support their immediate needs and long-term growth. As part of this commitment, the firm is investing $42.5 million in low-cost loans and philanthropy to expand the Entrepreneurs of Color Fund to more cities in the United States, in collaboration with Local Initiatives Support Corporation and a network of community development financial institutions (CDFI).
- **Investing in middle-market businesses:** The firm is co-investing up to $200 million alongside Ariel Alternatives and Project Black, an initiative that aims to close the racial wealth gap by investing in middle-market businesses that are minority-owned — or will become minority-owned — to develop a new class of Black and Latinx entrepreneurs.
- **Expanding our business with Black and Latinx suppliers:** The firm's internal Buy Black and Latinx Portal, led by Advancing Black Pathways, encourages our lines of business to purchase goods and services from diverse businesses. This year-long campaign is designed to support the firm's commitment to spend $750 million with Black- and Latinx-owned suppliers over the next five years.

Improve financial health and access to banking in Black and Latinx communities

- **Helping 1 million people open low-cost checking or savings accounts:** Chase will open 16 new community branches in traditionally underserved neighborhoods and hire 150 community managers by 2022. Branches in Chicago, Dallas, Minneapolis and New York (Harlem) have already been redesigned under this new model. This model has expanded outreach to local small businesses — and to consumers with financial education — and serves as a hub for overall community engagement. Another 100 new branches are being opened in low- to moderate-income communities across the United States as part of the firm's market expansion initiative. We want to build trust in the communities we serve and become our customers' primary bank. We offer Secure Banking — a low-cost, no overdraft checking account — for those new to banking, those who have had trouble getting or keeping a bank account, and for Black and Latinx unbanked and underbanked households, thereby expanding access to traditional banking.
- **Strengthening diverse-led financial institutions:** To promote financial institutions in underserved neighborhoods, we are providing additional access to capital, connections to institutional investors through new products and services, specialty support for Black-led commercial projects, and mentorship and training opportunities. In October 2020, the firm committed to investing $50 million in Black- and Latinx-led minority depository institutions and CDFIs. With $40 million of that investment already committed or deployed to Louisiana-based Liberty Bank, North Carolina-based M&F Bank, New York-based Carver Federal Savings Bank and Los Angeles-based Broadway Federal Bank, the total investment has been increased to $75 million, which could generate access to as much as $750 million in community lending. In addition, the firm's new Empower money market share class will allow these institutions to develop new revenue streams by serving institutional clients.

Our Sustainability Efforts

Climate change is a critical issue of our time. Reducing greenhouse gas (GHG) emissions — the main cause of climate change — requires collective ambition and cooperation across the public and private sectors.

Coal, oil and natural gas — the primary sources of GHG emissions — have powered the world's energy economy for many decades, advancing significant economic growth and social development for billions around the world. But our reliance on these resources now threatens the very growth they have enabled.

The challenge we face is significant. While continuing to generate power for all of our needs, big and small — lighting and heating our homes, commuting to work, and charging our phones and computers, as well as operating manufacturing facilities that produce goods used around the world each day — we also need to bring energy to the nearly 800 million people who still don't have reliable access to electricity. And we need to find a way to do all of these things while setting a path for achieving net-zero emissions by 2050.

The fact is we're long past debating whether climate change is real. But we need to acknowledge that the solution is not as simple as walking away from fossil fuels. We will need resources such as oil and natural gas until commercial, affordable and low-carbon alternatives can be developed to meet all of our global energy needs. This is where business and government leaders need to focus their time and attention.

While wind and solar technologies have made huge strides, they're principally deployed for electricity generation. We don't have clean alternatives for industrial and manufacturing energy needs, for example. Nor do we yet have solutions for heavy transportation, such as trucking and air travel. What's more, the projected growth of technologies like electric vehicles is going to place huge pressures on the need for rare earth minerals — which also presents geopolitical and environmental challenges.

Policymakers have taken some important steps.

The Paris Agreement is one such success, but we must put a price on carbon. A carbon tax (with a commensurate carbon dividend – directly returned to the people) is an excellent way to dramatically reduce carbon while investing in communities most adversely affected by this much-needed transition. Without a benchmark like this, businesses and economies won't be able to properly factor the cost of carbon and the benefit of alternatives into their long-term strategic planning and capital investment decisions.

Companies are figuring out how to manage amid these challenges. And many are also dealing with a growing chorus of pressure from customers, regulators, shareholders and activists with strong perspectives on how corporations and other institutions should address climate change.

When we cut through all the noise, here's what we know to be true:

Traditional energy resources play an essential role in our global economy today. We can agree on the need to make our energy system much less carbon intensive. But abandoning companies that produce and consume these fuels is not a solution. Furthermore, it's economically counterproductive. Instead, we must work with them.

There's huge opportunity in sustainable and low-carbon technologies and businesses. While many of these technologies and companies are mature, many more are just getting started — and more will need to be created in the coming decades. In addition, all companies will need capital and advice to help them innovate, evolve and become more efficient while staying competitive in a changing world.

This is why we made a commitment in 2020 to align our financing activities in three carbon-intensive sectors — oil and gas, electric power and automotive manufacturing — with the Paris Agreement.

To do so, we will measure our clients' carbon performance against sector-based GHG reduction targets that we're setting for 2030 — with the goal of helping them reduce emissions from their direct operations and, in the case of oil and gas and automotive companies, reduce GHGs from the use of their products.

The key metric we plan to use for evaluating climate performance is carbon intensity, which is a measure of GHG emissions per unit of output. Using intensity will enable us to evaluate the relative efficiency of companies and to adjust for factors such as size, clearly showing which are performing the best (or getting better).

We also want to take advantage of the huge opportunity to support existing and new green companies and to help others lower their carbon footprint — all while advancing economic development and standards of living for people around the world. This includes helping our clients invest in significant and continuous performance improvements, new technologies, alternative energy solutions, and research and development (R&D). Through our recently launched Center for Carbon Transition, clients will have access to information resources, as well as advisory and financing solutions that will help them evolve in a changing world.

We're also working to make our own company as sustainable as possible. We've committed to becoming carbon neutral for the emissions generated to power our buildings, branches and data centers, as well as those related to employee travel. A big focus of our strategy is to generate our own power using solar.

Currently, we have plans to install 40 megawatts of solar capacity across our corporate office buildings in the United States and the United Kingdom. This includes a 14.8-megawatt rooftop and carport solar installation at our corporate campus in Columbus, Ohio, which will produce about 75% of its power needs. We're also installing 30 megawatts of solar capacity at 900 retail branch locations across the United States, which will provide approximately 35% of each branch's power needs.

We have an opportunity to make the world a better place for ourselves, for our children and grandchildren, and for all living things that share this planet with us.

II. LESSONS FROM LEADERSHIP

Great management is critical to the long-term success of any large organization. Strong management is disciplined and rigorous. Facts, analysis, detail … facts, analysis, detail … repeat. You can never do enough, and it does not end. Complex activity requires hard work and no uneducated guesswork. Test, test, test and learn, learn, learn. And accept failure as a "normal" recurring outcome. Develop great models but understand they are not the answer – judgment has to be involved in matters related to human beings and extraordinary events. You need to have good decision-making processes. Force urgency and kill complacency. Know that there is competition everywhere, all the time. But even if you do all of this well, it is not enough.

1. Enforce a good decision-making process.

A good decision-making process involves having the right people in the room with all information fully shared (all too often I have seen precisely the opposite). There is also the need for constant feedback and follow-up. A bad decision-making process kills. If necessary, review the information over and over – often the answer is simply waiting to be found – and if you don't have to, don't rush. While intuition matters, and it can be the final deciding factor, intuition is not guessing – it is usually based on years of experience, hard work and practice.

2. Examine raw data and focus on real numbers.

It is helpful to try to separate and examine actual raw data versus calculated numbers. A few examples will suffice:

You always learn a lot more when you dig deep into the numbers. Look at total car sales, the number of people employed or the actual price of goods compared with calculated data like gross domestic product (GDP), inflation or productivity. For the latter, examine all of the methodologies and assumptions that go into those calculations. For instance, productivity tries to adjust for (or simply sometimes can't adjust for) new products that are superior to old products, such as smartphones versus dumb phones; similarly, calculations for inflation factor in something called "owners' equivalent rent," which generally differs substantially from actual home prices or rental costs.

Applied to corporate operations, examine the details. Many companies look at "net new accounts," which could be going up dramatically because of prices or marketing – masking attrition or consumers' dissatisfaction with the product. In detail, look at errors, complaints, attrition, competitors and other new entrants.

Look at market share by customer segment so as not to miss behavior shifts. Frequently, raw data tell a different story from what management may be saying: Too often management teams use the facts to justify what they already think or to celebrate what they believe is a great success.

Being true to these principles requires relentless discipline – which you should expect of us.

3. Understand when analysis is necessary and when it impedes change.

While I am fanatical about detail and multiyear analysis, it's important to be cautious about its application. Assumptions are frequently involved, and small changes in a few variables can dramatically change an outcome.

Even net present value analysis fails to capture the true value of something after a certain period of time. For instance, people commonly look at the five-year net present value of a customer acquisition, which can mask the true compounding effect of keeping that client for 20 years. And we have often seen net present value analysis fail to capture ancillary benefits (like customer happiness) that can often be more important than the analysis itself.

Sometimes a new product or an investment should simply be considered table stakes – meaning there's no need to do analysis at all. Think about banks adding the capability of opening new accounts digitally, for example, or maintaining a strong technology infrastructure and adopting new technologies, like cloud or artificial intelligence (AI). These could be life-or-death decisions for a company, so instead of focusing on net present value, the emphasis should be on getting the work done properly, efficiently and quickly.

Bureaucrats can torture people with analysis, stifling innovation, new products, testing and intuition.

In the last section, I go into further detail about how certain analyses fail to guide us to the right answer in public policy – particularly around complex issues like healthcare, job creation, mortgage markets and infrastructure.

4. Before conducting an important analysis, assess all factors involved.

I frequently see people trying to understand a complex situation without considering all the factors involved. In the final section, I attempt to analyze China as a strategic competitor. It's critical to weigh all the factors: cultural, psychological and historical. Also, what are the legal factors, and how is the rule of law applied? What is the country's situation with raw materials? What is the country's geography and relationship with its neighbors? It is important to lay out all the important variables *before* you start an assessment to ensure that they are all carefully reviewed and that one's judgment is not clouded early on by overfocusing on just a few issues.

In business, this type of assessment should also be applied to your competitors and to those you deem to be future competitors, as well as to your own strengths and weaknesses. In the next section, I describe the evolving competitive landscape for banks.

5. Always deal with reality.

In business, as in life, we must deal with both certainty and uncertainty. A simple look at history and our economic past illustrates the rather unpredictable nature of things. As a result, at the firm we try to look at all the possibilities, as well as their probabilities. For example, we conduct well over 100 stress tests each week to make sure we are prepared for what we are ***not*** predicting. We even evaluate the laws and regulations we live under today and project how they might be interpreted 10 years from now – we call this "reinterpretation risk." We look at a broad range of possibilities and probabilities to ensure that we understand, as best as we can, all of the possible outcomes – recognizing that we are not trying to make a forecast with certainty. Sometimes the action you take may not be the one that gives you the best outcome but the one that gives you a good outcome and reduces the possibilities of bad outcomes.

It also is often very difficult to capture the inflection points in the economy. Most people imagine the future as being roughly equivalent to the past, give or take a bit. However, we know there are significant inflection points, which are sometimes easy to see in hindsight but almost impossible to predict.

While we also try to keep things as streamlined as possible, making things simpler than they really are is equally flawed. Too many times people seek simple, cookie-cutter solutions that sound good but just don't work. For example, class size in schools matters but not necessarily in all types of classes. In Vietnam, when a major city once had a rat population problem, the government devised what it thought was an easy, foolproof solution: Pay people to kill rats. All people had to do was bring in a rat tail to be paid. What the government didn't consider was that people would breed rats for a supply of rat tails to sell. (All compensation schemes should be continuously re-evaluated.)

6. Remain open to learning how to become a better leader.

In addition to the above thoughts on analysis, assessment and good decision making, some softer leadership lessons are equally important.

As companies get bigger and more complex, leaders need to be more like coaches and conductors than players. If CEOs are running a smaller business, they can literally be involved in virtually everything and make most of the decisions – they often rely on traditional command-and-control tactics. This approach does not work as companies get bigger – the CEOs simply cannot be involved in every major decision. Command and constant feedback may be better than command and control. Here is where leaders would be better off providing clear direction and letting people do their job, including making mistakes along the way. Soft power – essentially trust and maturity – may become more important than hard power. Soft power creates respect among team members, with the coach offering honest assessment and support while allowing flexibility. Here the boss makes fewer but tougher decisions, such as removing people – when it must be done – and even then, it is handled respectfully. People will give to the best of their ability for leaders they respect and who they know are trying to help them succeed.

Respect and learn from your people. Managers and leaders get spread pretty thin. While they should have a wide grasp of many subjects, they could not possibly know everything their people know. Leaders should continually be learning from their people. They should go to a sales conference and ask lots of questions of their salespeople. Gather technology people in the room with branch managers and ask, "How are things working?" Taking a road trip should not be only for the purpose of showing the flag but also for learning from your employees and customers.

Have curiosity. It's important to ask questions to try to understand varying points of view. Be willing to change your mind. Read everything. Don't defend decisions of the past. Leaders should be happy when their people prove them wrong. Do not have a rigid mindset. And do not be complacent.

Skip hierarchy. If everything in a large organization must go up and down the hierarchical ladder, bureaucratic arteriosclerosis along with CYA sets in, and that company's life expectancy is substantially shortened. It should be routine that data, memos and ideas are shared – skipping hierarchies – and aren't vetted by all in the chain of command. This makes people more responsible for what they are doing, improves the dissemination of new information and new ideas, and speeds things up overall. In addition, it's good to have a few mavericks who are not afraid to shake things up. The ones who challenge authority or convention often get far more done than the ones who go along to get along. Collaboration is wonderful, but it can be overdone.

Act at the speed of relevance. When leaders have plenty of time to make decisions, they should analyze all factors over and over – take the necessary time, as choices can be hard to reverse. And there are other decisions that are more like "battlefield promotions" where there's no luxury of time, and, in fact, going slow may make things much worse. I've also seen people take a tremendous amount of time to make an unimportant decision, which just wastes time and slows things down.

In business, some decisions should be made carefully – for instance, putting the right people in the right job. But others, such as making pricing decisions, dealing with customer problems and handling reputational issues, must be done quickly, for these problems do not age well.

The Importance of Developing Leaders

Reprinted from my 2009 Letter to Shareholders

Earlier in this section, I mentioned that my number one priority is to put a healthy and productive succession process in place. As I will be increasingly focused on this process, I would like to share my thoughts about the essential qualities a leader must have, particularly as they relate to a large multinational corporation like JPMorgan Chase.

Leadership is an honor, a privilege and a deep obligation. When leaders make mistakes, a lot of people can get hurt. Being true to oneself and avoiding self-deception are as important to a leader as having people to turn to for thoughtful, unbiased advice. I believe social intelligence and "emotional quotient," or EQ, matter in management. EQ can include empathy, clarity of thought, compassion and strength of character.

Good people want to work for good leaders. Bad leaders can drive out almost anyone who's good because they are corrosive to an organization; and since many are manipulative and deceptive, it often is a challenge to find them and root them out.

At many of the best companies throughout history, the constant creation of good leaders is what has enabled the organizations to stand the true test of greatness – the test of time.

Below are some essential hallmarks of a good leader. While we cannot be great at all of these traits – I know I'm not – to be successful, a leader needs to get most of them right.

Discipline

This means holding regular business reviews, talent reviews and team meetings and constantly striving for improvement – from having a strong work ethic to making lists and doing real, detailed follow-up. Leadership is like exercise; the effect has to be sustained for it to do any good.

Fortitude

This attribute often is missing in leaders: They need to have a fierce resolve to act. It means driving change, fighting bureaucracy and politics, and taking ownership and responsibility.

High Standards

Leaders must set high standards of performance all the time, at a detailed level and with a real sense of urgency. Leaders must compare themselves with the best. Huge institutions have a tendency toward slowing things down, which demands that leaders push forward constantly. True leaders must set the highest standards of integrity – those standards are not embedded in the business but require conscious choices. Such standards demand that we treat customers and employees the way we would want to be treated ourselves or the way we would want our own mother to be treated.

Ability to Face Facts

In a cold-blooded, honest way, leaders emphasize the negatives at management meetings and focus on what can be improved (of course, it's okay to celebrate the successes, too). All reporting must be accurate, and all relevant facts must be reported, with full disclosure and on one set of books.

Openness

Sharing information all the time is vital – we should debate the issues and alternative approaches, not the facts. The best leaders kill bureaucracy – it can cripple an organization – and watch for signs of politics, like sidebar meetings after the real meeting because people wouldn't speak their mind at the right time. Equally important, leaders get out in the field regularly so as not to lose touch. Anyone in a meeting should feel free to speak his or her mind without fear of offending anyone else. I once heard someone describe the importance of having "at least one truth-teller at the table." Well, if there is just one truth-teller at the table, you're in trouble – everyone should be a truth-teller.

Setup for Success

An effective leader makes sure all the right people are in the room — from Legal, Systems and Operations to Human Resources, Finance and Risk. It's also necessary to set up the right structure. When tri-heads report to co-heads, all decisions become political — a setup for failure, not success.

Morale-Building

High morale is developed through fixing problems, dealing directly and honestly with issues, earning respect and winning. It does not come from overpaying people or delivering sweet talk, which permits the avoidance of hard decision making and fosters passive-aggressive behaviors.

Loyalty, Meritocracy and Teamwork

While I deeply believe in loyalty, it often is misused. Loyalty should be to the principles for which someone stands and to the institution: Loyalty to an individual frequently is another form of cronyism. Leaders demand a lot from their employees and should be loyal to them — but loyalty and mutual respect are two-way streets. Loyalty to employees does not mean that a manager owes them a particular job. Loyalty to employees means building a healthy, vibrant company; telling them the truth; and giving them meaningful work, training and opportunities. If employees fall down, we should get them the help they need. Meritocracy and teamwork also are critical but frequently misunderstood. Meritocracy means putting the best person in the job, which promotes a sense of justice in the organization rather than the appearance of cynicism: "Here they go again, taking care of their friends." Finally, while teamwork is important and often code for "getting along," equally important is an individual's ability to have the courage to stand alone and do the right thing.

Fair Treatment

The best leaders treat all people properly and respectfully, from clerks to CEOs. Everyone needs to help everyone else at the company because everyone's collective purpose is to serve clients. When strong leaders consider promoting people, they pick those who are respected and ask themselves, Would I want to work for him? Would I want my kid to report to her?

Humility

Leaders need to acknowledge those who came before them and helped shape the enterprise — it's not all their own doing. There's a lot of luck involved in anyone's success, and a little humility is important. The overall goal must be to help build a great company — then we can do more for our employees, our customers and our communities.

III. BANKS' ENORMOUS COMPETITIVE THREATS — FROM VIRTUALLY EVERY ANGLE

To fairly assess the competitive landscape for banks, you must fairly evaluate their strengths and weaknesses to deal with both the current competition and evolving competition. Banks have significant strengths – brand, economies of scale, profitability, and deep roots with their customers and within their communities. Many companies, including banks, have flaws of their own making – usually due to bureaucracy, complacency and lack of a deep competitive spirit. Banks have other weaknesses, born somewhat out of their success – for example, inflexible "legacy systems" that need to be moved to the cloud if they are to remain competitive. Banks are also required to deal with extensive regulations, which can hinder new competition and/or create an opening for both existing and evolving competitors. Banks fiercely compete with each other and now face fierce competition from multiple vectors.

Banks already compete against a large and powerful shadow banking system. And they are facing extensive competition from Silicon Valley, both in the form of fintechs and Big Tech companies (Amazon, Apple, Facebook, Google and now Walmart), that is here to stay. As the importance of cloud, AI and digital platforms grows, this competition will become even more formidable. As a result, banks are playing an increasingly smaller role in the financial system.

I am completely in favor of open competition, and much of the competition that I cover in this section will be good for America. One of the necessities for a healthy economy, and one at the core of America's success, is a strong, vibrant financial system. The disciplined allocation of capital, and the constant search for new opportunities for capital, is critical to growth (a corollary of the free and intelligent movement of capital is the free movement of human talent, which, ultimately, may be even more important). America's financial system is the best the world has ever seen, from our regulatory system and rule of law to exchanges, venture capital and private capital, banks and shadow banks. As our system changes, our government and regulators need to understand that maintaining the vibrancy, safety and soundness of this system is critical – and this includes maintaining a relatively fair and balanced playing field. While I am still confident that JPMorgan Chase can grow and earn a good return for its shareholders, the competition will be intense, and we must get faster and be more creative.

1. Banks are playing an increasingly smaller role in the financial system.

In the chart below, you will see that U.S. banks (and European banks) have become much smaller in size relative to multiple measures, ranging from shadow banks to fintech competitors and to markets in general.

Size of the Financial Sector / Industry

($ in trillions)		2000	2010	2020
Size of banks	U.S. banks market capitalization[1]	1.2	1.3	2.2
	U.S. GSIB market capitalization	0.9	0.8	1.2
	European banks market capitalization[1]	1.1	1.5	1.1
	U.S. bank loans[2]	3.7	6.6	10.5
	Total U.S. broker dealer inventories	2.0	3.5	3.7
	U.S. bank common equity[3]	0.4	1.0	1.5
	U.S. bank liquid assets[2, 4]	1.1	2.8	7.0
Market size	Total U.S. debt and equity market	33.6	57.2	118.4
	Total U.S. GDP[5]	13.3	15.8	18.8
Shadow banks	Total private direct credit	7.6	13.8	18.4
	Total U.S. passives and ETFs[6]	6.9	13.6	30.8
	Total U.S. money market funds	1.8	2.8	4.3
	Hedge fund and private equity AUM[7]	0.6	3.0	8.0
Size of evolving competitors	Google, Amazon, Facebook, Apple[8]	NM	0.5	5.6
	Payments[9]	NA	0.1	1.2
	Private and public fintech companies[9]	NA	NA	0.8

Sources: FactSet, S&P Global Market Intelligence, Federal Reserve Z.1, Federal Reserve H.8, Preqin and Federal Reserve Economic Data (FRED)
GSIB = Global Systemically Important Banks
NA = Not applicable
NM = Not material
For footnoted information, refer to page 67 in this Annual Report.

Whether you look at the chart above over 10 or 20 years, U.S. banks have become much smaller relative to U.S. financial markets and to the size of most of the shadow banks. You can also see the rapid growth of payment and fintech companies and the extraordinary size of Big Tech companies. (As an aside, capital and global systemically important financial institution (G-SIFI) capital rules were supposed to reflect the economy's increased size and banks' reduced size within the economy. This simply has not happened in the United States.)

Some regulators will look at the chart above and point out that risk has been moved out of the banking system, which they wanted and which clearly makes banks safer. That may be true, but there is a flip side – banks are reliable, less-costly and consistent credit providers throughout good times and in bad times, whereas many of the credit providers listed in the chart above are not. More important, transactions made by well-controlled, well-supervised and well-capitalized banks may be less risky to the system than those transactions that are pushed into the shadows.

2. The growth in shadow and fintech banking calls for level playing field regulation.

The chart below shows the potential regulatory differences between being a bank and being a nonbank or a fintech company – though this varies for each type of company on each item depending upon its legal and regulatory status. In some cases, these regulatory differences may be completely appropriate, but certainly not in all cases.

When I make a list like this, I know I will be accused of complaining about bank regulations. But I am simply laying out the facts for our shareholders in trying to assess the competitive landscape going forward.

It is completely clear that, increasingly, many banking products, such as payments and certain forms of deposits among others, are moving out of the banking system. In addition, lending in many forms – including mortgage, student, leveraged, consumer and non-credit card consumer – is moving out of the banking system. Neobanks and nonbanks are gaining share in consumer accounts, which effectively hold cash-like deposits.

Payments are also moving out of the banking system in merchant processing and in debit or alternative payment systems.

We believe that many of these new competitors have done a terrific job in easing customers' pain points and making digital platforms extremely simple to use. But growth in shadow banking has also partially been made possible because rules and regulations imposed upon banks are not necessarily imposed upon these nonbanks. While some of this may have been deliberate, sometimes the rules were accidentally calibrated to move risk in an unintended way. We should remember that the quantum of risk may not have changed – it just got moved to a less-regulated environment. And new risks get created. While it is not clear that the rise in nonbanks and shadow banking has reached the point of systemic risk, this trend is accelerating and needs to be assiduously monitored, which we do regularly as part of our own business.

Bank and Nonbank Regulation Requirements

Bank	Fintech / Nonbank
1. Higher capital requirements (which also require expensive debt and non-tax-deductible preferreds), even on deposits	1. Lower capital requirements, set by market
2. Operational risk capital	2. No operational risk capital
3. Extensive liquidity requirements	3. No liquidity requirements
4. FDIC insurance (this cost JPM ~$12B over the last 10 years — and not tax deductible beginning in 2018)	4. No FDIC insurance
5. U.K. bank levy and surcharges (this cost JPM $3.2B over the last 10 years)	5. No U.K. bank levy or surcharges
6. More costly regulations (e.g., loans, CFPB, OCC), including resolution planning and CCAR	6. Less costly regulations
7. Heavy restrictions around privacy and use of data	7. Fewer privacy restrictions, virtually no data restrictions
8. Extensive KYC / AML requirements	8. Less extensive KYC / AML requirements
9. Substantial social requirements (CRA)	9. No social requirements (CRA)
10. Extensive public and regulatory reporting requirements (e.g., disclosure, compensation)	10. Limited public and regulatory reporting requirements
11. Lower revenue opportunities (i.e., Durbin — this cost JPM ~$17B over the last 10 years)	11. Higher debit card income

FDIC = Federal Deposit Insurance Corporation
CFPB = Consumer Financial Protection Bureau
OCC = Office of the Comptroller of the Currency
CCAR = Comprehensive Capital Analysis and Review
KYC = Know your customer
AML = Anti-money laundering
CRA = Community Reinvestment Act

A few items need further explanation. On capital requirements, you should always remember that the market determines this level, not regulators, and to the extent that capital requirements in one entity are much higher than another, activities will move. Ironically, because standardized capital and G-SIFI capital do not recognize credit risk, banks have a peculiar incentive to hold higher risk credit rather than lower risk credit. All companies have operational risk, and most companies absorb operating losses through earnings. Banks are required to hold substantial capital against this risk. (I'm not debating that there is operational risk.) And because of the Durbin Amendment, if a bank has a customer with a small checking account who spends $20,000 a year on a debit card, the bank will only receive $120 in debit revenue – while a small bank or nonbank would receive $240. This difference may determine whether you can even compete in certain customer segments. It's important to note that while some of the fintechs have done an excellent job, they may actually be more expensive to the customer.

Finally, it's important to point out that not only has private credit been moving to the private markets but so have companies themselves. The number of public companies in the United States has been dropping dramatically over the past two decades, which has corresponded to an even larger increase in the number of private companies. Following its peak at 8,000 in 1997, the number of public companies is now around 6,000, and if you exclude non-operating companies, such as investment funds and trust companies, the decline is even more dramatic. This is worthy of serious study. The reasons are complex and may include factors such as onerous reporting requirements; higher litigation expenses; annual shareholder meetings focused on matters that most shareholders view as frivolous or inappropriate for company actions; costly regulations; less compensation flexibility; and heightened public scrutiny. It's incumbent upon us to figure out why so many companies and so much capital are being moved out of the transparent public markets to the less transparent private markets and whether this is in the country's long-term interest.

We need competition – because it makes banking better – and we need to manage the emerging risks with level playing field regulation in a way that ensures safety and soundness across the industry.

3. AI, the cloud and digital are transforming how we do business.

We cannot overemphasize the extraordinary importance of new technology in the new world. Today, all technology is built "cloud-enabled," which means the applications and their associated data can run on the cloud. This brings many extraordinary advantages, but the one that I'd like to spotlight is the immediate ability to access data and associated machine learning with virtually unlimited compute power. Essentially, in the cloud, you can "access" hundreds of databases and deploy machine learning in a split second – something mainframes and legacy systems and databases simply cannot do. To go from the legacy world to the cloud, applications not only have to be "refactored," but, more important, data also must be "re-platformed" so it is accessible. This availability of data – and banks have a tremendous amount of data – makes data enormously valuable and digitally accessible. All of this work takes time and money, but it's absolutely essential that we do it.

We already extensively use AI, quite successfully, in fraud and risk, marketing, prospecting, idea generation, operations, trading and in other areas – to great effect, but we are still at the beginning of this journey. And we are training our people in machine learning – there simply is no speed fast enough.

4. Fintech and Big Tech are here ... big time!

Fintech companies here and around the world are making great strides in building both digital and physical banking products and services. From loans to payment systems to investing, they have done a great job in developing easy-to-use, intuitive, fast and smart products. We have spoken about this for years, but this competition now is everywhere. Fintech's ability to merge social media, use data smartly and integrate with other platforms rapidly (often without the disadvantages of being an actual bank) will help these companies win significant market share.

Importantly, Big Tech (Amazon, Apple, Facebook, Google – and, as I said, now I'd include Walmart) is here, too. Their strengths are extraordinary, with ubiquitous platforms and endless data. At a minimum, they will all embed payments systems within their ecosystems and create a marketplace of bank products and services. Some may create exclusive white label banking relationships, and it is possible some will use various banking licenses to do it directly.

Though their strengths may be substantial, Big Tech companies do have some issues to deal with that may, in fact, slow them down. Their regulatory environment, globally, is heating up, and they will have to confront major issues in the future (banks have faced similar scrutiny). Issues include data privacy and use, how taxes are paid on digital products, and antitrust and anticompetitive issues – such as favoring their own products and services over others on their platform and how they price products and access to their platforms. In addition, Big Tech will have very strong competition – not just from JPMorgan Chase in banking but also from each other. And that competition is far bigger than just banking – Big Tech companies now compete with each other in advertising, commerce, search and social.

5. JPMorgan Chase is aggressively adapting to new challenges.

As tough as the competition will be, JPMorgan Chase is well-positioned for the challenge. But our eyes are wide open as the landscape changes rapidly and dramatically. We have an extraordinary number of products and services, a large, existing client base, huge economies of scale, a fortress balance sheet and a great, trusted brand. We also have an extraordinary amount of data, and we need to adopt AI and cloud as fast as possible so we can make better use of it to better serve our customers. We need to make our extraordinary number of products and services a huge plus by improving ease of use and reducing complexity. We need to move faster and bolder in how we attack new markets while protecting our existing ones. Sometimes new markets look too small or appear not to be critical to our customer base – until they are. We intend to be a little more aggressive here.

While we will argue for a level playing field, both in terms of how products and services are treated by regulators and possibly how competition should be treated across platforms, we are not relying on much to change. So we will simply have to contend with the hand we are dealt and adjust our strategies as appropriate.

We have mentioned that our highest and best use of capital is to expand our businesses, and we would prefer to make great acquisitions instead of buying back stock. We are somewhat constrained by how much we can grow our balance sheet because our capital charges will grow with our size, so sometimes buying back stock may still be the best option. But acquisitions are in our future, and fintech is an area where some of that cash could be put to work – this could include payments, asset management, data, and relevant products and services.

We will continue to do everything in our power to make JPMorgan Chase successful – and are confident we can do so.

IV. SPECIFIC ISSUES FACING OUR COMPANY

In this section, I review and analyze some of the current critical issues that affect our company.

1. Cyber risk remains a significant threat.

We cannot overemphasize the importance of cyber risk, not just to our bank (we spend more than $600 million a year on cybersecurity) but also to our customers, countries, economies and critical industries (i.e., telecom and power). We have pointed out to our shareholders before that having disciplined cyber hygiene is almost as important as the money you spend. Threats to our cybersecurity need urgent attention from our government as issues of national security and impediments to trade. Governments should build on prior agreements in the United Nations, recognizing the applicability of international law to cyberspace and enforcing obligations to hold bad actors accountable. Acknowledging that governments and their regulatory agencies are prime targets for cyber criminals, these agencies need to provide transparency to those affected by incidents (e.g., financial institutions and others that hold sensitive data), invest in the uplift to cybersecurity, and adopt safe and sound practices for data protection and handling.

Much of our extraordinary cyber capabilities are also used to train and protect our customers, particularly in the areas of risk and fraud.

2. Brexit was finally accomplished — but uncertainties linger.

Brexit was accomplished, but many issues still need to be negotiated. And in those negotiations, Europe has had, and will continue to have, the upper hand. In the short run (i.e., the next few years), this cannot possibly be a positive for the United Kingdom's GDP – the effect after that will be completely based upon whether the United Kingdom has a comprehensive and well-executed strategic plan that is acceptable to Europe. Included among the unresolved questions is how financial services will operate. London has been a major financial center that, under all laws and regulations, could conduct business throughout Europe. For most of us, the bulk of our operations (i.e., risk, compliance, audit, legal, regulatory, market-making, investment banking, research and asset management) were performed centrally in London. It was hugely efficient for all of Europe – and for financial services companies as well. London is a magnificent place to do business in terms of the rule of law, human capital, technology, transportation, language and many other facets. But future financial regulations were left uncertain in Brexit; and it is clear that, over time, European politicians and regulators will make many understandable demands to move functions into European jurisdictions. Because of this – and because of strong European efforts to compete with London – Paris, Frankfurt, Dublin and Amsterdam will grow in importance as more financial functions are performed there. Even so, few winners are likely to emerge from this fragmentation.

During this transition, our costs (most of which will probably be passed on to customers in one form or another) will go up as functions become duplicated. We may reach a tipping point many years out when it may make sense to move all functions that service Europe out of the United Kingdom and into continental Europe. But London still has the opportunity to adapt and reinvent itself, particularly as the digital landscape continues to revolutionize financial services. Innovation is key to preparing for doing the business of tomorrow versus relying on the shifting ways of the past.

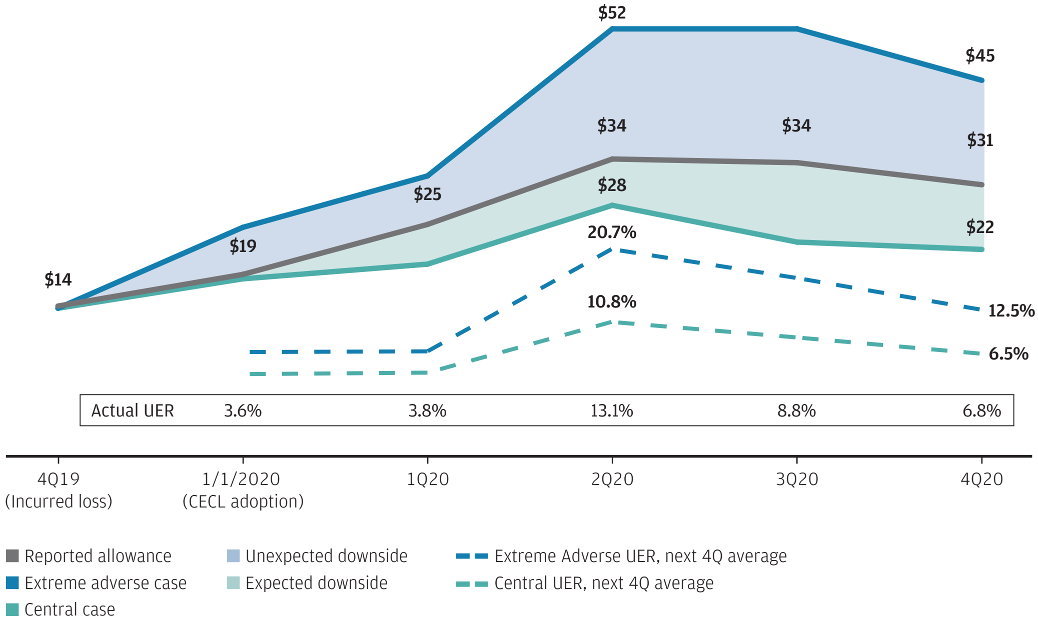
3. New accounting requirements affect reserve reporting but not how we run our business.

A new loan loss reserving method called the current expected credit losses (CECL) standard was adopted by large financial institutions, effective January 1, 2020. To oversimplify, there were two main changes. First, you must reserve for expected credit losses over the full remaining expected life of the loan, whereas in the past, we reserved for losses that had already been incurred using a forecast over a loss emergence period, for example the ensuing 12 months or so for credit cards. Second, you were to incorporate different reasonable and supportable macroeconomic forecasts (for multiple scenarios) in estimating losses. Given the benign macroeconomic environment when this new CECL standard was adopted, it increased reserves by only $4.3 billion, which was primarily attributed to moving to lifetime loss coverage for Card, with only a small amount of reserves for the probability of a far worse economic environment.

Hundreds of variables go into the scenarios and calculations shown in the chart below. During periods of stress, the firm leaned more heavily to the downside to reflect uncertainties not fully captured by the scenarios themselves. Uncertainties included a substantial drop in headline employment without corresponding job creation, the degree of permanent job losses, the extent and timing of federal government assistance, unknowns around vaccine efficacy against new virus strains, and the potential for economic scarring from changes in consumer behavior and the recovery of directly impacted sectors.

Allowance: Range of Downside Uncertainty

($ in billions)



CECL = Current expected credit losses
UER = Unemployment rate

The best way to look at this is to analyze our loan loss reserves as of December 31, 2020. Our central case is essentially our baseline forecast (and is roughly similar to the Federal Reserve's current forecast at the time), which would have unemployment over the ensuing 12 months at 6.5%. If we reserved to this case, our reserves would total $22 billion. But we run multiple scenarios – one of which is an extreme adverse case. This worst case, which is slightly more severe than the Federal Reserve's extreme adverse case, would have unemployment over the ensuing 12 months at 12.5% (among other variables). If we reserved as if this scenario had a 100% chance of happening, we would require $45 billion in reserves. After probability weighting multiple scenarios, we ended the year with $31 billion in reserves.

Clearly in turbulent times, these scenarios and the probabilities assigned to them are highly uncertain and volatile. The following are also clear and extremely important:

The firm earns almost $50 billion +/- pre-provision profit annually; it is able to easily handle large increases in reserves; and we could easily have done substantially more while maintaining high capital and high liquidity. This is also why we saw no reason to cut our dividend. If, however, the worst-case scenario had happened (which means it could have gotten even worse from there), we might have cut our dividend to retain capital out of prudence.

Importantly, CECL does not change risk management or the way we run the company. We have been lending, and will continue to lend, to our clients and customers throughout the pandemic with prudent risk management. Our credit risk decisions and broader risk appetite are mostly driven by our clients' needs and market conditions rather than solely by reserve methodology. While reserve levels are an estimate reflecting management's expectations of credit losses at the balance sheet date, they may not reflect the amount of losses ultimately realized.

4. While we disbanded Haven, we will continue to build on what we learned.

Although the United States has some of the best healthcare in the world (i.e., doctors, pharmaceutical care and innovation) and many people from other countries come here when they need serious medical attention, the problems associated with healthcare are serious, rampant and obvious. Our costs are more than twice those of the developed world without justification by better outcomes. There is no transparency in pricing, with patients legitimately complaining of hidden costs. And chronic care is not necessarily managed properly. More than 30 million Americans are uninsured, and we are falling short in basic wellness.

Amazon, Berkshire Hathaway and JPMorgan Chase set up Haven to address some of these problems, and, in the process, we learned a lot about how the healthcare system could be improved. Although we decided to disband Haven, JPMorgan Chase will continue to build on what we learned. We will invest in healthcare innovation and other approaches to improve the health and well-being of our employees and address this critical national issue. More details will be shared as we progress.

V. COVID-19 AND THE ECONOMY

Within days of realizing that COVID-19 was a global pandemic that would virtually close down large parts of the world's economies, the U.S. government moved with unprecedented speed. Fortunately, banks were part of the solution – unlike in the Great Recession. And unlike the Great Recession, the U.S. economy was actually in good shape going into the COVID-19 recession. Though there are many differences, it's instructive to compare the recovery from the Great Recession with the expected recovery from the COVID-19 recession.

1. Bold action by the Fed and the U.S. government effectively reversed financial panic.

The Federal Reserve (critically, with the support of the U.S. Treasury) immediately rolled out facilities that financed Treasuries, corporate bonds, mortgage-backed securities and other securities that effectively reversed the financial panic taking place. A full-blown financial crisis would have made the COVID-19 recession far worse, deeper and longer. Markets reacted extremely positively, and companies, over the next nine months, raised an unprecedented $2 trillion in debt and equity at good prices, dramatically improving their financial condition and balance sheets.

Congress, importantly, also took immediate action to provide fiscal stimulus, the Coronavirus Aid, Relief, and Economic Security Act, also known as the CARES Act, totaling $2.2 trillion. This largely consisted of stimulus payments to individuals, enhanced unemployment insurance and loans, which could be forgiven, to small businesses. Please see the sidebar on page 36 for more detail on the Paycheck Protection Program.

Suffice it to say while real damage was done, the size and scope of these programs dramatically reversed the deterioration of the economy and unemployment, which hit 14.8% in April 2020 but made steady progress back to 6.7% by the end of the year – though this number underrepresents the damage that was done because of the large deterioration in labor force participation and the potential permanent loss of many small businesses.

One last important point: The speed and breadth of the programs were critical, and there is no way they could have been done perfectly. While it always makes sense to do a thorough postmortem review and to properly punish those who deliberately misuse emergency government programs, we should try to avoid excessive finger-pointing.

2. Banks entered this recent crisis in great shape and were part of the solution coming out.

The banking system was in excellent shape going into this crisis, and just about every bank took extensive actions to help their customers, employees and communities. The sidebar on page 37 details how JPMorgan Chase responded to support various stakeholders. It's important to note that many of these programs went far beyond what was requested by the government.

Of course, banks are always affected, for the better and worse, by just about everything that impacts the economy. Some have said that banks were helped, or even bailed out, by the government's actions. The government took these actions to help those who needed it – not to help the banks. These actions helped just about everyone – and they had a collateral benefit to the banks.

The Paycheck Protection Program

The Paycheck Protection Program, while not perfect, was a tremendous achievement.

In the spring of 2020, lenders had seven frantic days to get ready to accept applications for $349 billion in loans through the newly created Paycheck Protection Program. Often known simply as PPP, the federal program provided desperately needed cash to help businesses sustain payroll so their employees could put food on their tables and make their rent or mortgage payments. If a business used the loan to pay its employees and certain other permitted expenses, the Small Business Administration would fully forgive the loan.

Not surprisingly, there were bumps in the road as the SBA and lenders worked around the clock to establish and implement specific rules and processes, as well as develop the technology to support the program. Ultimately, though, it was a lifesaver for millions of U.S. businesses. In Business Banking, we processed more than four years' worth of loan applications in 23 days — a combination of digital prowess and the efforts of more than 1,000 people who manually reviewed applications and contacted clients after hours and on weekends to correct errors.

All told, in 2020, we funded over 280,000 PPP loans for more than $32 billion — the most of any lender — to companies that employ a total of 3+ million people. We are especially proud that we helped some of America's smallest businesses: childcare centers, social service agencies, schools, grocery stores, physicians' offices and restaurants. In fact, half of our loans went to companies with fewer than five employees. And we're fully engaged in the 2021 edition of PPP: Through March 2021, we've funded in excess of 130,000 loans for more than $10 billion — again, the most of any lender. And more than 90% of those loans went to businesses with fewer than 25 employees.

Given that most small businesses keep just two weeks of cash on hand, the government and lenders had to act with exceptional speed. What they created in record time was unprecedented and really quite extraordinary. The program accomplished what it set out to do. Together, we helped many small businesses survive and kept a painful recession from becoming far, far worse.

JPMorgan Chase Helped Thousands of Small Businesses in 2020

more than
280K
loans funded

more than
$32B[1]
in relief

more than
3M
employee jobs

$112K
average loan amount

~80%
of loans were for **less than $100K**

~80%
of loans went to businesses with **fewer than 10 employees**

~50%
of loans went to businesses with **fewer than 5 employees**

~30%
of loans went to businesses in **majority-minority census tracts**

1 $28 billion excluding Small Business Administration safe harbor refunds.

JPMorgan Chase: Supporting the "Real Economy" during the COVID-19 Crisis

To support the "real economy" — our customers, clients, employees and communities impacted by the global crisis — JPMorgan Chase has brought the full force of its core business and expertise.

In 2020, we raised capital and provided credit totaling **$2.3 trillion for customers and businesses of all sizes**, helping them meet payroll, avoid layoffs and support operations.

Through March 2021, we've provided **more than $40 billion to more than 400,000 small businesses** through the PPP program.

Since March 13, 2020, we've delayed payments and refunded fees for customers on **over 2 million accounts**.

We committed **$250 million** in global business and philanthropic initiatives, with particular focus on the most vulnerable people and communities hardest hit by the pandemic.

Our ability to do all this, and more, is the result of the actions and investments we've made over many years to build a strong and resilient company.

CUSTOMERS

- Offered delayed payments and forbearance options for around 2 million mortgage, auto and credit card accounts representing $85 billion in loans
- Refunded **$120 million in fees** on consumer deposit accounts for nearly 1 million customers
- Streamlined relief benefit enrollment and renewal processes and required no evidence of hardship

SMALL BUSINESSES

- Supported distribution of funds through the SBA PPP
- Provided **$18 billion** in new and renewed credit for U.S. small businesses (outside of PPP) in 2020
- Delayed payments for **21,000** loans and refunded **$24 million** in deposit fees for more than 130,000 small businesses
- Committed **$350 million** to support underserved small businesses, including Black and Latinx companies

EMPLOYEES

- **Continued to pay employees** for regularly scheduled hours even if hours were reduced by temporary site closures or other circumstances
- Provided a **special payment** to select full- and part-time employees whose role required continuing on-site work
- Enhanced support for working parents, including childcare and tutoring
- Expanded access to medical resources

LARGE EMPLOYERS AND ESSENTIAL SERVICES

- Helped many large employers **avoid layoffs and furloughs** for countless Americans
- Extended funding to nonprofit and government services, such as hospitals and transportation, to support **continued essential services for their communities**
- Provided **$865 billion** in credit for corporations that, collectively, employ tens of millions of workers

LANDLORDS AND RENTERS

- Provided more than **$70 million** in loan relief through nearly 1,500 multifamily loans, affecting housing for more than 27,000 tenants
- Offered landlord borrowers periods of interest-only payments, deferral of mortgage payments and the ability to capitalize prior deferred payments over two years or more
- Provided payment assistance to millions of Chase customers, freeing up capital for rent or other critical expenses

COMMUNITIES

- **Committed $200 million** to help underserved small businesses and nonprofits access low-cost capital through community partners
- **Committed $50 million** to address public health and long-term economic challenges resulting from COVID-19

But many companies, large and small, may not have survived had JPMorgan Chase not taken extraordinary efforts to help them.

While the government's actions were a benefit to banks, there is no question the banks were able to weather a terrible storm while reserving extensively for potential future loan losses. Importantly, the Fed conducted two additional severely adverse Comprehensive Capital Analysis and Review (CCAR) stress tests, which projected bank results under extreme unemployment, GDP loss, market disruption and a smaller government stimulus. The result showed that banks could withstand this extreme outcome while continuing to finance the economy. I also have very little doubt that if the severely adverse scenario played out, JPMorgan Chase would perform far better than the stress test projections.

3. The confusing interplay of monetary, fiscal and regulatory policy continues through recessions.

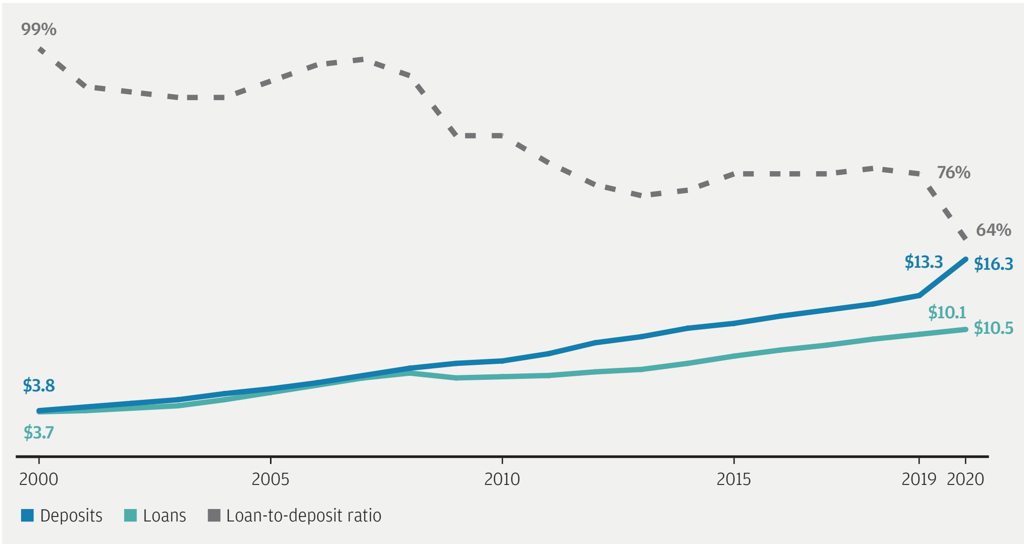
Prior to the Great Recession in 2008, banks operated under a completely different regulatory, capital and liquidity regime. Banks held less capital (for many banks, it was too little), they left virtually no money deposited at the Fed, they generally lent out an amount roughly equal to their deposits and they had less liquidity, mostly in the form of Treasuries and mortgages (the securities portfolio was also used for interest rate exposure). This completely changed with Dodd-Frank (the Dodd-Frank Wall Street Reform and Consumer Protection Act) capital/liquidity rules in 2010, and it changed again dramatically with the COVID-19 recession of 2020.

The quantitative easing and fiscal stimulus taken after the Great Recession were partially offset by changes in regulatory policy.

As the chart on the next page illustrates, until the Great Recession of 2008, banks were generally able to lend out 100% of their deposits. In addition, they maintained liquidity in the form of securities. Dodd-Frank created a new rule called the liquidity coverage ratio (LCR), which required banks to permanently "lock up" a lot more liquidity and also created more restrictions around what counted as liquidity. The new regulations generally limited liquidity sources to cash deposits at central banks, Treasuries and a portion of government-guaranteed securities. It should be noted that while the historic bank reserve requirement is now zero, it has effectively been replaced with LCR, which is substantially the same thing as a reserve requirement but far more stringent. In addition, we obviously saw an increase in capital requirements and their complexity. Taken together, these changes resulted in the loan-to-deposit ratio dropping to approximately 75% – and it is likely to stay approximately there unless regulations are changed. While loans are, of course, subject to supply and demand, this is a structural reduction that was clearly due to regulatory changes. The effect was also enduring: As banks phased in these rules, this new restriction limited their ability to extend credit, and that, in turn, may have held back the economy from reaching its maximum potential output.

To understand this in more specific terms, look at the chart on the next page that shows, prior to the COVID-19 recession, banks had $13 trillion in deposits and only $10 trillion in loans. This $3 trillion in "lost" lending (this is, in part, directly related to the new liquidity requirements) may very well have contributed to the secular stagnation experienced in the last decade. If $3 trillion more had been lent, the banking sector would have fostered a more dynamic economy, and GDP growth over the past decade would almost certainly have been faster.

Bank Deposits and Loans through Time
($ in trillions)



Source: Federal Reserve H.8 data for all commercial banks in the U.S.

If you aren't convinced yet – consider how surprising it is that $3.4 trillion of quantitative easing (QE) and deficit spending averaging 5% of GDP over the 10-year period after the Great Recession did not result in higher GDP growth and possibly higher inflation. As a reference point, in the mid-1970s, there was ***no*** QE – and deficit spending hit 4%, which many people thought was the main reason for the overheated economy and inflation, which, at its peak, was over 12%.

And so why did all this quantitative easing not have the effect you would have thought? QE was never effectively tried prior to the Great Recession, and it is different from fiscal spending. QE is the purchase of securities from security holders who tend to reinvest in the same or similar securities. Clearly, QE reduces interest rates, pushes up asset prices and creates some spending (through the wealth effect). QE, on the one hand, may have some inflationary effects, mostly on asset prices. But on the other hand, it also may have some disinflationary effects – lower interest rates themselves, which is an input cost for businesses, and lower income to savers – which may reduce consumption and may increase the propensity to save (e.g., we may need to set aside more money to protect retirement income). And finally, in this most recent round of QE, much of the money simply made a round trip – because of the new liquidity rules, it ended up back as deposits at the Fed, not as loans.

The fiscal deficit is, pure and simple, giving various individuals and institutions money to spend – which they will spend over time. All things being equal, this is, and always has been, inflationary. Of course, in a recessionary environment with low inflation, like after the Great Recession, this might be precisely what is needed without causing overheating or excessive inflation.

My own view: The anemic growth in the decade after the Great Recession was due to some of the factors I mention above but also due to many of the public policy failures that I outline in the next section.

The QE and deficit-spending response to the COVID-19 pandemic is of a completely different magnitude and without some of the offsetting drags that trailed the Great Recession.

The chart below shows that for the United States, QE actual in 2020 and QE projected for 2021 total $4.6 trillion or almost 25% of GDP. Deficit spending for the two years combined is projected to total $6.8 trillion, or about 35% of GDP. These numbers are far larger than the first couple of years of the Great Recession, and it is important to note that the rest of the world is showing similar actions, compounding the global effect.

As another reference point, during World War II the deficit hit almost 30%, and it averaged 16% over the five-year period from 1941 to 1946. This period did not create lasting inflation as the circumstances were completely different – we were coming out of a deep depression, and the money was spent financing a war.

Circumstances and starting points matter. Before the Great Recession, you had an overleveraged financial system and overleveraged consumers. For years after the Great Recession, there was a massive deleveraging in the United States by consumers, many investors and financial institutions, somewhat due to regulations. Today, this is not the case.

In the United States, the average consumer balance sheet is in excellent shape. The consumer's leverage is lower than it has been in 40 years. In fact, prior to the last $1.9 trillion stimulus package, we estimate that consumers had excess savings of approximately $2 trillion. Corporations also have an extraordinary amount of cash on their balance sheet, estimated to be approximately $3 trillion. And the financial system and investors have already adopted more conservative leverage requirements due to regulations – so they have very little need to de-leverage. The QE in this go-around will have created more than $3 trillion in deposits at U.S. banks, and, unlike the QE after the Great Recession, a portion of this can be lent out.

I have little doubt that with excess savings, new stimulus savings, huge deficit spending, more QE, a new potential infrastructure bill, a successful vaccine and euphoria around the end of the pandemic, the U.S. economy will likely boom. This boom could easily run into 2023 because all the spending could extend well into 2023. The permanent effect of this boom will be fully known only when we see the quality, effectiveness and sustainability of the infrastructure and other government investments. I hope there is extraordinary

Quantitative Easing and Deficit Spending of G4 Nations

	Quantitative Easing				Deficit Spending			
	2020		2021 Estimate		2020		2021 Estimate	
	$T	% of GDP	$T	% of GDP	$T	% of GDP	$T	% of GDP
U.S.	3.2	17%	1.4	7%	3.1	17%	3.7	19%
Other G4 nations	4.5	22%	2.0	9%	2.9	14%	1.7	8%
Total G4 nations	**7.7**	**20%**	**3.4**	**8%**	**6.0**	**15%**	**5.4**	**13%**

T = Trillions
GDP = Gross Domestic Product

discipline on how all of this money is spent. Spent wisely, it will create more economic opportunity for everyone.

While equity valuations are quite high (by almost all measures, except against interest rates), historically, a multi-year booming economy could justify their current price. Equity markets look ahead, and they may very well be pricing in not only a booming economy but also the technical factor that lots of the excess liquidity will find its way into stocks. Clearly, there is some froth and speculation in parts of the market, which no one should find surprising. As Captain Louis Renault said in Casablanca, “I’m shocked, shocked to find that gambling is going on in here!”

Conversely, in this boom scenario it’s hard to justify the price of U.S. debt (most people consider the 10-year bond as the key reference point for U.S. debt). This is because of two factors: first, the huge supply of debt that needs to be absorbed; and second, the not-unreasonable possibility that an increase in inflation will not be just temporary.

In 2020, the Federal Reserve bought essentially 100% of all new issuance of Treasury notes and bonds. In 2021, with the Fed’s current QE commitments, the market (not the Fed) will have to absorb $2.2 trillion in government debt – approximately 85% of which will be in longer duration maturities. This is a large number, even for the United States. We should also remember that many, if not most, buyers of U.S. debt are essentially required to buy; i.e., foreign central banks, banks, insurance companies, foreign exchange reserve managers and duration hedgers. A notable exception is investors who buy the 10-year bond to take risk-off positions. However, all of these buyers will seek out alternatives – and there are always some – if they become worried about the long-term, sustainable value of Treasury bonds. And remember, annual inflation is already running at 1.7%.

We don’t know what the future holds, and it is possible that we will have a Goldilocks moment – fast and sustained growth, inflation that moves up gently (but not too much) and interest rates that rise (but not too much). A booming economy makes managing U.S. debt much easier and makes it much easier for the Fed to reverse QE and begin raising rates – because doing so may cause a little market turmoil, but it will not stop a roaring economy.

And, of course, being who we are, while we are going to hope for the Goldilocks scenario – and we think there is a chance for that to happen – we will anticipate and be prepared for two other negative scenarios: 1) the new COVID-19 variants may be more virulent and resistant to the vaccine, which could obviously reverse a booming economy, damage the equity markets and reduce interest rates as there is a rush to safety, and 2) the increase in inflation may not be temporary and may not be slow, forcing the Fed to raise rates sooner and faster than people expect.

Much of the stimulus may very well hit when the economy is doing quite well. During the pandemic, it was appropriate that fiscal and monetary policy be fairly well-coordinated – working in concert to counter the pandemic-related downturn. In an inflationary case, fiscal and monetary policy may very well be at odds. I am reminded of when Paul Volcker effectively raised interest rates by 200 basis points on a Saturday night. Also in this case, the cost of interest on U.S. debt could go up fairly dramatically making things a little worse. Rapidly raising rates to offset an overheating economy is a typical cause of a recession. One other negative: In this case, we would be going into a recession with an already very high U.S. deficit.

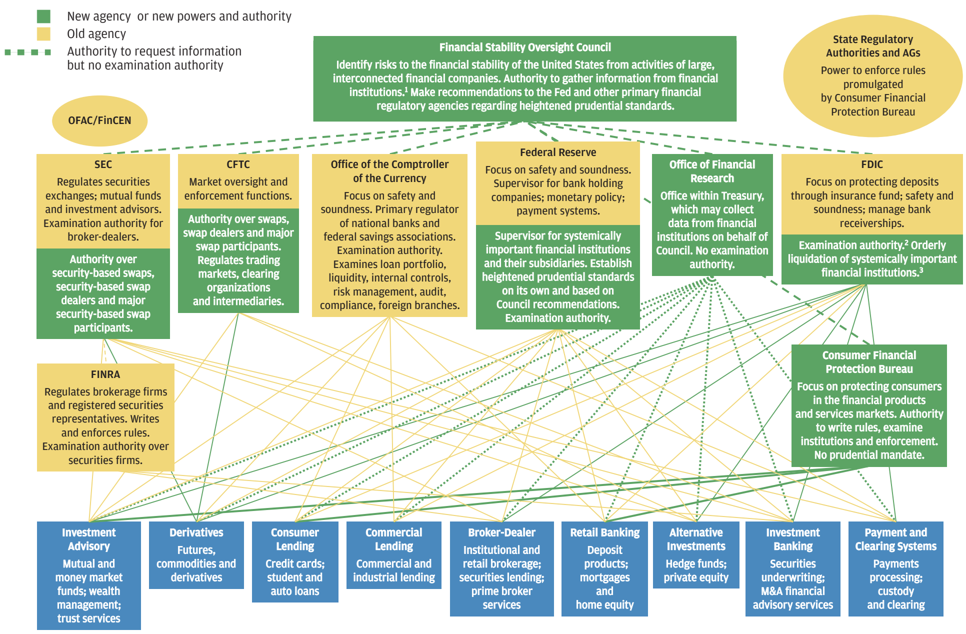
The government did the right thing by moving extraordinarily quickly to stop the COVID-19 recession from being extremely damaging. If we spend this money wisely, react quickly to changing circumstances and fix many of the public policy failures that are outlined in the next section, we can build a stronger and more equitable nation.

4. The regulatory system needs to keep up with the changing world — and finish Dodd-Frank to get it right.

We have a lot of experienced and hard-working regulators in the United States and globally. But I'm afraid that we gave them a virtually impossible job. The financial world is complex and rapidly changing. We gave them a regulatory system that is slow and backward-looking. A few years ago, my letter to shareholders included a "spaghetti chart" to illustrate how complex the regulatory environment in the United States had become. We're republishing it here to make a few points. We have multiple regulators with overlap-

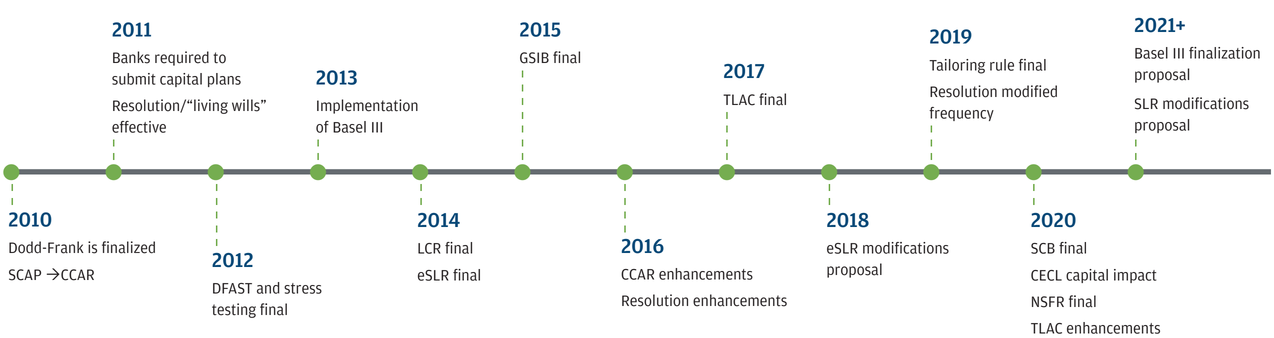
Complexities of the Regulatory System

Reprinted from the 2011 Chairman and CEO Letter to Shareholders



Note: Green lines from SEC and CFTC represent enhanced authority over existing relationships
This chart assumes these activities are conducted in a systemically important bank holding company (BHC)
For footnoted information, refer to page 67 in this Annual Report.

Timeline of U.S. Capital and Liquidity Regulation



CCAR = Comprehensive Capital Analysis and Review
CECL = Current Expected Credit Losses
DFAST = Dodd-Frank Act Stress Tests
eSLR = Enhanced Supplementary Leverage Ratio
GSIB = Global Systemically Important Banks
LCR = Liquidity Coverage Ratio
SCAP = Supervisory Capital Assessment Program
SCB = Stress Capital Buffer
NSFR = Net Stable Funding Ratio
TLAC = Total Loss-Absorbing Capacity

ping rulemaking, oversight and examination authorities. All of the agencies are independent, and there is no one real authority that can coordinate all the moving parts and bridge differences. The Financial Stability Oversight Council, chaired by the U.S. Secretary of the Treasury, is really just a convening body – no one agency has the ability to adjudicate decisions. Any one agency can hold up major decisions – and this unnecessarily politicizes and slows the regulatory policymaking process.

We don't give our regulators the political cover they need. Proper regulation requires a finely tuned, thoughtful and often-changing balance between competing needs and risks. This, in particular, puts the Federal Reserve, the key oversight regulator, in a terrible position. Monetary policy is so critical to our country that the Fed must necessarily subjugate and sacrifice regulatory policy to achieve its monetary policy goals.

That said, I will look at the regulatory system from the regulators' point of view and describe what I would want to do if I were in their shoes. Let's start with basic regulatory principles:

- Ensure that safety and soundness come first but not at the expense of maximum long-term growth
- Keep the banks funding their clients through the inevitable downturns and crises
- Create a fairly level international playing field (we don't need to see perfection here, but it needs to be fair)
- Constantly assess emerging risk to the system

Dodd-Frank worked.

While Dodd-Frank included a lot of things that had nothing to do with safety and soundness and the Great Recession, to be fair, it accomplished its basic objectives – higher levels and quality of capital and liquidity, more stringent stress testing, strong resolution capabilities and better governance that created a far healthier banking system, which we've just seen. Nothing like what happened to the banks in the Great Recession can happen again.

But it's bogged down in the past — it needs to focus on the future.

It is obvious, however, that we are bogged down. Ten years after the financial crisis, we still have not put the finishing touches on Basel III (aka Basel IV). And it's not clear when it's finished if it will be an ***international*** level playing field. In addition, there are many things that need to be recalibrated. For example, we have not corrected mortgage rules to make mortgages more accessible to more Americans.

Not only are we slow in dealing with the past, but it distracts us from dealing with the future. There are serious emerging issues that need to be dealt with – and rather quickly: the growth of shadow banking, the legal and regulatory status of cryptocurrencies, the proper and improper use of financial data, the tremendous risk that cybersecurity poses to the system, the proper and ethical use of AI, the effective regulation of payment systems, disclosures in private markets, and effective regulations around market structure and transparency (payment for order flow, high-frequency trading and exchanges).

We need to actively decide what we want in the regulatory system.

Regulators need to decide what they want included in the regulatory system – and what they don't want included. They can do this by product and by service; however, to do so, they need to apply the same rules to everyone. We need to recognize that if a regulated system has higher capital requirements than the market demands, then the product will move outside of the regulated system. If we are going to do this, we should do it deliberately and with ***aforethought***. Today, there are extensive differences between the requirements placed on banks versus nonbanks engaging in the same activity. I will give one example of the impact of market capital versus regulatory capital. Under standardized capital, whether we make a AA loan or a BB loan, approximately 10% of equity capital is required to support it (plus other expensive debt). In the nonbank market, institutions and securitizations can possibly finance the investment grade debt effectively with 5% equity capital. Ironically, this pushes high-grade credit out of banks and incentivizes more risky lending.

We need to calibrate how much liquidity and capital should be required for banks in a way that balances what you want in the regulatory system while maximizing both safety and soundness of banks and the growth of the economy.

One day, someone is going to ask why the banking system has $4 trillion either in the form of cash or deposits at the Fed or as Treasury securities. Shouldn't we use some of this liquidity to help the economy grow? It's a good question, and I've yet to see agreement on the right answer. Under the old regulatory regime, banks could turn to the Fed's discount window to create a tremendous amount of liquidity by pledging their securities and loans at times of surging demand – it no longer works this way. In today's regime, using the discount window is so stigmatized that far fewer banks consider it a viable option, meaning that liquidity never reaches the banking system and, by default, the broader economy.

This calibration will be one of the main factors in determining what ends up in the regulatory system – and what doesn't. It is a fine balance. Too much capital and liquidity could possibly slow down the economy and push lots more to the shadow banking system. Too little capital and liquidity could make banks riskier and more subject to failure. And remember, products and services inside a well-regulated system will generally have higher scrutiny, transparency and reporting supporting them. This decision will be a key factor in determining the probability of a large bank's failure, which raises the question ...

Should large banks be allowed to fail?

It is very easy to take one side of this argument. After the Great Recession of 2008, the answer was generally "never again!" The system was rebuilt to minimize the odds so that no large bank would ever fail again – regardless of the consequences. The Fed has to decide if it is willing to accept a large bank failure, provided that failure isn't going to bring the market down or put the average customer in harm's way. To me, the obvious answer should be "yes." The market can easily absorb a bank failure, particularly since the government now has the tools to have an orderly unwind of even the largest financial institutions. In addition, if you look at the market price of bank debt, failure is priced in (just like all other corporates) – bank debt and bank preferreds are not cheap. The market can deal with the failure of bank debt – in fact, resolution maximizes the odds of recovering your money. The cost to the economy of having fail-safe banks may not be worth it. Dodd-Frank accomplished two very important things. First, the chance of a bank failure is dramatically lower. Second, and maybe more important, a failing large bank can be managed in a way that it does not affect the economy any more than any other large company that fails. A yoke that is too tight may throttle the economy.

Finally, banks need to be allowed to properly manage their capital to maintain any kind of premium in the market. Proper capital management means consistent dividends, the ability to reinvest in your business and incentives to buy back stock when it's cheap – not when it's expensive. The procyclicality of both accounting and bank regulatory management virtually assures the opposite. It is one of the reasons that bank stocks may not trade particularly well.

We need to decide who we want to intermediate in the markets when there is stress.

Several times in the last few years you have seen dislocation in our repo markets, Treasury markets and, in March 2020, all of our markets. In many cases, the Fed has had to step in to intermediate and help finance these markets.

Part of the reason for this is the probably unintended confluence of new regulations. We now manage our bank to try to maximize and optimize across more than 20 capital and liquidity factors (we run the bank to serve customers, but we maximize capital and liquidity requirements for economic reasons). But the confluence of three main constraints (the LCR, the supplementary leverage ratio (SLR) rule and G-SIFI) created red lines that we cannot cross. Over the past two years, we saw significant dislocation in the U.S. Treasury (UST) repo markets, which were certainly linked to these regulations. At those moments of stress, by simply reducing the regulatory cost of UST repo, we could have supplied hundreds of billions of dollars in additional UST financing to the market (this activity would be properly collateralized and very safe) – and remember, we are only one market player. In addition, when the market had high stress, we could also have lent hundreds of billions of dollars against corporate bonds, mortgage securities or equities to help market participants sell or deleverage in an orderly way. We did much of this in the Great Recession, but today's new rules precluded us from taking these actions this time. JPMorgan Chase was essentially "the discount window" for the marketplace before Dodd-Frank – we would lend freely against good collateral just as the central bank was the discount window for banks in a crisis. This system is broken.

The main point is that if large players cannot intermediate in markets because of regulatory requirements, the Fed will have to do it – and far more frequently than just in the worst crises. I do not believe that this is good, long-term central bank policy.

Finally, more thought should be given to how stress tests and buffers can and should be used in a financial crisis. The main question is when you are in the depths of a crisis, how do you stress test without going down a rabbit hole? And is that the time when bank boards are going to allow people to reduce their capital buffers? Plain and simple, countercyclical buffers do not work.

Public rhetoric and the politicization of complex regulations aside, proper design of these systems should be done to maximize the health of the U.S. economy for all. Overall, the banks – and, importantly, your bank – stand ready to do more.

5. The pandemic accelerated remote working capabilities, which will likely carry forward.

While we are continually preparing for multiple business resiliency scenarios (i.e., data center failures, closures of cities, major storms, even pandemic planning), we never prepared for a global pandemic, which also entailed a large-scale shutdown of the global economy. And while many of our employees, particularly in the branches, continued to work on our premises every day, it was amazing how quickly we were able to set up the technology – from call centers and operations to trading and investment banking – to enable our employees to work from home. We learned that we could function virtually with Zoom and Cisco and maintain productivity, at least in the short run.

The COVID-19 pandemic changed the way we work in many ways, but, for the most part, it only accelerated ongoing trends. And while working from home will become more permanent in American business, it needs to work for both the company and its clients. I believe our firm's on-site versus remote work will sort out something like this:

- Generally speaking, we envision a model that will find many employees working in a location full time. That would include nearly all of the employees in our retail bank branches, as well as jobs in check processing, vaults, lockbox, sales and trading, critical operations functions and facilities, amenities, security, medical staff and many others.

- Some employees will be working under a hybrid model (e.g., some days per week in a location and the other days at home).
- And a small percentage of employees, maybe 10%, will possibly be working full time from home for very specific roles.

In all cases, these decisions depend upon what is optimal for our company and our clients, and we will extensively monitor and analyze outcomes to ensure this is the case. Of course, we will also continue to reopen following health authority and government guidelines and our own established processes. Remote work ***will change*** how we manage our real estate. We will quickly move to a more "open seating" arrangement, in which digital tools will help manage seating arrangements, as well as needed amenities, such as conference room space. As a result, for every 100 employees, we may need seats for only 60 on average. This will significantly reduce our need for real estate.

The virtual world also presented some serious weaknesses. For example:

- Performing jobs remotely is more successful when people know one another and already have a large body of existing work to do. It does not work as well when people don't know one another.
- Most professionals learn their job through an apprenticeship model, which is almost impossible to replicate in the Zoom world. Over time, this drawback could dramatically undermine the character and culture you want to promote in your company.
- A heavy reliance on Zoom meetings actually slows down decision making because there is little immediate follow-up.
- And remote work virtually eliminates spontaneous learning and creativity because you don't run into people at the coffee machine, talk with clients in unplanned scenarios, or travel to meet with customers and employees for feedback on your products and services.

Finally, we still intend to build our new headquarters in New York City. We will, of course, consolidate even more employees into this building, which will house between 12,000 to 14,000 employees. We are extremely excited about the building's public spaces, state-of-the-art technology, and health and wellness amenities, among many other features. It's in the best location in one of the world's greatest cities.

VI. PUBLIC POLICY

AMERICAN EXCEPTIONALISM, COMPETIVENESS AND LEADERSHIP: CHALLENGED BY CHINA, COVID-19 AND OUR OWN COMPETENCE.

Our nation is clearly under a lot of stress and strain from various events: the COVID-19 pandemic, of course, which has taken more American lives than the total lost in World War II, the Korean War and the Vietnam War combined, resulting in acute economic distress for millions more; the brutal murder of George Floyd and the racial unrest that followed; the divisive 2020 presidential election, culminating in the storming of the Capitol and the attempt to disrupt our democracy; and the seemingly inevitable, but nonetheless alarming and unnerving, rise of China, threatening America's global preeminence.

America has faced tough times before – the Civil War, World War I, the U.S. stock market crash of 1929 and the Great Depression that followed, and World War II, among others. As recently as the late 1960s and 1970s, we struggled with the loss of the Vietnam War, political and racial injustice, recessions, inflation and the emergence of Japan as an economic power. But in each case, America's might and resiliency strengthened our position in the world, particularly in relation to our major international competitors. This time may be different.

China's leaders believe that America is in decline. They believe this not only because their country's sheer size will make them the largest economy on the planet by 2030 but also because they believe their long-term thinking and competent, consistent leadership have outshone America's in so many ways. The Chinese see an America that is losing ground in technology, infrastructure and education – a nation torn and crippled by politics, as well as racial and income inequality – and a country unable to coordinate government policies (fiscal, monetary, industrial, regulatory) in any coherent way to accomplish national goals. Unfortunately, recently, there is a lot of truth to this.

Perhaps we were lulled into a false sense of security and ***complacency*** in the last two decades of the 20th century as we enjoyed relative peace in the world and a position of global dominance, validated by the fall of the Soviet Union. During those two decades, we experienced relatively uninterrupted and strong growth, resulting in broad improvement in income for almost all Americans. That stability was shattered by the September 11, 2001, terrorist attacks, which were followed by nearly 20 years of overseas combat for American soldiers. Economic growth over the last two decades (including the Great Recession of 2008) has been painfully slow, with increasing income inequality and virtually no growth in income at the lower rungs of the economic ladder. The COVID-19 pandemic, for which our nation was totally unprepared, capped by the horrific murder of George Floyd, shoved into the spotlight our country's profound inequities and their devastating effects – inequities that had been there for a long time. Once more, our country suffered, and its least well-off individuals suffered the most. Unfortunately, the tragedies of this past year are only the tip of the iceberg – they merely expose enormous failures that have existed for decades and have been deeply damaging to America.

Today, the United States and other countries around the world are grappling with many other critical issues. To name just a few: capitalism versus other economic systems; access to healthcare; immigration policy; the role of business in our society; and how, or even whether, the United States intends to exercise global leadership. Many Americans have lost faith in their government's ability to solve these and other problems – in fact, most people would describe government as ineffective, bureaucratic and often biased. Almost all institutions – governments, schools, media and businesses – have lost credibility in the eyes of the public. And perhaps for good reason: Many of our problems have been around for a long time and are not aging well. Politics is increasingly divisive, and government is increasingly dysfunctional, leading to a number of policies that simply don't work.

Americans know that something has gone terribly wrong, and they blame this country's leadership: the elite, the powerful, the decision makers – in government, in business and in civic society. This is completely appropriate, for who else should take the blame? And people are right to be angry and feel let down. Our failures fuel the populism on both the political left and right. But populism is not policy, and we cannot let it drive another round of poor planning and bad leadership that will simply make our country's situation worse.

To explain how and why this all happened, we tend to look for convenient reasons – some blame greed and "short-termism," some blame immigration and others blame the uncontrolled effects of new technologies, trade or China. Many of our citizens are unsettled, and the fault line for all this discord is a fraying American dream – the enormous wealth of our country is accruing to the very few. In other words, the fault line is inequality. And its cause is staring us in the face: our own failure to move beyond our differences and self-interest and act for the greater good. The good news is that this is fixable.

Some Americans think that the country's can-do attitude, innovative entrepreneurism and great resiliency, which served us so well in prior crises, still exist and will re-emerge to help us self-correct. At the other end of the spectrum, there are those who think we are simply a great empire whose glory days have passed and we should cede global leadership to China. These advocates would add that democracy itself does not work – our failures being prime evidence of democracy's ineffectiveness. Both views fall short.

The problems that are tearing at the fabric of American society require all of us – government, business and civic society – to work together with a common purpose. And that common purpose should be our ongoing quest to be a more perfect union and to maintain America's preeminent role in the world. To do this, we need to demand more of both ourselves and of our leaders. And we can't fix our problems if we don't ***acknowledge*** them and the damage they have caused. Hoping that things will self-correct is not a strategy – working on solutions is.

One last thing: The raw power of America is often represented by our incredible military might. In reality, however, our raw power emanates from our economic vitality and strength, which have always been predicated upon freedom, free enterprise, and the promise of increasing equality and opportunity for all. If income inequality is the fault line, returning to the basic morality at the core of America's founding principles can lead us to a common purpose and help bind us together again.

1. Laying out the problems is painful.

What actually are our problems? If we can agree on what they are, as well as their symptoms and their causes, then we can start to address them. I hope you find what I'm about to say as ***painful*** as I do.

While the average American high school graduates approximately 85% of its students, many of our inner city schools don't graduate half of their students and often don't give our children an education that leads to a livelihood. No one can claim that the promise of equal opportunity is being offered to ***all*** Americans through our education systems. Our healthcare system is increasingly costly – now over $11,000 per person, more than twice our global competitors. In addition, almost a decade after the adoption of the Affordable Care Act, over 30 million Americans still don't have any medical insurance. And, shockingly, life expectancy has gotten worse – particularly for poor and minority communities – nutrition and personal health aren't being taught at enough schools, and obesity, a main driver of diabetes, cancer, stroke, heart disease and depression, has become a national scourge. Our education and health issues come together in this alarming statistic: Seventy percent of today's youth (ages 17-24) are not eligible for military service, essentially due to a lack of proper education (basic reading and writing skills) or health issues (commonly obesity or diabetes).

Of course, there's a litany of other problems. I'll give some examples, but if I tried to address them all, this letter would become a book. We have a litigation and regulatory system that is costly, crippling small businesses with red tape and bureaucracy; terrible infrastructure planning and investment; and huge waste and inefficiency at both the federal and state levels. We have failed to put effective immigration policies in place; our social safety nets are poorly designed; and we fail to properly fund pension obligations. The growth in American incomes from 1980 to 2000 was healthy, and for the lowest and second-lowest quintiles, it was 18% and 19%, respectively, both cumulatively and inflation-adjusted. Growth slowed dramatically in the decades from 2000 to 2019, but it was the worst for the lower two quintiles, which were up only 1% and 8%, respectively. Income inequality has gotten worse. Nearly 30% of American workers earn less than $15 an hour, which is barely a living wage even if two adults are working in a family of four. Another key driver of growth has dropped over the past 20 years: Labor force participation of prime working age men peaked at 92% in 2000; in 2020, it was 88%. If we returned to the peak year, 2 million more men would be working. (An estimated 1.6 million Americans were addicted to opioids in 2019, which some studies show is one of the major reasons why men aged 25-54 are permanently out of work.)

In addition, 30% of Americans don't have enough savings to deal with unexpected expenses that total as little as $400, such as medical or car repair bills. This obviously adds to the economic anxiety of our lower-paid people.

Trillions of government dollars were spent on social programs even before these latest crises – clearly, our broken systems leave too many of our fellow citizens trapped. Simply put, the social needs of far too many of our citizens are not being met. And, surprisingly, approximately 25% of those eligible for various types of federal assistance programs don't get the help to which they're entitled.

Governments, both federal and state, fight to keep military bases open that we don't need and Veterans Affairs hospitals functioning that are broken – making the military more costly and less effective. Our shortcomings are not just about inefficiencies; they border on being immoral. In an incredibly depressing story, former Secretary of Defense Bob Gates describes how Congress took years longer than it should have to approve the building of U.S. Army personnel carriers that we needed in Iraq and Afghanistan to protect our soldiers from improvised explosive devices. While we dallied, many of our soldiers died or received terrible lifelong injuries. Although the government does certain things well, no one believes that it does most things well or that it gives an honest accounting of what it does do. We merely throw up our hands in frustration.

All of this broken policy may explain why, over the last 10 years, the U.S. economy has grown cumulatively only about 18%. Some think that this sounds satisfactory, but it must be put into context: In prior sharp downturns (1974, 1982 and 1990), economic growth was 40% over the ensuing 10 years. Had we had 20% more growth, our GDP would have added $3 trillion, which certainly would have driven wages higher and given us the wherewithal to broadly build a better country. Tax receipts would have been higher, and we easily could have afforded better social safety nets.

Anemic growth may account for our worsening productivity and income inequality. Included among the common explanations for this growth is that "secular stagnation" is the new normal or that there is a "savings glut." Faster growth would not only have spurred higher incomes, more jobs and increased opportunities but also would have created far more consumption and increased demand for investment, eliminating any potential "savings glut" or secular stagnation.

It is hard to look at these issues in their ***totality*** and not conclude that they have a significant negative effect on the great American economic engine. My view is if you add it all up, this dysfunction could easily have been a 1% drag on our growth rate. And, unfortunately, our extraordinary strengths as a nation cover up our weaknesses. This is the new normal – and it does not need to be this way. We should first look at how and why we became so inept at public policy.

2. Why did — and didn't — these failures happen?

Before we discuss how to fix our problems, it would be helpful to understand *why* some of them happened – and why we failed to design and implement good public policies. Clearly, increasing political partisanship – possibly structural – deserves part of the blame, but I'll leave that subject to others. It's also clear that our failings are not deliberate since no one wants these terrible outcomes. What has changed, however, is the scale of our challenges: They are bigger, global and increasingly complex, and they are happening in a world that is transforming itself far more rapidly than before. History teaches us that as a successful society ages, the common social purpose that binds it becomes less important. Instead, the society becomes more balkanized and often is crippled by powerful agendas of special interest groups – even if they all have good intentions. Let's examine some of the reasons why we have failed to design effective policies.

We are hampered by short-term thinking that's never comprehensive.

As a nation, we don't think long term, which hampers our ability to design proper policies that are based on thoughtful analysis. In my view, we don't perform the deep analysis required to fully understand what we're trying to solve. One of the reasons for this is that our outlook is often too limited; i.e., examining only how things have changed year-over-year or even quarter-over-quarter. We frequently fail to look at trends over a multi-year period or across decades – and we miss the forest for the trees.

When you step back and take a ***comprehensive multi-year view*****, considering the situation in its *****totality*****, it is the *****cumulative effect*** of many of our policies that has resulted in our present-day failures.

We are over-reliant on economic models and use them inappropriately.

Economic models are a great discipline that force you to think through the interplay of many factors, often over many years. Unfortunately, however, a lot of people use models like they do certain facts: to justify what they already believe. While we should definitely use models as tools, they should not be determinative, as they simply cannot account for much of humankind.

Certain pivotal factors are too complex or qualitative to incorporate into a model. In evaluating a company or the economy, for example, models quite often fail to properly account for culture and morality, the character of players involved, the increasing importance of education and skills, the value of dignity of work, the power of self-confidence as a secret sauce and the emergence of new technologies, just to name a few.

Even worse, many models use inputs that are so inaccurate that their outputs cannot be remotely relied upon. For instance, accounting itself (particularly government accounting) may be the worst culprit. Good investments are treated as expenses (including education, R&D and infrastructure) – indistinguishable from incarceration costs and homelessness. And incredibly, federal government budgeting rules, like PAYGO (or Pay-As-You-Go) or budget caps, mandate that many expenses have to be offset by revenue increases or have to be traded off against other priorities. The economy is frustratingly complex, and many times overusing models devalues basic commonsense.

We cloud debate with unfair thinking and arguing.

One of the best pieces of advice I have ever received was that people should use their intelligence to seek out the answers, not to justify what they already think or to win the argument. Here are some of the favorite tricks people use to win the argument and obviate issues:

- **Presenting issues as if they are binary.** This is a habit of sloppy thinking. Two of my favorite quotes illuminate this. One by Albert Einstein: "Everything should be made as simple as possible, but not simpler." And the second by H.L. Mencken: "For every complex problem there is an answer that is clear, simple and wrong." We frequently seek out convenient and simplistic answers, which are often wrong. The same is true for how we listen. Instead, we should try to find common ground with parts of someone's argument as opposed to rejecting the entirety of it offhand.
- **Creating and blaming scapegoats** like trade, China, immigration or capitalism. While scapegoating is easy, it mostly hides the truth – in fact, when you dig a little deeper (which we do in the following pages), other causes, possibly self-inflicted, become clear.
- **Unfairly assigning motives to people,** which may or may not be true. The goal is simply to denigrate an individual and/or win an argument – but this tactic has nothing to do with the actual facts.
- **Creating strawmen** (representing your opponent). This strategy makes it easier to attack foes for things they did not actually think or say.

Media hype and people's willingness to be weaponized derail thoughtful strategies.

Much has been said about the role of social media, but some things are clear. Most media and individuals barely have time to focus on the issues – and often default to overly simplistic, binary and incorrect conclusions that neatly fit into false political narratives. The urgency of ***today*** and the hyperactive and frequently hysterical focus on irrelevant issues crowd out thoughtful strategy and policy for ***tomorrow***. Lack of civility and humility make it hard to work together and to respect each other. Moral indignation is blinding – it stops you from trying to agree on what the problems are; it disguises itself as policy, and it turns expertise into elitism.

I am often surprised how people allow themselves to be completely riled up – yes, it happens to me, too. And when politics and media meet, we are whipsawed by false arguments of fanatics, the certitude of ideologues and cycles of intolerance. We all should try not to be drawn into this vortex.

We are stymied by self-interest, selfishness, and the buildup of bureaucratic plaque and institutional sclerosis.

Now willingly, I'm about to go down a slippery slope. I'm going to cite some very specific examples, but I essentially apply them to all of us and make my point as simply and strongly as possible: We are bogged down, sometimes crippling our nation, because of self-interest and the associated bureaucracy and bad thinking that follow. Much of this is not done deliberately – it's just built up over time – like arteriosclerosis. Historians sometimes point to this disease as a cause of the decline and fall of great empires.

This self-interest is virtually everywhere. There are 17,000 registered lobbyist contracts for special interest groups in Washington, D.C., including business-related groups and banking and financial services. We all deserve our share of the blame for using the balkanized government, bureaucracy and lack of transparency to further our own interests – not necessarily the country's. This includes business, unions, state and local governments, and individuals. All of us failed to properly heed President John F. Kennedy's appeal: "Ask not what your country can do for you – ask what you can do for your country."

For years, business, government and community leaders, including myself, voiced concerns about the inequities and other crises in our economy and communities. Business did not cause many of these societal issues – large companies, generally, pay their workers a higher-than-average salary, offer more training, provide more extensive insurance and medical and pension benefits for their employees and fundamentally drive our country's growth and competitiveness, as these companies account for approximately 80% of capital expenditures and R&D. Frankly, we punted too much of the responsibility to our government. But we are partly responsible – for we prioritized shareholder interests and sometimes narrow self-interests over creating broader opportunity for all in America. Successful businesses can literally and figuratively "drive by" our worst problems (think inner cities) and still thrive. These large companies can and should be more aggressively part of the solution because they can uniquely help with job planning, skills training, infrastructure investment and community development. And doing so, over the long run, is both morally right and commercially right because it will be good for business.

State and local governments are equally to blame. Take, for instance, five states (California, Connecticut, Illinois, New Jersey and New York) that continue to fight for unlimited state and local tax deductions (because those five states reap 40% of the benefit) even though they are aware that over 80% of those deductions will accrue to people earning more than $339,000 a year.

Few of our institutions are blameless. Hospitals fighting to keep their prices unpublished and teachers' unions arguing to continue to keep failed schools open are just two such examples.

Then there's our tax code – buried in it are an extraordinary number of loopholes, credits and exemptions that aren't about competitiveness or good tax policy: Private equity, venture capital and real estate still get carried interest, and sugar and cotton, for some unknown reason, still get government subsidies. Suffice it to say, industry gets its share of tax breaks and forms of protection from legitimate competition.

Our public policy failures are not partisan issues.

Our problems are neither Democratic nor Republican – nor are the solutions. Unfortunately, however, partisan politics is preventing collaborative policy from being designed and implemented, particularly at the federal level. We would do better if we listened to one another.

Democrats should acknowledge Republicans' legitimate concerns that money sent to Washington often ends up in large wasteful programs, ultimately offering little value to local communities. They could acknowledge that while we need good government, it is not the answer to everything. Democrats could also acknowledge that a healthy fear of a large central government is not irrational (like a Leviathan).

Republicans need to acknowledge that America can and should afford to provide a proper safety net for our elderly, our sick and our poor, as well as help create an environment that generates more opportunities and more income for more Americans. Republicans could acknowledge that if the government can demonstrate that it is spending money wisely, we should spend more – think infrastructure and education funding. And that may very well mean higher taxes for the wealthy. Should that happen, the wealthy should keep in mind that if tax monies improve our society and our economy, those same individuals will be, in effect, among the main beneficiaries.

Democrats and Republicans often seem to be ships passing in the night – with both parties talking at cross purposes even when they may share the same goals. Compromise is not incompatible with democracy – in fact, compromise is a core principle of democracy. When major policies are enacted on a purely partisan basis (think healthcare and tax reform), it virtually guarantees decades of fighting. It's not unreasonable to think that major policies should be bipartisan or not at all.

We must remember that the concepts of free enterprise, rugged individualism and entrepreneurship are not incompatible with meaningful safety nets and the desire to lift up our disadvantaged citizens. We can acknowledge the exceptional history of America ***and*** also acknowledge our flaws, which need redress.

Our problems are complex and frustrating – but they are fixable with hard work.

If our Founding Fathers were here today, they would be very proud that the Constitution they enacted has survived, thrived and helped to build this great country. But I also believe they would be disappointed. Those leaders were students of history, society and economics (just read the *Federalist Papers*) and drew upon that knowledge to structure a government that would function properly.

Our country would do well to study the successes of the rest of the world. Germany and Switzerland have created impressive work apprenticeship programs; Singapore has developed effective healthcare programs; Hong Kong has excelled with infrastructure; and some countries, with no natural resources and starting from terrible baseline positions (think South Korea after the Korean War), have done a terrific job in growing their economies and lifting up all of their people. Another inspiring example is Ireland. After decades of sectarian strife and terrorism, a poor, male-dominated country was transformed. A few years ago, the country elected an Indian immigrant who is gay as Prime Minister – Ireland is now a melting pot with a thriving economy due to good government policies. Bad government is prevalent in some countries, and we would also do well to study those examples: Argentina, Cuba and Venezuela, to name a few – all countries with tremendous natural resources that allowed, in the name of their people, their economies to be destroyed.

Any economic society, not just capitalism, involves billions of decisions made by individuals and institutions every day. These interactions are complex and can operate in mysterious ways. Capitalism has lifted billions of people out of poverty. Capitalism, and the continuous and free movement of capital and, more important, of human talent, in the pursuit of happiness (the invisible hand of Adam Smith), creates a continuous exchange of information and ideas – and constant innovation. But, of course, capitalism has always had its shortcomings. Good government and the guardrails of properly designed laws and regulation have always been necessary for the process to work fairly and efficiently.

Fixing America's problems is going to take hard work. But if we divide them into their component parts, we will find many viable solutions. With thoughtful analysis, commonsense and pragmatism, there is hope.

3. We need a comprehensive, multi-year national Marshall Plan, and we must strive for healthy growth.

We need a coherent, consistent national strategy to match the severity of the existing structural challenges that are driving our country's racial and economic crises. Just as careful planning and analysis would have prepared us for the current pandemic, careful planning and analysis can address many of the challenges we face. These plans need to be comprehensive, integrated, sustainable and regularly reported on. If we throw a lot of money at infrastructure without fixing the regulations that cripple it, it won't work. If we throw a lot of money at education but don't report on the outcome (i.e., good jobs), we will lose credibility. Lurching from policy to policy and having boondoggles and special interest groups abound will make things worse. We need to do the right things and the hard things very ***competently***.

We need to recognize the essential and irreplaceable importance of healthy growth and our global competitiveness. The best way to address our problems, and perhaps the *only* way to solve them without accelerating inequality further, is to promote healthy economic growth. A healthy growth strategy should be the primary economic policy of both political parties. Healthy growth may be the only way out of our current situation (slow income growth and rapidly increasing debt). We must unleash the extraordinary vibrancy of the American economy. Economic growth will give us the wherewithal to deal with the issues stemming from inequality in ways that are sustainable. It is the engine that will drive and secure America's global leadership.

This can be a moment when we all come together and recognize our shared responsibility – acting in a way that reflects the best of all of us. During this terrible COVID-19 crisis, we are, in some ways, being forced to count on each other. It is moving to see the respect and gratitude that most of us now show our essential workers – and that is something we should do for *all* of our workers, *all* of the time. This crisis also reminds us that we all live on one planet. Let's hope that civility, humanity and empathy will drive us forward toward the goal of improving America. We have the resources, and the solutions are there – just waiting to be found.

4. We need to take specific action steps.

In this section, I offer my views and analysis on specific solutions to our problems. Neither the diagnosis nor the proposed cures are purely my own. Our nation's issues have been studied intensively by many people with deep knowledge. And given the space and other constraints of this letter, I admit to violating Einstein's maxim about simplicity. I do make some of these issues simpler than they are, sometimes by giving only conclusions instead of providing reasoned analysis.

In the following pages, we review 15 policies (many of which, of course, are interrelated) where we believe we need to – and can do – a far better job. We would do all of them if we could, but fixing even some of them will make a significant difference.

Training for Jobs: We need to build an education system that includes training for skills that lead to good jobs (and this will improve labor force participation).

Our high schools and community colleges (and all colleges) need to provide our youth with training for certified and apprenticed skills that lead to good paying jobs. With nearly 7 million job openings and 10 million workers unemployed in the United States, creating an effective training and retraining program is a high-impact opportunity. Business must be involved in this process, and it needs to be coordinated locally because that is where the actual jobs are. Proper training and retraining mean being sensitive to our rapidly changing technological world. Expanding digital skills and training opportunities for workers and students will be critical, as the pace of AI will likely accelerate to meet future business demands and foster innovation in high-risk jobs, especially across healthcare and the supply chain. Many students in our high schools and colleges are unaware that, with a little bit of training, they can qualify for jobs paying $65,000 or more a year. You can major in philosophy or history, but taking a few courses in coding will help to ensure you a good job. Our education system should bear responsibility for our children to graduate with an education that leads to a good livelihood.

Germany has one of the strongest education and training systems in the world, with about 1.3 million young people annually participating in paid apprenticeship programs that provide them opportunities to gain in-demand skills along with an education. Vocational school and apprenticeship programs work directly with local businesses to ensure students are connected to available jobs upon graduation. Germany's youth unemployment rate is one of the lowest in the world.

Many companies have numerous jobs for which a "college degree is required," but this often turns out to be unnecessary and even harmful. Much more can be done in terms of making a degree requirement truly relevant for specific jobs. Over 80 Business Roundtable member companies – and counting – are participating in a new multi-year targeted effort to reform companies' hiring and talent management practices to emphasize the value of skills, rather than just degrees, and to improve equity, diversity and workplace culture. The initiative will support measures that address inequity in employment practices, including how people are hired and how they advance, and it will work toward eliminating bias that may prove to be a barrier to hiring and advancement. According to a recent study, employers frequently require a four-year college degree for 74% of new jobs in America – this screening excludes roughly two-thirds of American workers, and its impact is most pronounced on minority applicants.

In addition to the Business Roundtable initiative, companies are partnering with educators in regions throughout the country. For example, in New York City, the New York Jobs CEO Council is working with City University of New York (CUNY) to develop new two-year associate degrees.

These degrees are explicitly designed to enable students to graduate with a marketable college degree (and paid apprenticeship experience) in two years, debt free and with an employment opportunity in an in-demand, high-potential field of their choosing.

One last point: Although there are wide variations across the United States, teachers in public institutions, on average, earn 33% less than their peers with equivalent degrees (college level and above) – this is the lowest ratio in the OECD (Organisation for Economic Co-operation and Development). While we should attack waste in the system, we should pay teachers more money and base their salaries upon clear standards that will measure success – not just graduation rates and standardized test scores but certification of skills – and lead to ***actual*** good paying jobs.

Paying for Jobs: We need to improve wages for low-skilled work (again, this would improve labor force participation).

Decades ago, an unskilled worker, who may not have graduated from high school but was willing to work hard, could get a job at a manufacturing plant that would soon lead to a living wage and the ability to earn a middle-class income. That may no longer be the case. Today, it may be that unskilled or low-skilled workers would not *naturally* earn a living wage. All jobs are good jobs: They bring dignity; people who start working generally continue working; and the first job is often the first rung on the employment ladder. Jobs also lead to better social outcomes – less crime, more household formation and less mental illness.

While a living wage differs by state, the national average is currently $68,000 a year for a family of four. With two adults working full time, each would need to earn $16.50 an hour to reach that level. We should strive to make every job generate a living wage — and do two things to accomplish this goal. First, we should, at the very least, increase the federal minimum wage and allow states, based on local conditions and unemployment rates, to make further adjustments. Simply stated, our policy goals should focus on maximizing incentives to get more people working while minimizing incentives for employers to lay off workers, especially low-paid employees.

Second, we should ensure that federal efforts, like the Earned Income Tax Credit (EITC) and the Child Tax Credit, are effective enough so that every job essentially pays a living wage. The higher wages resulting from these credits would go a long way toward improving our labor force participation, which is a key driver of productivity and economic growth.

Opportunities for Jobs: We need to make it easier for those with a criminal record to get a job (which will also improve labor force participation).

We need to reduce recidivism, reform the criminal justice system and eliminate barriers to a good job. One such barrier is a criminal record, which one in three adults (more than 70 million people) in our country has. Our criminal justice system disproportionately impacts people of color – Black adults are over five times more likely to be incarcerated than white adults. This is institutional racism in its clearest form. Reforms to the criminal justice system and business screening and hiring practices can open the door of opportunity to significantly more people. JPMorgan Chase supported a measure signed into federal law in 2020 restoring access to Pell Grants for incarcerated individuals, which allows them to pursue postsecondary education in prison and increase employment opportunities after their release. Other steps that we can – and must – take are: adopting "ban the box" measures for employment applications and reforming clean slate laws so anyone with a record of minor offenses can more easily qualify for a job. JPMorgan Chase has taken many of these steps, and, in 2020 alone, we hired more than 2,000 people with a criminal background.

America believes in second chances and redemption. Getting a second chance will give people dignity and enable them to earn a higher lifetime income while reducing recidivism and all of its related costs.

We need to reform and improve our social safety net programs (which can also improve labor force participation).

Our varied and various public assistance programs (Medicaid, food assistance, income support, unemployment, housing and utilities benefits for individuals who cannot work, due to disability or childcare responsibilities, to name a few) are a complete mishmash of uncoordinated federal, state and local policies. People qualifying for public benefits may be eligible for various programs but often don't apply because they are unaware, ill-informed or unable to navigate the complexities. These programs frequently have different applications and application processes, including different places to apply, with benefits often disappearing at different income levels and at different speeds. It is accurate to say that the complexity and variability in eligibility rules have negative consequences for both program administration and access to assistance. For example, beneficiaries often have to provide the same information for different federal programs and visit multiple offices in order to apply. The Government Accountability Office has provided reports about this maze of programs to Congress; in addition, the Center on Budget and Policy Priorities has created guides for state and local use to help streamline the application and enrollment process, utilizing eligibility determinations made by other programs to jump-start approvals.

Public assistance programs need to be coordinated, consolidated and connected to trends in the larger economy, as well as to the individual's transition to employment. For example, unemployment insurance should have automatic stabilizers that increase benefits when and where jobs are lacking and reduce them when and where jobs are abundant. Application to all social welfare benefits should be available through one single form and phased in and phased out on a common grid, not on a cliff. Coordinated with an individual's transition to work, benefits should gradually be reduced, making them a true safety net.

Finally, providing affordable childcare programs or lowering the starting age for public school would make it far easier for parents to work. Some countries are now implementing universal access to preschool for children at three years of age. This is a wonderful policy. It makes childcare less expensive and has proved to be extraordinarily good for student education over the short and long term. Parents like it, too. Of course, the benefits may not be fully realized for years, but this is precisely the type of long-term thinking in policymaking that we need. Women, in particular, suffered in the COVID-19 crisis as an estimated 2.5 million left the workplace, largely because they had to become full-time caregivers for their children or elderly parents. Many of the programs listed above will make it easier for women to return to the workforce if they so choose.

We need to try to make the healthcare system work better (better health drives both productivity and labor force participation).

We have the best healthcare in the world in terms of doctors, hospitals, and pharmaceutical and medical device companies, but we certainly do not have the best outcomes. As I discussed earlier, 30 million Americans do not have any insurance; obesity, high blood pressure, asthma, diabetes and other conditions are rampant; and costs are far too high with little transparency into their calculation. Annual medical costs per person in the United States are now $11,000 versus $4,000 for other developed nations. There are ways we can make significant improvements. Here are a few: allow bigger incentives for becoming and staying healthy; eliminate bureaucracy and waste in the healthcare system, including administrative complexity and fraud (this represents approximately 25% of total healthcare spending in the United States); empower employees to make better choices through more transparent employer plan pricing and options that include the actual cost of medical procedures; eliminate surprise bills (these usually come from unexpected out-of-network services); develop better corporate wellness programs that target obesity and smoking; create better tools to enable comparison shopping for nonemergency care and help manage healthcare expenses; and reduce the extraordinary expense for unwanted end-of-life care. There should be national, not state-by-state, insurance exchanges, which would be far more efficient. And exchanges should also offer a low-cost, catastrophic-only insurance package as an option. Plus all healthcare data should belong to the individual, not to various healthcare companies. Another obvious incentive is to dramatically enhance how effectively wellness, nutrition, health and exercise are taught in K-12 classrooms nationwide.

We need proper, rigorous and multi-year budgeting, planning and reporting.

Companies perform extensive budgeting, planning and reporting, some of it conducted on a multi-year basis. Real investments – in training, data centers, manufacturing plants and other categories – are needed on a multi-year basis and cannot be stopped and started without incurring enormous additional costs. But this stopping and starting is exactly what takes place in the federal government, which inevitably leads to waste and inefficiency. One striking example: The military estimates that it spends more money per year on procurement than is necessary because of this inefficiency. In total, the stop-start nature of our government's budgeting processes most certainly costs us tens of billions of dollars a year in complete waste.

Proper budgeting and planning – on a multi-year basis – should be implemented at all levels of government. It is particularly important that most federal programs – think military, infrastructure and education – have good long-term plans and be held accountable to execute them.

When the government talks about spending money, it should not lead with the amount spent or budgeted to be spent – as if that's the measure of success. Instead, the expected outcome of the spending and then the ***actual outcome*** should be described. We desperately need honest and transparent accounting, accountability and evaluation about everything we fund with government dollars. Every department should have an outcome report.

It would be beneficial to review government accounting practices and look for a better way to differentiate between investments and expenses, for instance. There are also examples that show it would be good if the government conformed to public company accounting, particularly around how it accounts for loans and guarantees.

An honest accounting would go a long way to rebuilding trust in government – and in government spending.

We need proper management and periodic review of regulatory red tape and bureaucracy.

The American can-do system is now being bogged down in a maze of regulatory red tape and bureaucracy. All you need to do is to take 10 small business owners out to lunch and ask them what they need to do to meet local, state and federal regulations, and you will understand the problem. And while we all want a legal system that brings justice to all our citizens, our litigation system now costs 1.6% of GDP, 1% more than what it costs in the average OECD nation. And most businesspeople think that it is excessively litigious, slow, and somewhat arbitrary and capricious. One example, which works in many other countries, is to have the losing party pay in some circumstances. Clearly, this would have to be done in such a way as to ensure that the aggrieved parties are not denied appropriate access to our justice system.

The cost of the now over 1 million federal regulations is estimated at approximately $14,000 per household. And while we want good regulations and good "guardrails," there is an excessive amount of licensing, paperwork, employment laws and insurance requirements, and anyone who deals with the application process knows how wasteful and unnecessary it can be. Red tape like this cripples small businesses and, worse, reduces the formation of new enterprises. Very often local regulations are simply a form of low-level corruption in which bureaucrats are paid to slowly … move … paper … around.

Smart regulation includes continual improvement, constant cost-benefit analysis and a review of purpose and objectives, which are reported honestly. Bad regulation often stifles competition – think of the airlines and telecom industries before they were deregulated.

Here are few examples. The Federal Aviation Administration is unable to adopt new technology for air traffic control, which most of the world has already adopted, that would reduce the average flight time by more than 10 minutes and reduce greenhouse gases by 12%. President Dwight D. Eisenhower's Federal-Aid Highway Act of 1956 was 29 pages long and originally authorized $25 billion for the construction of the interstate highway system during a 13-year period, creating a 41,000-mile interstate highway network. And 13 years later, the interstate highway system was largely built. Fast forward to current times, it took 10 years and 47 local, state and federal approvals to rebuild the Bayonne Bridge connecting Staten Island and New Jersey, which was badly in need of replacement and was, in fact, quite dangerous to cross. If this is the way we are going to go about fixing our infrastructure, we will never get it done. And it's not just the time element – long delays increase the costs and risks involved.

We need to properly invest, on an ongoing basis, in modernizing infrastructure.

Virtually everyone agrees that we have done a woefully inadequate job investing in our infrastructure – from highways, ports and water systems to airport modernization and other projects. One study examined the effect of poor infrastructure on efficiency (for example, poorly constructed highways, congested airports with antiquated air traffic control systems, aging electrical grids and old water pipes) and concluded this could all be costing us hundreds of billions of dollars per year. Some economists estimate that a proper infrastructure investment plan could add 0.3% growth annually to our GDP – and it would improve competitiveness across many industries while opening up new investment opportunities.

Such a plan would also create many new jobs with competitive salaries and spur workforce innovation. It could intentionally provide employment opportunities for disadvantaged and young workers, including those with a criminal background. There are many efficient ways to properly build and finance infrastructure, from the local, state and federal level or public-private partnerships, which have the added benefit of increasing the investment discipline. It is important to point out, however, that building ineffective "bridges to nowhere" while temporarily creating jobs is actually a huge value destructor. This kind of waste would ultimately undermine Americans' faith in our system.

We need proper and consistent tax and fiscal policy — done right, it can actually help drive healthy growth and improve income equality.

It would be good to have a tax and fiscal ***strategy***, which is premised upon maximizing healthy growth and redistributing income effectively. It would include the following features:

1. A system that is consistent, highly transparent and as simple as possible.
2. A tax collection system that enables collection of all taxes owed. My view is that everyone should pay the taxes they owe, and it should be strictly enforced. Many estimates project that with increased headcount and greater input from data scientists, we could collect between $30 billion and $100 billion more per year.
3. A target for what the federal government should expect to collect in taxes over time. A good starting point would be 18% of GDP (it has been running at an average of about 16% over the last decade). In good times, we should run a small surplus (~1%), and in bad times, we should have a small deficit (~4%-5%), such that debt to GDP stays fairly constant over time. A side benefit of this is that the government would know that it would have more money to spend – but only if we grow.

We should think about good taxes and bad taxes in terms of spurring growth. Taxing primary capital formation or labor are growth reducers. Having capital retained and reinvested in the United States should be a ***sine qua non*** for healthy growth, and that means that our business tax rates should be globally competitive. Today, the average corporate tax rate for OECD nations is around 22% versus our 21%. The retention and reinvestment by businesses of capital in the United States is ultimately the primary driver of productivity and growth. Even if that capital is distributed in dividends or stock buybacks, it is simply being put to a higher and better use – this is completely normal capital reallocation. The free flow of money capital and human capital is fundamental to our growth and innovation (and fundamental to our freedoms as individuals).

Unfortunately, taxes that minimize damage to growth would involve taxing high incomes. The wealthy are less likely to complain about taxes if the money is ***actually used*** to help the less fortunate or help build a better country. Even with the redistribution of income, there will be items that help growth and items that hurt growth. Redistributing income through the EITC will be money spent to improve labor force participation. Redistributing money to inefficient and poorly run bureaucracies will not improve growth.

In addition, there is a maze of tax breaks in the tax code that should be eliminated. There are hundreds of examples, but I will mention just a few: carried interest, the special tax breaks for race cars, private jets and horse racing, and a special land conservation tax break for golf courses. Hidden tax breaks have the additional stigma of being perceived by the American public as just another example of institutional bias and favoritism toward special interest groups. If the wealthy paid more in taxes and the money was put to good use, they would be the main beneficiaries of a stronger economy.

Due to government stimulus packages as a result of the COVID-19 crisis, external government debt to GDP is now a high 102%. We can afford that percentage and even more, particularly because interest rates are low. But in 10 to 20 years, mostly because of out-of-control healthcare expenses, the debt-to-GDP ratio will start to rise dramatically – and at some point, that will become a problem. The sooner we deal with it, the better. The best way to counteract that is with healthy growth. After World War II, in 1946, the United States still had a 120% debt-to-GDP ratio, which over the next 10 years fell to 60%. This was not because the government raised taxes or dramatically cut expenses but because the country grew at almost 4% for the decade.

We need intelligent industrial policy.

Being a free market economy, the United States has never been a great believer in government-driven industrial policy. But we have done it and ought to do it intelligently in discrete areas that make sense (and where free markets alone don't necessarily provide needed products or services), such as rural broadband, healthcare and cybersecurity. We also need to boost our investment in R&D; we're now #8 in the world in terms of GDP spend on R&D. Government R&D could focus on AI and quantum computing, climate innovation and other areas.

We need thoughtful trade policies.

The United States needs to take a leadership role in establishing global free and fair trade rules. If we don't, they will likely be established to the detriment of American business. Free and fair trade rules do not have to be completely equivalent and reciprocal – just fair. Working with our allies and other countries, we should negotiate the gold standard of trade – not just rules around tariffs but fair regulations that address subsidies to state-controlled enterprises and other forms of unfair competition, bilateral investment and protection for intellectual property, among other issues.

In addition, we should recognize that trade, while positive for the United States as a whole, has caused the loss of jobs, both in specific geographies and in specific industries. Americans who have been affected by these disruptions need better support in terms of income assistance, retraining and relocation.

We need to maintain a strong financial system.

The United States has the best financial system in the world. This financial system encompasses asset managers, investors, banks, investment banks, private equity, hedge funds, pension plans and shadow banking. It is protected and enhanced by the rule of law (including banking laws), and it offers investor protections and transparency around governance and accounting and provides complete and free access to global investors. While nothing is ever perfect and can always be improved upon, most of the world would give an arm and a leg for our system.

The free flow of credit and investments – disciplined capital allocation – is critical to being globally competitive. It is the flywheel of the economy as capital is seeking out good investments (across the risk spectrum) and individuals and ideas that drive growth and innovation. A country's economy can hardly be better than its financial system and vice versa.

The United States' extraordinary and open economy gives us the extraordinary privilege of being the world's reserve currency. The U.S. dollar is the currency of choice for the majority of trade transactions, and it is held by governments, central banks and corporations as the reserve currency (approximately $7 trillion, or 60% of total world reserves). This helps provide cheaper financing for the United States and gives us enormous clout in foreign and economic policy. However, we should not overly "weaponize" the dollar, and we should use this authority judiciously and in support of building a healthy, global economy (see accompanying feature that follows).

The United States has the best financial system in the world, and we must strive to maintain it.

The U.S. Dollar Is the World's Reserve Currency for a Reason

While there may be faith involved, the U.S. dollar is the reserve currency of the world for a reason. First, the dollar is supported by the full faith and credit of the United States. The dollar, which is a liability of the Federal Reserve (i.e., the federal government) in digital or in currency form, is always supported by an asset – and that asset is generally Treasury bonds. Treasury bonds are supported by the full taxing authority of the U.S. government, which, in turn, is supported and paid for by the full power of the U.S. economy. These assets and liabilities, including the economy, are supported by powerful institutions, the rule of law and, ultimately, the full might of the U.S. military. Of course, a central bank can debase a currency, but our central bank, the Federal Reserve, is meant to protect the currency's value. Faith is only a small part of these calculations.

Second, and equally important, the U.S. dollar is the world's reserve currency because anyone who legally has a U.S. dollar can move it freely around the world, buy and sell what they want, and invest in the United States. By comparison, the Chinese currency, the renminbi (RMB), cannot be freely moved around the world; it can leave China only in limited amounts and can be invested only as the Chinese see fit. It is subject to their laws and regulations. While the Chinese have done a good job building their economy and are slowly moving toward a more transparent society and financial system, they are a long way from having a currency that is fully "convertible" like the U.S. dollar.

As an aside, JPMorgan Chase moves more than $8 trillion (99% digital) a day for more than 52 million payments (94% digital). Approximately 98% of value is done the same day, 78% is done in real time and 20% is executed the same day. When these dollars are moved, they go through extensive screening for risk and fraud matters. While systems can always be improved upon, this process seems to be safe and efficient.

We need proper immigration policies.

Thirty percent of foreign students who receive an advanced degree in science, technology or math (300,000 students annually) have no legal way of staying here, although many would choose to do so. Most students from countries outside the United States pay full freight to attend our universities, but many are forced to take the skills they learned here back home. From my vantage point, that means one of our largest exports is brainpower. We need more thoughtful immigration policies that will prevent such a brain drain. In addition, 43% of the growth of our workforce over the past 10 years has come from immigrants. Today, we have 10 million undocumented people living and working in our country; on average, they have resided in the United States for more than 15 years. Most Americans would like a permanent solution to DACA (Deferred Action for Childhood Arrivals), as well as a path to legal status for law-abiding, tax-paying undocumented immigrants. Americans also would like to see, and deserve to see, border security, and there would be far more support for immigration reform if it included proper border security. These issues are tearing the body politic apart. The Congressional Budget Office estimates that the failure to pass immigration reform earlier this decade is costing us 0.3% of GDP a year. Immigration has been one of the great strengths of this country – and we should never forget that.

Affordable housing remains out of reach for too many Americans.

Prior to the COVID-19 pandemic, the demand for affordable housing significantly outpaced supply in nearly every U.S. county. In addition, rising home prices made it increasingly difficult for individuals and families to live near their workplace or within easy access to grocery stores, pharmacies and other essential services. There are many legislative actions that could dramatically increase the availability and affordability of housing (offering tax credits and changing local zoning laws are two examples). While the subprime mortgage crisis and the recession that followed were terrible, the overreaction to it made housing too costly for many individuals (without creating more safety). Excessive origination, servicing and securitization requirements have increased the cost of the average mortgage by approximately 20 basis points. This has mostly affected smaller mortgages and lower-income individuals who have a slightly higher delinquent rate – but who still deserve a mortgage. In fact, J.P. Morgan analysis shows that, conservatively, more than $1 trillion in additional loans might have been made over a five-year period had we reformed our mortgage system. Our analysis also indicates that the cost of not reforming the mortgage markets could be as high as 0.2% of GDP per year. We believe that percentage includes an additional $500 billion a year in mortgages that could be written predominantly for lower-income households. This alone could dramatically lead to growth in America and help lower-income individuals build wealth.

We need to implement several additional programs and policies specifically to assist Black and Latinx communities.

We need to address hiring and advancement targets, help develop minority-owned small businesses and improve financial education products for the unbanked. In addition, minority-owned small businesses, which employ nearly 9 million people and generate $1 trillion in annual economic output, have been hit especially hard by COVID-19 and will need serious assistance going forward, including capital to restart and run their businesses. We should consider requiring companies, such as grocery stores, pharmacies and other retailers, to provide locations in low-income neighborhoods, as banks must do (this would reduce the cost of goods purchased by minority individuals and increase local hiring and engagement). These efforts would be a form of redress for the low-income community that is sustainable and reinforcing.

Companies can go further by building a more diverse and inclusive workforce, including in their top ranks; tying executive compensation to diversity commitments; developing a more robust pipeline of diverse talent; improving supplier diversity; cutting ties with customers who make racist comments and treat employees disrespectfully; helping young men and women of color get ahead personally and professionally; and increasing the diversity of businesses with whom they partner. Above all, it means building a company culture that respects and listens to everyone. Companies might not always get it right, but they should keep trying. The feature in The Path Forward in Section I outlines many of the specific efforts underway at JPMorgan Chase to help advance racial equity.

The cumulative, multi-year effect of doing just some of the measures mentioned above would lead to a healthier, more resilient and robust, and fairer America.

It is my belief that the underlying U.S. economy is so strong that it could overcome many of the things we have failed to do and still grow at 2%. If we could grow at 3% versus 2% over a 10-year period, that would lead to $2.3 trillion in additional GDP by the end of the decade or an increase in household income of about $18,000. A 3% growth rate is what we used to have – and it is achievable again. This growth will help all Americans, but particularly poor and disadvantaged citizens (even before implementing special assistance programs) by increasing opportunities for better jobs, higher incomes, affordable housing and other benefits.

We owe it to ourselves to restore our competitiveness, our common purpose and our true sense of civility in the pursuit of building a more perfect union.

5. America's global role and engagement are indispensable to the health and well-being of *America*.

One of the biggest uncertainties today is America's role on the world stage. A more secure and prosperous world is not only good for the rest of the world but also for our country's long-term security and prosperity. Our role in building that more secure world has been, and will likely continue to be, indispensable. It is a complex role, and if we don't fulfill it, others will – and not with our best interests in mind. It is even more complex now because since the Cold War, the United States has not had to deal with another great world power. Now we have the relentless rise of China, which will likely overtake America in the next 20 years as both the world's largest economy and the largest financial market. Throughout history, the rise of a second great power has always been disruptive. Increasingly and appropriately, most of the world, including Americans, looks at our global position, particularly our economic and military strength, and compares it with that of China. There is no question that the relationship with (and intense competition between) the United States and China will be the most critical relationship for the next 100 years so it is important to deeply understand all of China's strengths and weaknesses.

China has done a good job in building its economy – but it still has a way to go.

Over the last 40 years, China has done a highly effective job of maneuvering itself to this point of economic development. China's leadership has been strategic, consistent and coherent. And unlike developed democratic nations, it can both macromanage and micromanage its economy and move very fast. Government officials can pull, in a coordinated way, fiscal, monetary and industrial policy levers to maintain the growth and employment metrics they want, and they have the control and wherewithal to do it. Unlike Western democracies that frequently, and increasingly, have changes in government leadership and policy approaches, China's system allows for consistent leadership and consistent execution of policies and regulations over the long term. But their most important economic advantage is their huge home market, which they can use to develop their economy and their companies. They have, as a result, been able to use this home market to subsidize some very competitive industries.

But in the next 40 years, the country will have to confront some serious issues: The Chinese lack enough food, water and energy to support their population; pollution is rampant; corruption continues to be a problem; state-owned enterprises are often inefficient; corporate and government debt levels are growing rapidly; financial markets lack depth, transparency and adequate rule of law; income inequality is higher than in the rest of the world; and their working age population has been declining since 2012. America's demographics, by contrast, will remain strong, particularly if we continue to have healthy immigration. China will continue to face pressure from the United States and other Western governments over human rights, democracy and freedom in Hong Kong, and activity in the South China Sea and Taiwan.

Asia is a very tangled part of the world, geopolitically speaking. Unlike America, which is at peace with its neighbors and is protected by the Atlantic and Pacific oceans, many of China's neighbors (Afghanistan, India, Indonesia, Japan, Korea, Pakistan, the Philippines, Russia and Vietnam) are large, complicated and not always friendly to China – in fact, China has had border skirmishes and wars with India, the Soviet Union and Vietnam since World War II. These neighbors do not all look at the rise of China as being completely beneficial.

Autocratic and authoritative leadership works well when you can manage top down and you are starting from a very low base. China's recent success definitely has its leadership feeling confident. Many believe that America is in permanent decline and that democracy is failing. Regardless of their opinions, we should neither over- nor underestimate them. Only 100 million people in China effectively participate in the nation's one-party political system. No other developed nation has such low participation. Growing middle classes almost always demand political power, which helps explain why autocratic leadership almost always falters in a larger, more complex economy. Under autocratic leadership, a major risk is the allocation of economic assets (capital and people), which are, over time, used to further political interests, leading to inefficient companies and markets, favoritism and corruption. In addition, autocratic leadership diminishes the rule of law and transparency – damaging the ability to create a well-functioning financial system (this certainly restricts the internationalizing of the RMB).

Disruption of trade is another risk China faces. The United States' trade issues with China are substantial and real. They include the theft or forced transfer of intellectual property; lack of bilateral investment rights, transfer of ownership or control of investments; onerous non-tariff barriers; unfair subsidies or benefits for state-owned enterprises; and the lack of rapid enforcement of any disagreements. Our position is supported, though, in an uncoordinated way, by our Japanese and European allies. We should expect China to do only what is in its own self-interest. Near term, we expect challenge and conflict to characterize the relationship between China and the West over a range of economic, human rights and strategic issues. There may, however, be areas where we will simply never agree. As the two largest economies in the world, China and the United States should continue to have a long-term interest in collaborating where we can on critical global issues, including climate change, global health and stability on the Korean Peninsula. This will not be easy, but we will need to mature the management of this relationship so we can deal head on with our differences while continuing to seek common ground on our common challenges.

China does not have a straight road to becoming the dominant economic power. To put this in perspective, America's GDP per person in 2019 was $65,000 and China's was $10,000. Even if we do a rather poor job at managing our economy (growing at 2%), our GDP per person in 20 years would be $85,000. And if the Chinese do a good job managing their economy, their GDP per person in 2040 would still be under $35,000. While China is well on its way to becoming a fully developed nation, it may face more uncertainty and moments of slower growth in the future (like the rest of us) than in the past. For the near term, if China and the United States can maintain a healthy strategic and economic relationship, it could greatly benefit both countries – as well as the rest of the world.

America is in a very strong position.

We have the resources to emerge from this latest economic crisis as a stronger country. Sometimes we forget how blessed we already are. America is still the most prosperous nation the world has ever seen. We are blessed with the natural gifts of land; all the food, water and energy we need; the Atlantic and Pacific oceans as natural borders; and wonderful neighbors in Canada and Mexico. And we are blessed with the extraordinary gifts from our Founding Fathers, which are still unequaled: freedom of speech, freedom of religion, freedom of enterprise, the sanctity of the individual, and the promise of equality and opportunity for all. These gifts have led to a bold and dynamic economy – one that nurtures vibrant businesses large and small, exceptional universities and a welcoming environment for innovation, science and technology. America was an idea borne on principles, not based upon historical relationships and tribal politics. It has and will continue to be a beacon of hope for the world and a magnet for the world's best and brightest.

America has strong and deep economic and geopolitical relationships with a large part of the world – mainly, but not exclusively, with our allies, including Canada and Mexico, countries of the European Union, Great Britain, Japan, South Korea and Australia, to name a few. With these allies, we respect the values of democracy, individual rights and economic freedoms. Collectively, we need to reassert our foundational strengths, which are grounded in our common principles, mutual trust and cooperation, and shared prosperity. As a nation, America needs to reassert its confidence in democracy and re-establish that it can function competently in the interest of our people. Fundamentally, we need not fear the success of China; we need to fear only our own failure because that is the only thing that will truly limit us.

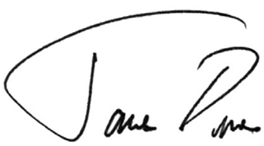
America should engage and exercise its power and influence – cautiously, judiciously and respectfully – with various international organizations (the North Atlantic Treaty Organization, the United Nations and the World Trade Organization). While there are many legitimate complaints about these organizations, the world is better off with these institutions. Americans should understand that global laws, standards and norms will be established whether or not we participate in setting them. However, it is certain that we will be happier with the evolution of global standards around trade, immigration, corporate governance and other important issues if we help craft and implement them. We should not abdicate this role – if we do, that void will simply be filled by China and others. Our engagement and leadership in the world are as important for ***our country*** as they are for the rest of the globe.

My fervent hope is that America will roll up its sleeves and bring bold leadership to our self-inflicted problems. Business and government collaborating together can conquer our biggest challenges – income inequality, economic opportunity, education and healthcare for all, infrastructure, affordable housing and disaster preparedness, to name a few. We can be unabashed about the exceptionalism of America while acknowledging that we have problems. As we work together for an inclusive recovery that is long lasting, we must never forget that America's economic prosperity is a necessary foundation for our military capability, which keeps us free and strong and is essential to world peace. America is still the arsenal of democracy.

While I have a deep and abiding faith in the United States of America and its extraordinary resiliency and capabilities, we do not have a divine right to success. Our challenges are significant, and we should not assume they will take care of themselves. Let us all do what we can to strengthen our exceptional union.

IN CLOSING

I would like to express my deep gratitude and appreciation for the employees of JPMorgan Chase. From this letter, I hope shareholders and all readers gain an appreciation for the tremendous character and capabilities of our people and how they have helped communities around the world. They have faced these times of adversity with grace and fortitude. I hope you are as proud of them as I am. Finally, we sincerely hope that all the citizens of the global community will be able to move beyond this unprecedented pandemic and look forward to a brighter future.



Jamie Dimon
Chairman and Chief Executive Officer

April 7, 2021

Client Franchises Built Over the Long Term (page 6)

1 Digital includes outflows for ACH, BillPay, PayChase, QuickPay, Real-time Payments, external transfers and some wires.
2 2019 and 2020 Consumer Banking deposits include JPM Wealth Management
3 FDIC 2020 Summary of Deposits survey per S&P Global Market Intelligence. Limits all branches to $500 million deposits. Includes all commercial banks, savings banks and savings institutions as defined by the FDIC. 2006 excludes non-retail branch locations and all branches with over $500 million in deposits within the last two years (excluded branches are assumed to include a significant level of commercial deposits or are headquarter branches for direct banks).
4 Barlow Research Associates, Primary Bank Market Share Database, as of 4Q20. Rolling 8-quarter average of small businesses with revenue of more than $100,000 and less than $25 million.
5 Represents 2020 general purpose credit card spend, which excludes private label and Commercial Card. Based on company filings and JPMorgan Chase estimates.
6 Represents users of all web and/or mobile platforms who have logged in within the past 90 days.
7 Represents users of all mobile platforms who have logged in within the past 90 days.
8 Chase is tied with one other bank for first place, as per the Kantar 2020 Retail Banking Monitor (~3,000 surveys per quarter or ~12,000 per rolling 4 quarters). Data are based on Chase footprint, excluding recent expansion markets.
9 Based on 2020 sales volume and loans outstanding disclosures by peers (American Express Company (AXP), Bank of America Corporation, Capital One Financial Corporation, Citigroup Inc. and Discover Financial Services) and JPMorgan Chase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and JPMorgan Chase estimates for AXP's U.S. small business sales. Loans outstanding exclude private label, AXP Charge Card and Citi Retail Cards.
10 Inside Mortgage Finance and JPMorgan Chase internal data, as of 4Q20.
11 Experian AutoCount data for 4Q20. Reflects financing market share for new and used loan and lease units at franchised and independent dealers.
12 ~$83 billion represents the December 31, 2020 balances for accounts provided payment relief, including those currently enrolled in relief and those who have exited relief. Includes residential real estate loans held in Consumer & Community Banking, Asset & Wealth Management and Corporate.
13 Dealogic as of January 4, 2021.
14 Coalition Competitor Analytics, preliminary 2020 rank; market share analysis reflects JPMorgan Chase's share of the global industry revenue pool and is based on JPMorgan Chase's business structure. 2006 rank analysis is based on JPMorgan Chase analysis.
15 Client deposits and other third-party liabilities pertain to the Wholesale Payments and Securities Services businesses.
16 Based on Firmwide data. 2006 data not archived. 2019 restated based on 2020 methodology using Regulatory reporting guidelines.
17 Institutional Investor.
18 Based on third-party data.
19 Assets under custody based on Company filings.
20 Represents total JPMorgan Chase revenue from investment banking products sold to Commercial Banking clients.
21 S&P Global Market Intelligence as of December 31, 2020.
22 Commercial and industrial groupings for CB are generally based on client segments and do not align with regulatory definitions.
23 Refinitiv LPC, FY20.
24 Affordable housing consists of Community Reinvestment Act qualified, rent-restricted and naturally occurring affordable units; i.e., includes affordable housing units that are in low-to-moderate income neighborhoods.
25 Euromoney; 2020 results released February 2021.
26 Based on Company filings and JPMorgan Chase estimates. Rankings reflect publicly traded peer group as follows: Allianz Group, Bank of America Corporation, Bank of New York Mellon Corporation, BlackRock, Inc., Credit Suisse Group AG, DWS Group, Franklin Resources, Inc., The Goldman Sachs Group, Inc., Invesco Ltd., Morgan Stanley, State Street Corporation, T. Rowe Price Group, Inc. and UBS Group AG. JPMorgan Chase ranking reflects Asset & Wealth Management client assets, Chase Wealth Management investments and new-to-firm Chase Private Client deposits.
27 Ranking as of December 31, 2020. Source: Morningstar, as of February 28, 2021, including long-term open-end mutual funds and ETFs only, excluding feeder funds and fund of funds. China inbound funds AUM is aggregated based on equity, fixed income and allocation funds domiciled outside of China that invest primarily in Greater China as defined by J.P. Morgan Asset Management.
28 Reflects J.P. Morgan Asset Management global long-term active fund AUM market share as of December 31, 2020. Source: ISS Market Intelligence Simfund retrieved March 17, 2021. Excludes index, fund of funds and money market funds.
29 In the fourth quarter of 2020, the Firm realigned certain Wealth Management clients from Asset & Wealth Management to Consumer & Community Banking. Prior-period amounts have been revised to conform with the current presentation.
30 Effective in the first quarter of 2021, the Wealth Management business was renamed Global Private Bank.
31 Source: IXI, J.P. Morgan estimates
32 All quartile rankings, assigned peer categories and the asset values used to derive the 10-year J.P. Morgan Asset Management long-term mutual fund AUM are sourced from Lipper, Morningstar and Nomura based on country of domicile. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund and Brazil-domiciled funds. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers redenominate the asset values into U.S. dollars. This percentage of AUM is based on fund performance and associated peer rankings at the share class level for U.S.-domiciled funds and at the primary share class level or fund level for all other funds. Primary share class, as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and, in most cases, will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one primary share class territory, both rankings are included to reflect local market competitiveness. Performance data could have been different if all funds/accounts had been included. Past performance is not indicative of future results. The classifications in terms of product suites and product engines shown are J.P. Morgan's own and are based on internal investment management structures.
33 Represents the Nomura star rating for Japan-domiciled funds and Morningstar for all other domiciled funds. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund and Brazil-domiciled funds. Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The overall Morningstar rating is derived from a weighted average of performance figures associated with a fund's three-, five- and 10-year (if applicable) Morningstar Rating metrics. For U.S.-domiciled funds, separate star ratings are given at the individual share class level. The Nomura star rating is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings and the assigned peer categories used to derive this analysis are sourced from these fund rating providers as mentioned. Past performance is not indicative of future results.
34 Represents AUM in a strategy with at least one listed female and/or diverse portfolio manager. "Diverse" defined as U.S. ethnic minority.

JPMorgan Chase Is in Line with Best-in-Class Peers in Both Efficiency and Returns (page 8)

1 Best-in-class peer overhead ratio represents the comparable business segments of JPMorgan Chase (JPM) peers: Capital One Consumer Banking & Domestic Card (COF–CB & DC), Citigroup Institutional Clients Group (C–ICG), US Bancorp Corporate and Commercial Banking (USB–C & CB), Credit Suisse Private Banking (CS–PB) and T. Rowe Price (TROW).
2 Best-in-class peer ROTCE represents implied net income minus preferred stock dividends of the comparable business segments of JPM peers when available, or of JPM peers on a firmwide basis when there is no comparable business segment: Bank of America Consumer Banking (BAC–CB), Morgan Stanley Institutional Securities (MS–IS), PNC Bank (PNC), UBS Global Wealth Management (UBS–GWM) and Morgan Stanley Investment Management (MS–IM).
3 Comparisons are at the applicable business segment level, when available; the allocation methodologies of peers may not be consistent with JPM's.
4 Citigroup Inc. (C), Bank of America Corporation (BAC), The Goldman Sachs Group, Inc. (GS), Morgan Stanley (MS), Wells Fargo & Company (WFC).
5 Managed overhead ratio = total noninterest expense/managed revenue; revenue for GS and MS is reflected on a reported basis.

Size of the Financial Sector / Industry (page 28)

1 Banks over $5B in assets as of 2020.
2 H.8 data.
3 US Banks over $50B in assets as of 2020.
4 Consists of cash assets and Treasury and agency securities.
5 Real Gross Domestic Product, Billions of Chained 2012 Dollars, Quarterly, Seasonally Adjusted Annual Rate.
6 Federal Reserve Financial Accounts Z.1 data composed of total financial assets of the following subcategories: mutual funds, ETFs, closed end funds, brokers and dealers and funding corporations.
7 Data from Preqin; Hedge Fund AUM is not included in 2000; 2020 figure is annualized based on available data through 3Q.
8 Represents market capitalization; Facebook not included in 2010.
9 Represents market capitalization; Private companies use the latest valuations.

Complexities of the Regulatory System (page 42)

1 The Council, through Office of Financial Research, may request reports from systemically important BHCs.
2 The FDIC may conduct exams of systemically important BHCs for purposes of implementing its authority for orderly liquidations but may not examine those in generally sound condition.
3 The Dodd-Frank Act expanded the FDIC's authority when liquidating a financial institution to include the bank holding company, not just entities that house FDIC-insured deposits.