

Outlook

Consumer and Wealth Management

US Resilient



Durability is one of the chief elements of strength. Nothing is either loved or feared but that which is likely to endure.

– Alexis de Tocqueville, *Democracy in America*



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Dear Clients,

Two themes have driven our strategic and tactical investment recommendations to clients since the trough of the global financial crisis (GFC) in March 2009:

US preeminence: We have consistently suggested over this period that clients strategically allocate a greater portion of their equity portfolios to US stocks, with the higher allocation funded by a lower allocation to non-US developed and emerging market countries.

Staying invested: We advised clients to tactically overweight US equities and/or US high yield bonds from July 2008 until May 2017 and again from February 2020 through the end of 2020, relative to their customized portfolio allocations. Over the course of the entire nearly 12-year period, we have never recommended clients underweight US equities.

These investment themes of US preeminence and staying invested have served our clients well. Since March 2009, US equities have returned 609% (18% annualized), outperforming non-US developed market equities by 361 percentage points (pp), or 6.9pp annualized (ann.) in local currency terms, and emerging market equities by 341pp, or 6.4pp annualized.

US equities have also provided outsized returns relative to other asset classes. At 18% (ann.), US equities have outperformed 10-year US Treasuries by 14.1pp (ann.) since the trough of the GFC, US high yield securities by 6.7pp (ann.), and emerging market local and dollar-denominated debt by 12.5pp (ann.) and 9.3pp (ann.), respectively. US equities have also outperformed gold by 11.7pp (ann.) and crude oil by about 18pp (ann.). Compared with alternative asset classes, US equities, adjusted for the lower beta of hedge funds, have outperformed hedge funds by about 3.5pp (ann.). The only asset class that has outperformed public US equities is private equity—which is predominantly composed of US companies—by an estimated 4pp (ann.).¹

Unsurprisingly, clients and colleagues are asking, as they periodically do but perhaps more so this year, whether it is time to change course. They cite a litany of concerns, including lofty equity market valuations, the economic toll of the pandemic, damage to US institutions from an unconventional presidency, uncertain fiscal policy under a new administration, a Congress in which neither party has a significant majority, risk of inflation and debasement of the dollar, escalating cyberattacks and a continuing uncertainty over when life will return to normal and what normal might even look like.

These are important questions, and we will address them in the following pages, along with others. But we conclude that our two investment themes will carry into 2021.

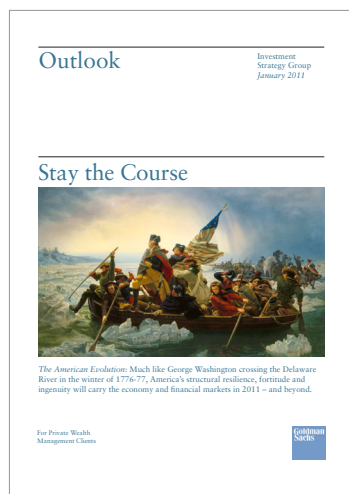
Our US preeminence strategic allocation views are unchanged since we first described them in our 2010 *Outlook: Take Stock of America*. We highlighted then

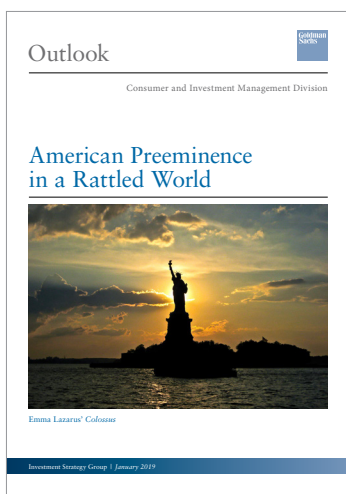
how the emergence of fast-growing economies such as China would not cost the US its leadership position, given America's underlying strengths. We also pushed back against those heralding the rise of China and the fall of the US.

Similarly, in our 2011 *Outlook: Stay the Course*, we wrote that "America's structural resilience, fortitude and ingenuity will carry the economy and financial markets in 2011—and beyond." We used

the iconic image of the determined and undeterred General George Washington crossing the Delaware River in the winter of 1776–77 to illustrate the point.

We revisited the theme in our 2015 *Outlook: US Preeminence*, and concluded not only that our six-year investment theme had endured, but that the gap





between the US and other countries and regions had actually widened.

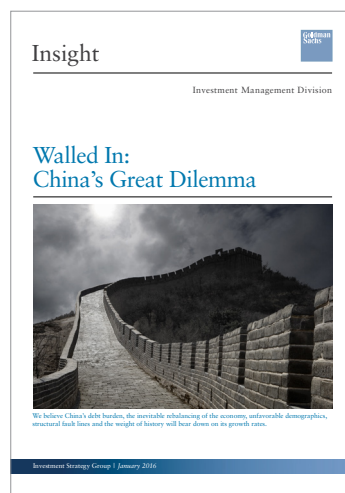
By the end of 2018, pundits were suggesting that President Donald Trump’s administration had created crises that were undermining the very institutions that support and sustain US preeminence, pushing the US into decline. In our 2019 *Outlook: American Preeminence in a Rattled World*, we agreed that the Trump presidency, with its barrage of “tweeting and teetering,” had created an unsteady undertow that was pulling the US economy and financial markets in different directions. But we concluded that the

economic, social and institutional factors that account for US preeminence were intact and this country’s institutions are stronger than any one president or administration.

Today, the declinists are at it again, saying that four years of President Trump have taken their toll, most importantly on democracy and the rule of law. They add that the COVID-19 pandemic has revealed extensive weaknesses in the US, while shining a light on the strengths of the Chinese model of government and social structures. The reported US infection rate of over 60,326 per million and fatality rate of 1,045 per million, compared with China’s officially reported infection rate of 67 per million and three fatalities per million, if accurate, support that contention, at least with respect to the speed and efficacy of responses to pandemics. The declinists’ argument is further boosted by an estimated decline in US GDP of 3.5% in 2020, in contrast to an increase in China’s GDP of 2%.

We disagree with the declinists and will demonstrate that those who have predicted the decline of the US have been proven wrong time and again. We believe today’s declinists will be similarly proven wrong.

We therefore maintain our strategic asset allocation recommendation to overweight US assets.



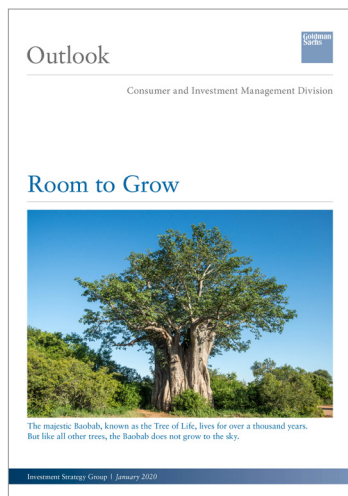
Our “staying invested” tactical allocation views are similarly unchanged. Since the trough of the GFC, we have recommended staying invested on 98 separate occasions.² Many of these recommendations were made during equity market downdrafts when our clients, fearing much steeper declines, were tempted to exit the equity market (and some did so). Examples include:

- The S&P 500 decline of 18.6% between April and October of 2011 resulting from the European sovereign debt crisis
- The S&P 500 decline of 12.0% between July and August of 2015 when China announced a one-off devaluation of the renminbi and changed the process by which its exchange rate was set
- The S&P 500 decline of 19.4% between September and December of 2018 due to the confluence of slowing global growth, 200-basis-point tightening of monetary policy by the Federal Reserve, low market liquidity, and rising international and domestic tensions
- The S&P 500 decline of 33.8% between February 19 and March 23 of 2020 due to the pandemic, following which we recommended clients overweight US equities

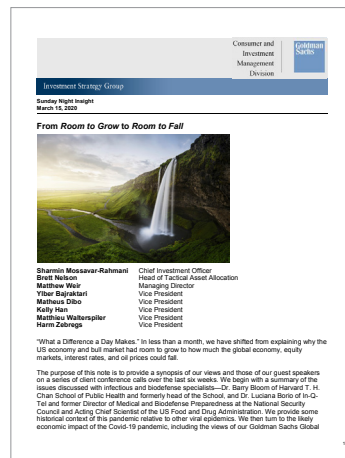
We have recommended clients stay invested after strong market rallies as well, because high valuations prompt many market participants, including high-profile macro hedge fund managers, to exit or suggest others exit equity markets. Examples include:

- Our first recommendation in January 2010 after the S&P 500 had posted a total return of 70% since the trough of the GFC over a 10-month window
- April 2015, when we hosted a client call, “Bubble Trouble?” dispelling the notion that US equities were in bubble territory because the S&P 500 had rallied 254% since the trough of the GFC
- June 2017, as investors were becoming increasingly nervous about President Trump’s unconventional presidency, and we advised clients to remain invested based on economic and earnings growth and low odds of recession—the S&P 500 had rallied 330% since the trough of the GFC and 19.9% in the prior 12 months

This report provides the data and analysis underlying our view to stay the course. In Section I, we begin with a review of the factors that underpin US preeminence, with a particular focus on China given that the latter is the only contender for dislodging the US from its perch. We then turn to the investment case for staying invested at this time. We conclude with our one- and five-year expected returns and the risks to our outlook. In Section II, we provide a detailed review of our economic outlook, and in Section III, we provide the same for our financial market outlook.



As always, we put forth this *Outlook* with a strong dose of humility. It was less than a year ago that we had to pivot 180 degrees from our 2020 *Outlook: Room to Grow* to a *Sunday Night Insight* published on March 16



called *Room to Fall*. But even in that *Insight*, we maintained our recommendation to stay invested given that the S&P 500 had already declined 27% in three weeks, the market was already discounting a recession and we expected a higher S&P 500 by the end of 2020. Formulating an economic and financial market outlook is a herculean task in the best of times—it has been made that much more daunting by a global pandemic that has turned everyone’s personal and professional lives upside down.

We take this opportunity to wish you a safe, healthy and increasingly normal year ahead.

With our warm regards,
The Investment Strategy Group

Acknowledgments

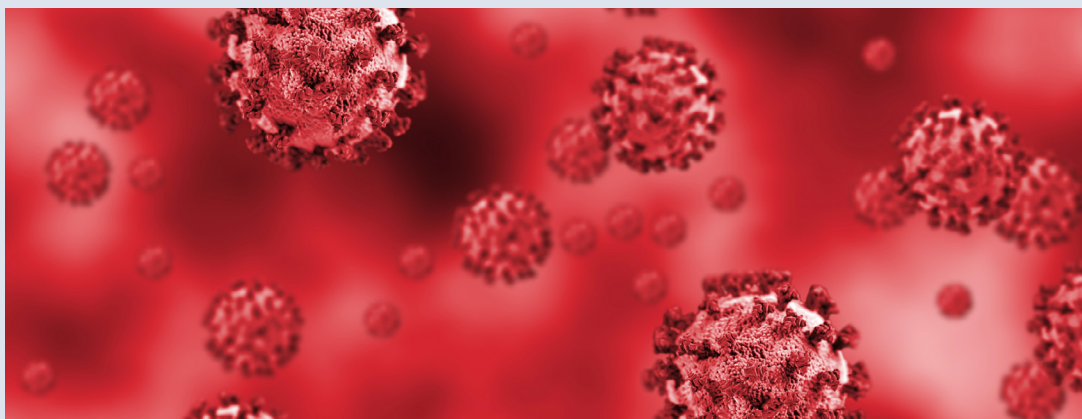
Since the inception of the Investment Strategy Group 20 years ago, we have leveraged the extensive resources of Goldman Sachs as well as that of select external firms, including other investment banks, think tanks and third-party research firms to formulate our investment views and recommendations. We have also leveraged a cadre of expert advisors in a broad range of subjects. In 2020, we were particularly fortunate to benefit from the expertise of a “who’s who” in healthcare focused on the pandemic. From our first COVID-19-related client call on February 4 titled, *The 2019-nCoV (Wuhan Coronavirus) and its Economic and Investment Implications*, where we heard from Dr. Luciana Borio and Professor Barry Bloom, to our 23rd COVID-19-related call on October 14, we and our clients have benefited from and been guided by the insights and expertise of this panel. We thank them and acknowledge their tremendous value to our work in 2020.

- **Stéphane Bancel**, CEO, Moderna.
- **José Manuel Barroso**, Chairman-Elect of Gavi, the Vaccine Alliance. Former President of the European Commission; and former Prime Minister of Portugal.
- **Seth Berkley**, CEO of Gavi, the Vaccine Alliance. Previously was the Founder, President, and CEO of the International AIDS Vaccine Initiative.
- **Barry Bloom**, Research Professor of Public Health at the Harvard T.H. Chan School of Public Health. Previously served as the Dean of the Faculty; and an advisor to the White House and the World Health Organization.
- **Luciana Borio**, Vice President, In-Q-Tel. Former Director for Medical and Biodefense Preparedness Policy at the White House; and former Acting Chief Scientist at the FDA.
- **Steven Corwin**, President and CEO, NewYork-Presbyterian.
- **Scott Gottlieb**, 23rd Commissioner of the Food and Drug Administration (2017–19). He also serves on the boards of Pfizer Inc. and Illumina Inc.
- **Richard Hatchett**, CEO, Coalition for Epidemic Preparedness Innovations. Former acting Director of the Biomedical Advanced Research and Development Authority; and former Director of Medical Preparedness Policy at the White House under Presidents Bush and Obama.
- **David Heyman**, Professor of Infectious Diseases at the London School of Hygiene and Tropical Medicine. Previously served for 22 years at the World Health Organization, including as the Executive Director of the Communicable Diseases Cluster heading the global response to SARS.

- **Florian Krammer**, Professor of Vaccinology, Icahn School of Medicine at Mount Sinai; First in the nation to develop a COVID-19 antibody test.
- **Esther Krofah**, Executive Director, FasterCures. Former Deputy Director of the Office of Health Reform at the Department of Health and Human Services.
- **Robert Langar**, Institute Professor at the Massachusetts Institute of Technology. Dr. Langar has received over 220 major awards, written over 1,250 articles and has nearly 1,050 patents worldwide. He has also taken part in the founding of over 40 biotechnology companies, including Moderna.
- **Mark McClellan**, Director, Duke-Margolis Center for Health Policy at Duke University. Previously served as the Administrator of the Centers for Medicare & Medicaid Services; and Commissioner of the Food and Drug Administration.
- **Steve Rusckowski**, CEO, Quest Diagnostics.
- **Thomas Schinecker**, CEO, Roche Diagnostics.
- **Leonard Schleifer**, CEO, Regeneron.
- **Peter Slavin**, President, Massachusetts General Hospital.
- **Paul Stoffels**, Chief Scientific Officer, Johnson & Johnson.
- **Pablo Tebas**, Director, Developmental Core, Penn Center for AIDS Research. Also serves as the principal investigator at the Perelman School of Medicine for INOVIO's INO-4800 vaccine candidate against COVID-19.

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- **Terence Flynn**, Managing Director, GS Global Investment Research.
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US Preeminence Still Intact

AFTER FOUR YEARS OF THE Trump presidency and a devastating pandemic, the declinists—those who foretell the decline of the US—are out in full force.

Professor Alexander Cooley, director of the Harriman Institute at Columbia University, and Professor Daniel Nexon of Georgetown University argue in “How Hegemony Ends: The Unraveling of American Power” that, while “predictions of American decline and a shift in international order are far from new—and they have been consistently wrong ... this time really is different. The very forces that made US hegemony so durable before are today driving its dissolution.”³

David Frum, a political commentator and former speechwriter for President George W. Bush who is now a staff writer at *The Atlantic*, argues that “the challenge to democratic values and institutions from Trump and his supporters is a page that will not turn.”⁴

Tom McTague, also of *The Atlantic*, quotes a European politician: “The collapse of the American empire is a given; we are just trying to figure out what will replace it.”⁵ McTague describes the Trump presidency as a watershed event that cannot be undone.

Professor Daron Acemoglu of the Massachusetts Institute of Technology and co-author of *Why Nations Fail* writes that the “United States is now on the brink of the sudden phase of institutional collapse after ... years of gradual decay.”⁶ He suggests that “countries fail the same way businesses do, gradually and then suddenly.”

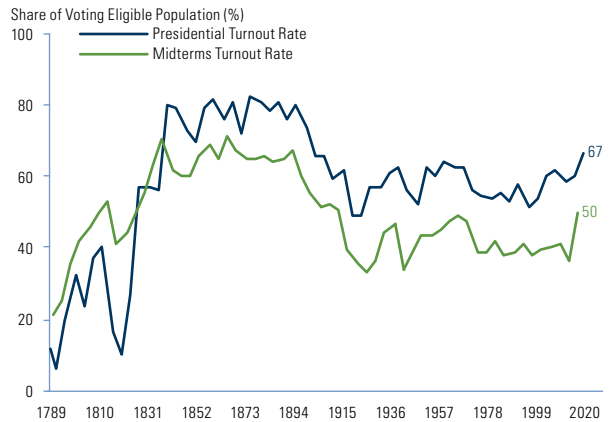
This is not the first time that declinists have declared the end of US preeminence. Notable prophecies of American decline that we have highlighted in past annual *Outlook* reports include:

- In the 1950s, following Soviet missile launches and the success of Sputnik (the first orbital satellite), declinists warned that the Soviet Union was establishing an unchallengeable lead in missiles and producing superior scientists and engineers.
- In the late 1960s, declinists said the bipolar world was coming to an end and that Europe and Japan would emerge as equals of the US and the Soviet Union.
- In the 1970s, declinists pointed to the Vietnam War, the Kent State University shootings, the Watergate scandal, the Arab oil embargo, and President Richard Nixon’s ensuing resignation as harbingers of US economic, political, geopolitical and social decline.
- In the 1980s, declinists warned that Japan and the Asian Tigers were on the march as the US retreated. Books like *Japan as Number One: Lessons for America* and *The Enigma of Japanese Power* epitomized the thinking of the time.
- In 2008–09, the declinists touted the rise of China and the fall of the US. Some even went so far as to say that the dominant political and economic force in the 21st century would be China, just as the US was the dominant force in the 20th century.

We believe that the declinists will be proven wrong again. As James Baker III, White House chief of staff and secretary of the Treasury under President Ronald Reagan and White House chief of staff and secretary of state under President George H.W. Bush, said in anticipation of the Trump presidency, “Presidents can do a lot but they can only do so much through the system of checks and balances. We are a country of laws, limited by bureaucracy and the power structure in Washington. Presidents are not unilateral rulers. If they did not know that,

Exhibit 1: General Elections Voter Turnout

Voter turnout in 2020 as a percentage of the voting-eligible population was the highest since 1900.



Data as of December 31, 2020.
Source: Investment Strategy Group, Election Project.

they will find out soon enough.”⁷ He believes that the US and its institutions are strong enough to survive any shock, including a seismic one.

The late Charles Krauthammer, a political journalist with an observant eye and a sharp pen who won the Pulitzer Prize in 1987 for his columns in the *Washington Post*, wrote in the early years of the Trump presidency, “Our checks and balances have turned out to be quite vibrant.”⁸ America’s “guardrails,” he posited, have held.⁹

The resilience of American institutions and democracy is often underappreciated. Consider that nearly 160 million ballots were cast in the 2020 general election in the midst of the worst pandemic since the Spanish flu in 1918, with voter turnout as a percentage of the voting-eligible population at its highest level since 1900, as shown in Exhibit 1. Concerns about broad-based voter suppression, widespread rioting and violence, and a contested or contingent election proved ill-founded. Neither Democrats nor Republicans won a sweeping majority in the Senate or House of Representatives. The American electorate voted for a return to normalcy and repudiated both extreme progressive and extreme conservative policies. Most importantly, the US Supreme Court did not bend to the whims and whines of politicians seeking to overturn the election results. The American political system has not been degraded by the Trump presidency and a deadly pandemic.

Other factors that underpin US preeminence are also firmly intact: economic strength supported

by abundant natural resources; human capital advantages; and a vibrant, innovative and efficient private corporate sector. While the US ranks high on each of these factors, it is the fact that it ranks high on so many of them—each reinforcing the others—that accounts for US preeminence. Such depth and breadth of dominance make it extremely difficult, if not impossible, for any one country to knock the US off its perch.

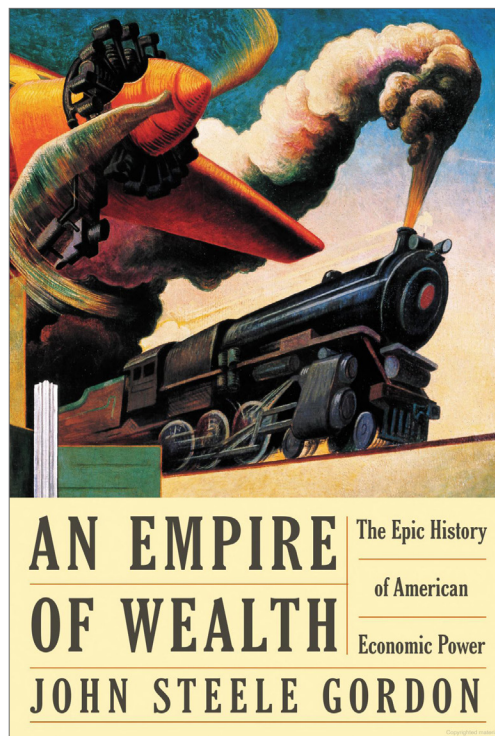
This is not to say that the US is immune from recessions, equity market downdrafts, policy mistakes and pandemic shocks, or that it can address such shocks better than other countries. Rather, we believe America's economic strength and sound institutions have created a resilient, innovative and risk-taking culture that has not been replicated on the same scale anywhere else. Furthermore, no other country—not even China—is likely to erase this advantage anytime soon. We now examine each of the factors supporting US preeminence in greater detail, using over 30 objective metrics.

Economic Strength

The US is one of the wealthiest countries in the world. John Steele Gordon wrote in *An Empire of Wealth: The Epic History of American Economic Power* that the ultimate strength of the US lies “in its wealth ... its capacity to create still more wealth, and its seemingly bottomless imagination in developing new ways to use that wealth productively.”¹⁰ US economic hegemony is driven by the diversity of its economy, the most productive labor force in the world, a highly educated population, unparalleled rates of innovation, the highest-ranked corporate management in the world and the good fortune of having abundant natural resources.

GDP and GDP per Capita

The US economy is the largest in the world, at \$21 trillion, and it accounts for 25% of world gross domestic product (GDP). It is 40% larger than the next largest economy, which is China, 4.2 times as large as the third-largest (Japan), 5.5 times as large as the fourth-largest (Germany), 7.9 times as large as the fifth-largest (the UK) and 64% larger than the entire Eurozone. Even though we have touted the sheer size of the US economy in the past, we have also suggested that China likely will become



An Empire of Wealth. Copyright © 2004 by John Steele Gordon, by permission HarperCollins Publishers.

a larger economy than the US sometime in the next decade or so. While size matters, size alone does not equate to preeminence.

The US is also by far the wealthiest country on a GDP per capita basis among large countries in the world. Its GDP per capita stands at \$63,051, compared to Germany at \$45,466, the UK at \$39,229, Japan at \$39,048, and the Eurozone at \$37,427 in the aggregate. Lower down the rankings, China weighs in at \$10,582, which is some \$2,000 below the poverty level of the US. China's population is still relatively poor.

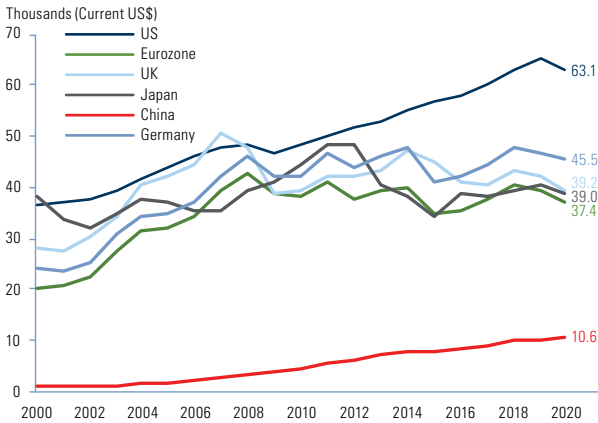
Adjusted for purchasing power, China's GDP per capita stands at \$17,206. Despite the more rapid growth expected in China over the next decade or so, its GDP per capita will not surpass that of the US in the 21st century. At best, according to our estimates, it may reach 72% of US GDP per capita by 2099.

We note that there are a handful of countries, such as Luxembourg and Switzerland, that have GDP per capita levels that are higher than that of the US, but these have populations totaling well under 10 million each.

Not only does the US have the highest GDP per capita of any large country, but the GDP

Exhibit 2: GDP Per Capita

The US has the highest GDP per capita among large economies, and the gap with other regions has widened.



Data as of 2020.
Source: Investment Strategy Group, Haver.

per capita gap between the US and most other developed economies has been widening, as shown in Exhibit 2.

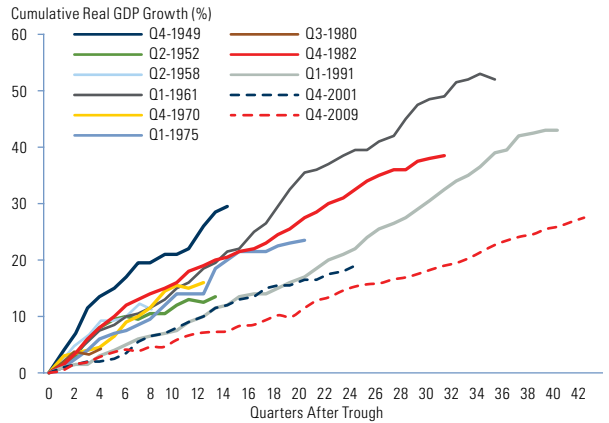
Some economists argue that this trend will not continue because the US is in a permanent state of “secular stagnation,” facing lower levels of economic and productivity growth. They point to the slow pace of growth in the post-GFC recovery as evidence. As shown in Exhibit 3, the recovery, at a 2.3% annualized growth rate, was certainly the slowest in the post-WWII period. But what the recovery lacked in strength, it made up for in length.

The post-GFC recovery was the longest in US history and, in all likelihood, would have continued if not for the pandemic. The expansion added \$4.6 trillion to US GDP in 2019 dollars—the largest increase of any post-WWII recovery. Similarly, it added \$10,300 to GDP per capita. To put that number in context, the increase in US GDP in the 10-year recovery was nearly on par with China’s total GDP per capita of \$10,600.

The US has also weathered the GFC and the COVID-19 pandemic better than other large developed economies. As shown in Exhibit 4, the US has grown faster than Germany, the UK, Japan and the Eurozone from the trough of the GFC. What is most impressive is that the US has managed to grow while significantly reducing leverage, as shown in Exhibits 5, 6 and 7. The US is also the only country in this cohort of large

Exhibit 3: US Real GDP Growth During the Longest Post-WWII Recoveries

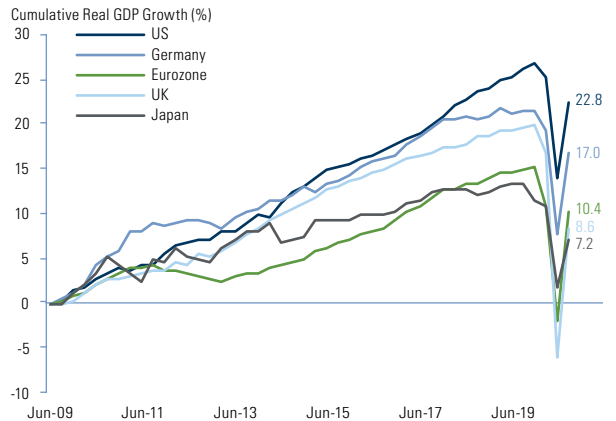
What the last recovery lacked in strength, it made up for in length.



Data as of December 31, 2020.
Note: Excludes Q4 1945–Q4 1948 expansion. The NBER records an expansion, despite annual real GDP contracting slightly between 1946 and 1947.
Source: Investment Strategy Group, Datastream, NBER.

Exhibit 4: Post-GFC Cumulative Real GDP Growth

The US has grown faster than Germany, the UK, Japan and the Eurozone since the trough of the GFC.



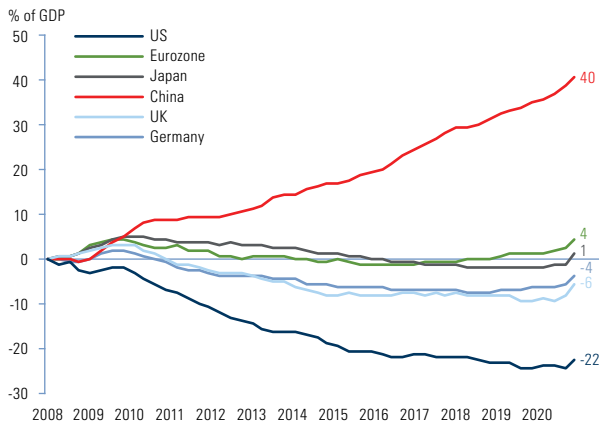
Data as of Q3 2020.
Source: Investment Strategy Group, Datastream.

developed economies that is projected to attain a level of real GDP by the end of 2021 that is higher than its pre-pandemic level at the end of 2019.

Among emerging market countries, China’s GDP is expected to exceed its 2019 level by 9.7% in 2021, compared to the US exceeding by 1.7%. Clearly, even though the virus originated in China, the country has contained the pandemic more effectively than the US and has leveraged its export

Exhibit 5: Cumulative Change in Household Leverage

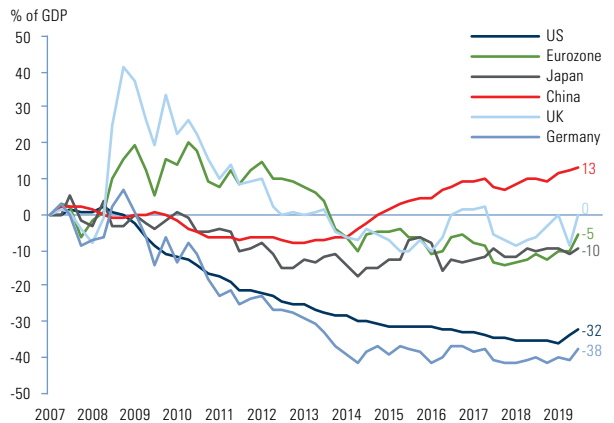
US households have meaningfully reduced their debt levels since the GFC.



Data through Q2 2020.
Source: Investment Strategy Group, BIS, Datastream, IMF.

Exhibit 7: Cumulative Change in Financial Sector Leverage

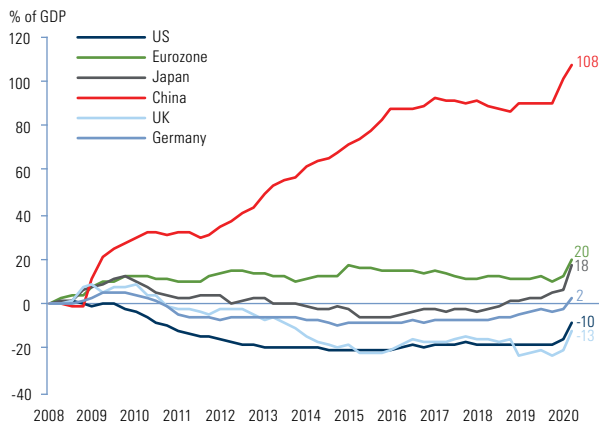
The US has managed to grow while significantly reducing leverage in the financial sector.



Data through Q2 2020.
Source: Investment Strategy Group, BIS, Datastream, IMF.

Exhibit 6: Cumulative Change in Private Non-Financial Sector Leverage

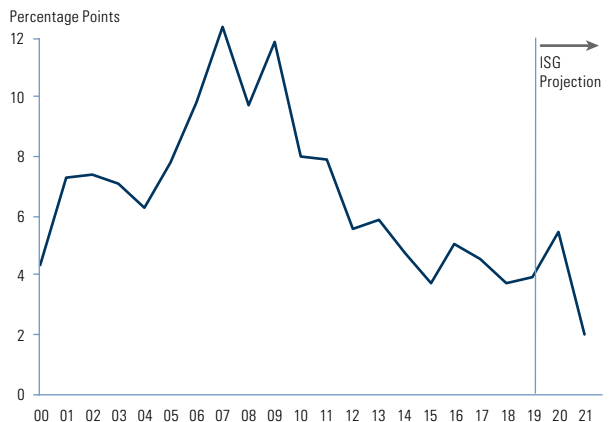
The US economy has delevered significantly.



Data through Q2 2020.
Source: Investment Strategy Group, BIS, Datastream, IMF.

Exhibit 8: China vs. US GDP Growth Gap

China's growth has outpaced that of the US since the GFC; however, we expect the gap to narrow.



Data through 2019, Forecast through 2021.
Source: Investment Strategy Group, Haver.

capacity in personal protective equipment to avoid a recession.

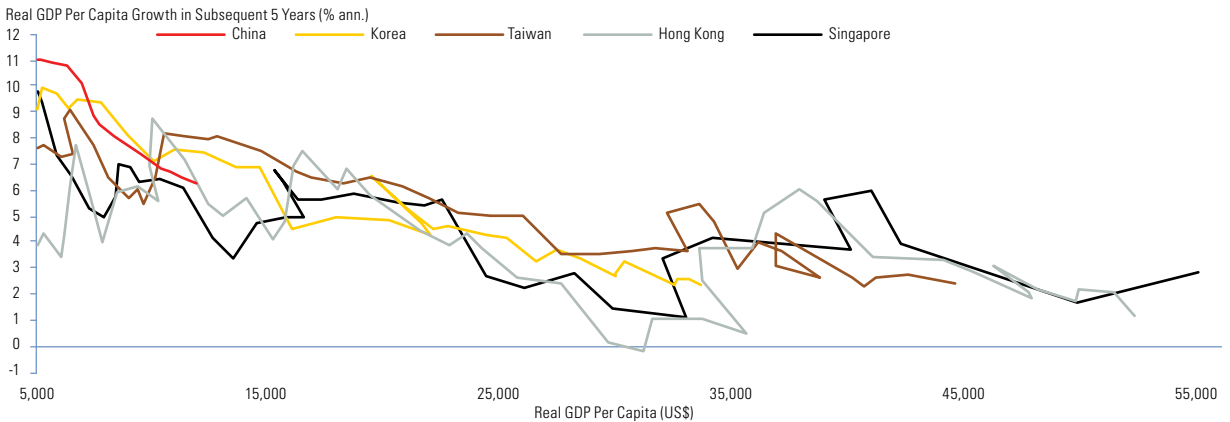
China's growth has also outpaced that of the US since the trough of the GFC (see Exhibit 8). China followed in the footsteps of Japan and the Asian Tigers when it joined the World Trade Organization (WTO) in 2001. These Asian economies relied on an export-led growth model driven by cheap currency and cheap labor to generate rapid growth rates in the early years of

development. But, inevitably, their growth rates slowed, as shown in Exhibit 9. Japan's trend growth rate now stands at 0.6%, and South Korea, Taiwan, Hong Kong and Singapore have trend growth rates that range from 2.2% to 2.9%. China is likely to follow the same path.

Harvard University Professors Lant Pritchett and Lawrence Summers also argue that history will bear down on China's impressive growth rates. In "Asiaphoria Meets Regression to the

Exhibit 9: GDP Per Capita vs. Growth in Subsequent 5 Years

As the Asian Tiger economies grew richer, their growth rates slowed.



Data as of 2019.
Source: Investment Strategy Group, Haver.

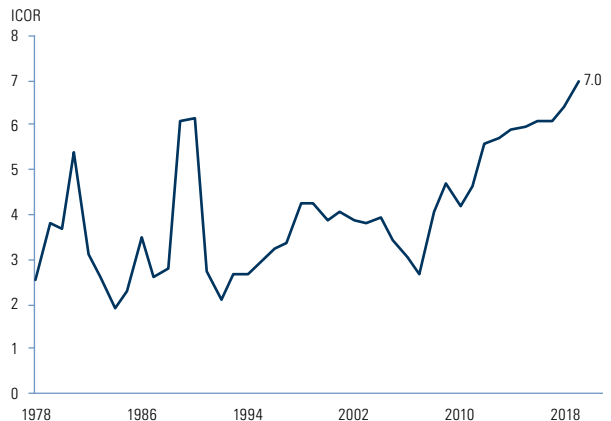
Mean,” a 2014 NBER working paper, they argue that “regression to the mean is perhaps the single most robust and empirical relevant fact about cross-national growth rates.”¹¹ The cross-national historical average has been 2%, with a standard deviation of 2%. The Pritchett and Summers regression analysis predicted that Chinese growth between 2015 and 2035 would be 3.9% per year, with a standard error of 1.6%.

Our own analysis points to a similar steady downward drift approaching 3.5% per year by 2030. China’s growth continues to be reliant on fixed capital formation, primarily property and infrastructure, and exports. There are three constraints on the sustainability of this growth model:

- The incremental capital China needs to generate the same amount of real GDP growth has been increasing. The incremental capital-output ratio has more than doubled over the past 20 years, implying a greater need for capital (see Exhibit 10).
- China’s debt has increased significantly, from 176% of GDP in 2011 to 289% of GDP in 2020 (see Exhibit 11). The government is not inclined to allow debt to continue rising; however, a meaningful deleveraging across the central government, local governments, state-owned enterprises and the private sector will lower GDP growth rates.
- China already accounts for 13% of global exports of goods, a share that is 45% higher

Exhibit 10: China Incremental Capital-Output Ratio

The incremental capital needed to generate the same amount of real GDP growth in China has risen sharply.

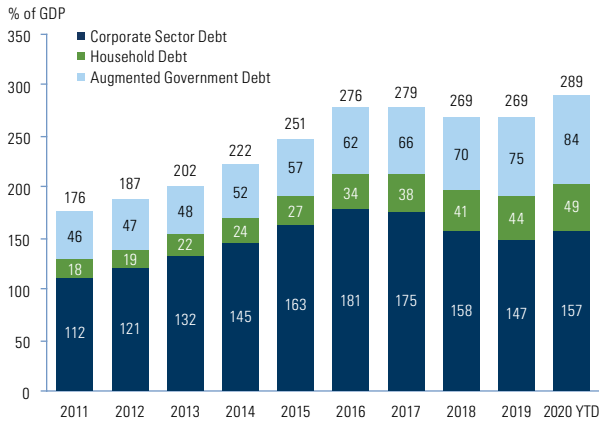


Data as of 2019.
Note: ICOR is the incremental amount of investment (as a percent of GDP) that is required to generate an additional percentage point of GDP growth.
Source: Investment Strategy Group, Haver, World Bank.

than the next-largest exporter, the US, and 64% higher than the third-largest exporter, Germany. At its peak level of exports in 1986, Japan accounted for 10.4% of global exports; its share declined thereafter, partly due to the very strong pushback by the US. China’s share is unlikely to increase given that it is facing even stronger resistance than Japan did from its major Western trading partners.

Exhibit 11: China Total Debt by Sector

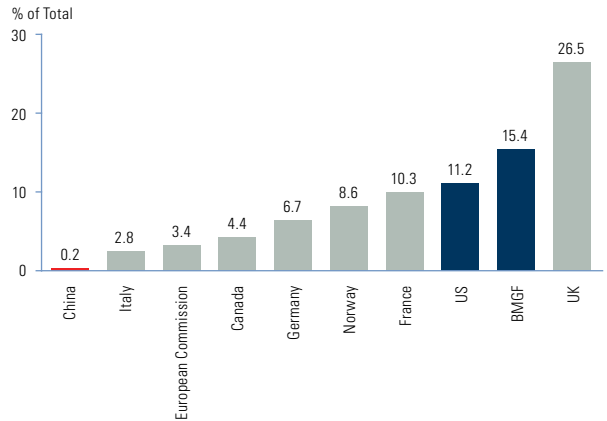
Total debt in the economy increased sharply in 2020, reversing the trend of recent years.



Data through November 2020.
 Note: Augmented government debt includes central and local government debt and the debt of local government financing vehicles.
 Source: Investment Strategy Group, CEIC, Haver Analytics.

Exhibit 13: Pledged Contributions to Gavi, the Vaccine Alliance, for 2021–25

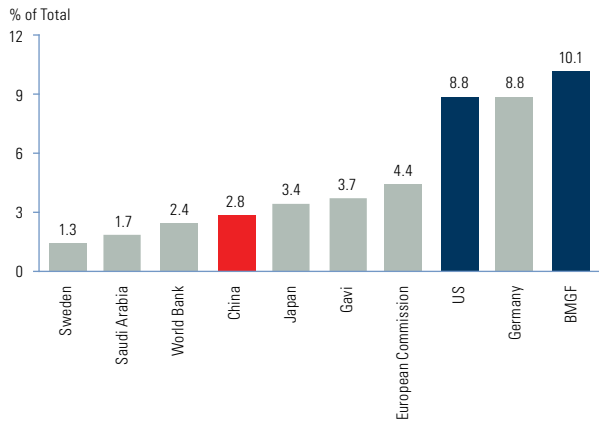
The US government and BMGF have contributed much more to Gavi than China.



Data as of September 30, 2020.
 Source: Investment Strategy Group; Gavi, the Vaccine Alliance.

Exhibit 12: Total Contributions by Select Nations / Entities to WHO for 2020–21

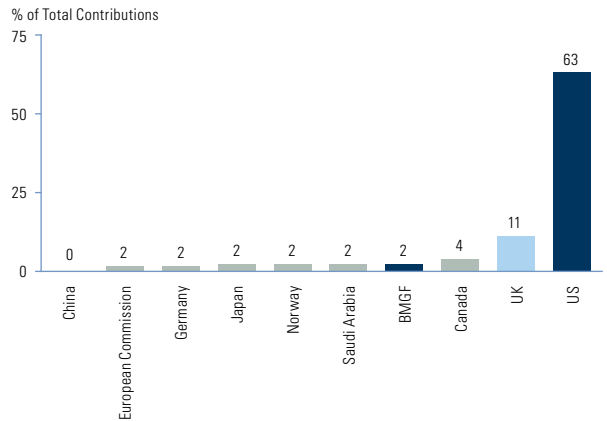
The US government and BMGF account for 19% of 2020–21 WHO contributions.



Data as of December 31, 2020.
 Source: Investment Strategy Group, World Health Organization.

Exhibit 14: Contributions by Select Nations / Entities to COVAX AMC

China has yet to contribute anything to the COVAX AMC.



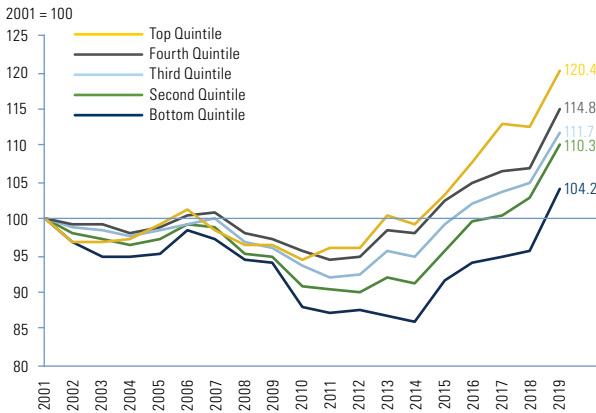
Data as of December 2020.
 Source: Investment Strategy Group; Gavi, the Vaccine Alliance.

A small but particularly timely example of the wealth and leadership of the US relative to China can be observed by its respective contributions to the World Health Organization (WHO); Gavi, the Vaccine Alliance; and the COVAX Advance Market Commitment (AMC). The US government and the Bill and Melinda Gates Foundation (BMGF) account for 18.9% of WHO

contributions, while China accounts for 2.8% (see Exhibit 12). The US government and BMGF have accounted for 26.6% of Gavi’s pledged contributions for 2021–25, while China has contributed 0.2% (see Exhibit 13). Finally, the US and BMGF have given 65% of the COVAX AMC contributions, whereas China has not yet contributed anything (see Exhibit 14).

Exhibit 15: Real Income for the US Consumer by Quintile

Recent gains in the lower quintiles of income were likely dealt a significant blow by the pandemic.



Data through 2019.
Source: Investment Strategy Group, US Census Bureau.

While the US is an “empire of wealth,” as Gordon termed it, we would be remiss if we did not highlight the large income inequality in this country. One of the benefits of the long duration of the post-GFC, pre-pandemic recovery and the ensuing decline in the unemployment rate to 3.5%—the lowest rate since 1949—was a long-awaited recovery in the incomes of the lowest-income quintiles of US households. Although the real income of the top two quintiles of households had recovered to pre-GFC levels by 2014, the bottom quintile had just begun to recover in 2019 (see Exhibit 15). The gains in the lowest quintiles of income, however, were undoubtedly dealt a significant blow by the pandemic. The Gini coefficient, a measure of income inequality, is very high in the US. After deteriorating in the 1970s and 1980s, the US Gini coefficient has remained steady, ranging between 40 and 41. Still, it compares unfavorably to that of most developed and emerging market economies, including China (see Exhibit 16).

Economic Complexity

The US economy is also a more diverse and complex economy than others. The Economic Complexity Index computed at the Growth Lab at Harvard University measures the extent to which a country produces a large variety of specialized products that only a few other countries produce and export. Examples include jet engines and medical imaging devices.

Exhibit 16: Gini Coefficients Across Selected Economies

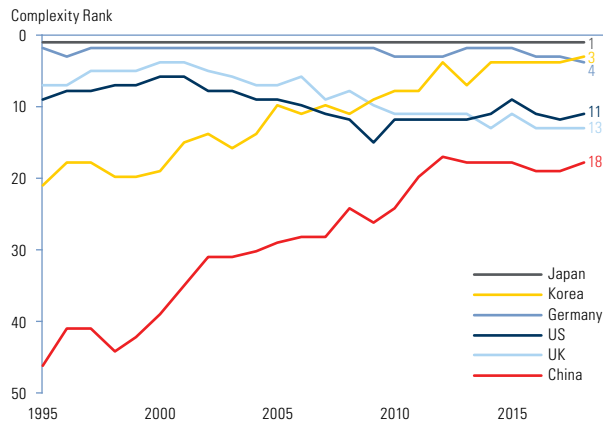
The US’s Gini coefficient compares unfavorably to those of many developed and emerging market economies.



Data as of 2016 for: China, US, Germany and UK; as of 2017 for: France, Italy, Spain, Denmark, Finland, Norway and Sweden; as of 2013 for Japan; as of 2012 for Korea; and as of 2018 for Russia.
Source: Investment Strategy Group, World Bank.

Exhibit 17: Economic Complexity Index Rankings

China’s economic complexity has improved, but remains below that of developed countries.

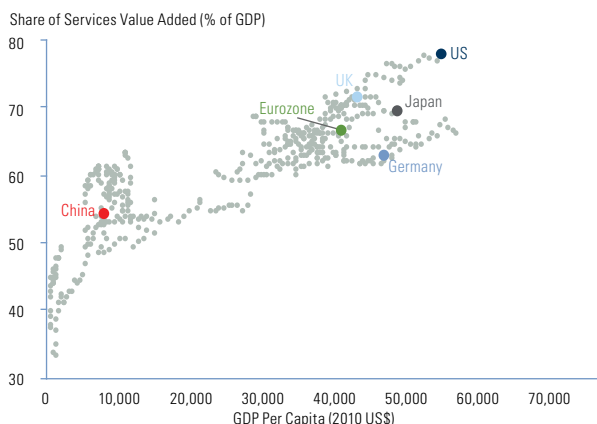


Data through 2018.
Source: Investment Strategy Group, World Bank, The Growth Lab at Harvard University, 2019, “Growth Projections and Complexity Rankings,” <https://doi.org/10.7910/DVN/XTAQMC>, Harvard Dataverse, V2.

As shown in Exhibit 17, the US ranks 11th on this index, below Japan, South Korea and Germany, but well above China. We note that China’s accession to the WTO and the outsourcing of high-technology manufacturing from the US to China accounted for the increase seen between 2000 and 2010.

Exhibit 18: Share of Services Value Added in GDP

To the extent services reflect more advanced skills, China's economic complexity lags that of developed markets.



Data as of 2019.
Source: Investment Strategy Group, Haver.

Another measure of economic diversity and complexity is the share of services in gross value added (GDP adjusted for subsidies and taxes on products), to the extent that services reflect more advanced skills. As shown in Exhibit 18, the US compares favorably to other large developed economies and far surpasses China on this measure.

Abundant Natural Resources

Another major source of US economic strength is the abundance of natural resources, both in aggregate and on a per capita basis (see Exhibit 19). These resources include hydrocarbons, metals and minerals, renewable water resources, and arable and currently cultivated land. For example, the US has 4,639 square meters of arable land per capita, compared to 3,653 square meters in Australia, 1,894 square meters in the Eurozone and 851 square meters in China. The US has 210 barrels of oil per capita, compared to the UK at 40 barrels and China at 19 barrels. Russia is the only country with extensive natural resources that are greater than those of the US on a per capita basis.

Human Capital Advantages

The US has several major human capital advantages compared to the largest developed economies and China:

- Demographics
- Education
- Labor productivity

Exhibit 19: Global Proven Reserves of Natural Resources

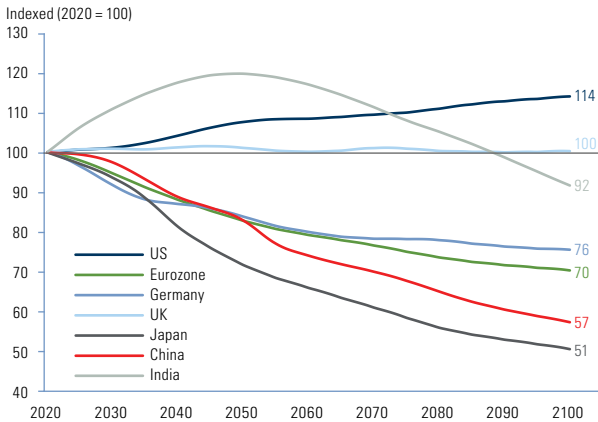
A major source of US economic strength is its abundance of natural resources.

		Proven Reserves Per Capita (latest data available as of end-2020)									
	Unit	US	Eurozone	UK	Japan	Australia	China	Brazil	India	Russia	World
Energy											
Oil	Barrels	210	2	40	–	0	19	60	3	743	226
Natural gas	Thousand cubic meters	39	1	3	–	0	6	2	1	263	26
Coal	Tonnes	760	117	–	–	1	101	31	78	1,123	139
Uranium	Kilograms	0	0	–	0	11	0	1	0	2	1
Metals and Minerals											
Copper	Kilograms	155	–	–	–	689	19	–	–	423	113
Zinc	Kilograms	34	–	–	–	539	31	–	5	–	33
Nickel	Kilograms	0	–	–	–	158	2	52	–	48	12
Gold	Grams	9	–	–	–	79	1	11	–	37	7
Potash	Kilograms	670	636	–	–	–	250	114	–	4,156	469
Rare earths	Kilograms	4	–	–	–	26	31	104	5	83	16
Agriculture											
Renewable water resources	Cubic meters	9,350	3,856	2,199	3,406	3,897	2,032	40,971	1,399	31,342	7,133
Irrigated land	Square meters	804	456	14	196	202	494	256	488	298	423
Arable land	Square meters	4,639	1,894	899	333	3,653	851	3,791	1,145	8,528	1,858

Data as of 2020.
Source: Investment Strategy Group, BP, USGS, Central Intelligence Agency, OECD, AQUASTAT Main Database, Food and Agriculture Organization of the United Nations (FAO).

Exhibit 20: Working-Age Population Projections

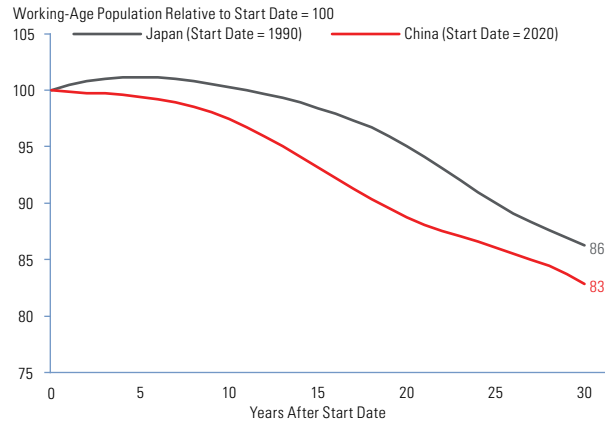
The working-age population in the US is not expected to peak in this century.



Data projected through 2100.
Source: Investment Strategy Group, United Nations Population Division.

Exhibit 21: Trajectory of Working-Age Population

China faces worse demographics over the next 30 years than Japan did between 1990 and 2020.



Data projected through 2050.
Note: Working-age Population defined as ages 15–64
Source: Investment Strategy Group, United Nations.

Demographics

A key contributor to economic growth is favorable demographics: a growing labor force increases the productive capacity of a country. The US has a much more favorable demographic outlook than most other developed and emerging market countries. The only country that has more favorable long-term demographics relative to the US is India. Germany's working-age population peaked in 1996 and the Eurozone's topped out in 2010. Japan's peak came in 1995 and China's in 2015. By comparison, the working-age population in the US is not expected to peak in this century (see Exhibit 20).

China, put forth by the United States declinists as the leading contender to challenge US preeminence, faces a very unfavorable demographic outlook. Its working-age population is expected to decline at a faster rate in the next 30 years than Japan's did during its "lost decades" between 1990 and 2020 (see Exhibit 21). Moreover, China entered the decline of its working-age population from a much weaker starting point than Japan did. China's GDP per capita is 16% of the US's on a nominal basis and 26% of the US's on a purchasing power parity (PPP) basis, while Japan's GDP per capita was 105% of the US's on a nominal basis and 80% on a PPP basis in 1990.

Japan was a rich country with a high debt burden of 275% of GDP when it faced a declining working-age population, and still its GDP growth rate was pulled down by its demographics. As mentioned earlier, Japan's trend growth now stands at 0.6%. China, in contrast, is today a poor country with a similarly high debt burden of 289% of GDP.

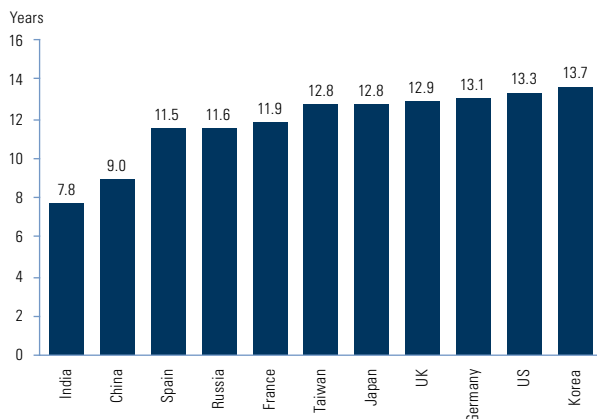
Education

One of the most important contributors to the strength of an economy is the quality of its labor force. The more educated the labor force, the higher the level of labor productivity. Professor Dale Jorgenson of Harvard University has written extensively about the impact of educational attainment on labor productivity.¹² We discussed this topic in greater detail in our 2016 *Outlook: The Last Innings*.

China, put forth by the United States declinists as the leading contender to challenge US preeminence, faces a very unfavorable demographic outlook.

Exhibit 22: Average Years of Schooling Among Working-Age Population

The US has one of the most highly educated labor forces in the world.



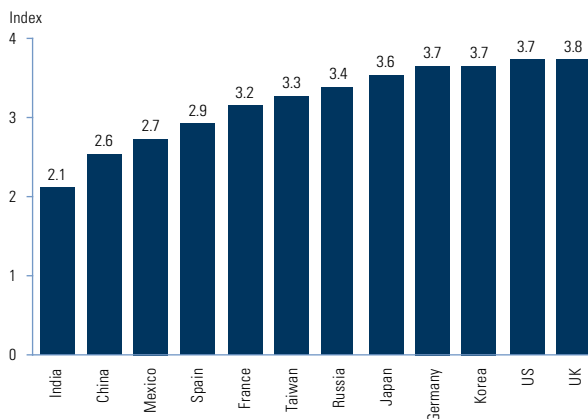
Data as of 2020.

Note: Working-age Population defined as ages 15–64.

Source: Investment Strategy Group, UNESCO, United Nations World Population Prospects, Barro-Lee.

Exhibit 24: Human Capital Index

The US ranks above Eurozone countries and substantially above China in human capital.

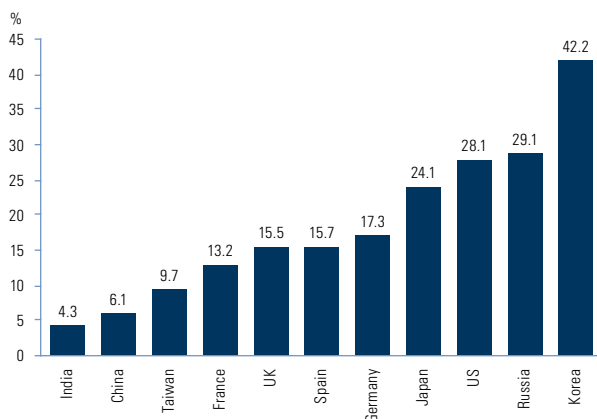


Data as of 2017.

Source: Investment Strategy Group, CEIC, United Nations World Population Prospects, Barro-Lee, OECD, PISA 2018: Insights and Interpretations, Paris, France, 2019.

Exhibit 23: Fraction of Working-Age Population That Has Completed Tertiary Education

Nearly 20 years after China joined the WTO, only 6.1% of its population has completed tertiary education.



Data as of 2020.

Source: Investment Strategy Group, UNESCO, United Nations World Population Prospects, Barro-Lee.

The US has one of the most highly educated labor forces in the world. The average years of schooling in the population between the ages of 15 and 64 is 13.3 years, exceeding that of most larger developed countries including Germany, the UK, Japan, France and Spain (see Exhibit 22). China's average years of schooling stands at 9.0 years.

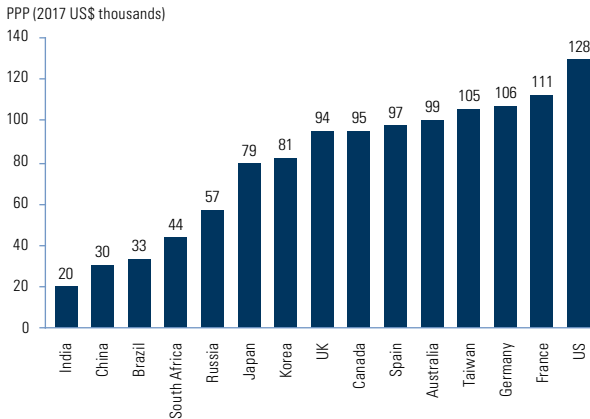
The US also bests most other countries in terms of its share of the population with tertiary education. The US's share stands at 28.1% of the population, lagging the share in South Korea and Russia, but exceeding that of most other developed economies. As of 2020, nearly 20 years after China joined the WTO, only 6.1% of its population had completed tertiary education (see Exhibit 23). Current enrollment levels in tertiary education are also low in China, which implies it will have a lower-quality workforce in the future.

The University of Groningen's Growth and Development Centre has developed an index of human capital based on years of schooling and the estimated economic returns from that level of education. According to this index, the US ranks above the large Eurozone countries and substantially above China (see Exhibit 24).

Finally, US preeminence in education is evident in the world rankings of top academic institutions. The US accounts for eight out of the top 10 universities, according to the Times Higher Education rankings of world universities (UK universities are the other two). Even when the list is expanded to the top 50 universities, the US accounts for half of these institutions, followed by the UK with seven, Germany and Canada with three each, and China with two.

Exhibit 25: Countries' Level of Output per Worker

Another factor contributing to US preeminence is the productivity of the US labor force.

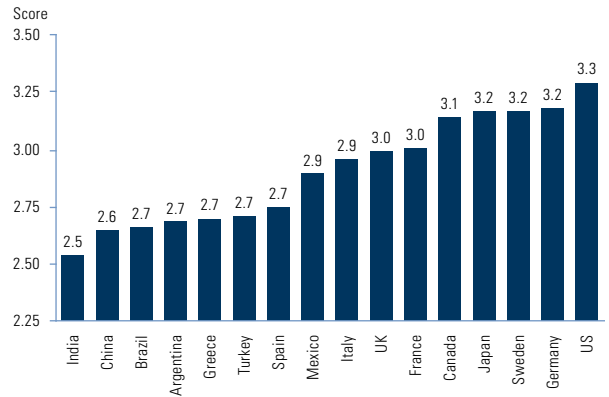


Data as of 2019.

Source: Investment Strategy Group, World Bank, International Monetary Fund. Min Zhu, Longmei Zhang and Daoju Peng, "China's Productivity Convergence and Growth Potential—A Stocktaking and Sectoral Approach," International Monetary Fund, 27, 2019.

Exhibit 26: Average Corporate Management Score

The US has the highest average corporate management score among developed and emerging market economies.



Data as of 2015.

Source: Investment Strategy Group, World Management Survey.

Labor Productivity

Another economic factor contributing to US preeminence is the productivity of its labor force. At \$128,447, the US's output per worker exceeds that of France, Germany, Taiwan, the UK and South Korea (see Exhibit 25). The US's productivity is 4.3 times as great as that of China.

Recent research by the International Monetary Fund (IMF) suggests that productivity in China is partly weighed down by the service sector. This low productivity is due to the non-tradable nature of certain services and the absence of competitive pressure from foreign companies because of reduced access to the Chinese market. China's low capital-to-labor ratio, which is 33% of the US's, also weighs down the country's labor productivity.

The Corporate Sector

We believe that a vibrant, efficient and profitable corporate sector is another major contributor to economic strength. In fact, there have been several studies showing that differences in corporate management account for as much as a quarter of the difference in the total factor productivity of the US economy and that of other countries. In short, a strong corporate sector reinforces strong economic

productivity. Here again, the US stands out across a broad range of objective metrics. We evaluate the US corporate sector across three of them:

- Corporate Management
- Earnings per Share Growth
- Cost Competitiveness

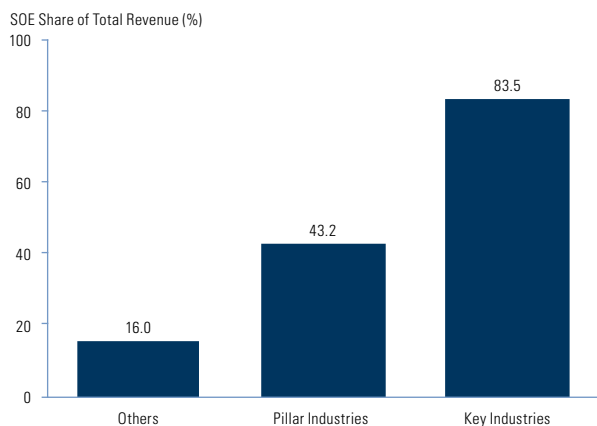
Corporate Management

The US has the highest average corporate management score among developed and emerging market economies—well above those of Germany, Sweden, Japan and Canada. China scores particularly poorly, ranking below Brazil and Argentina (see Exhibit 26). China also has a skewed distribution, with a larger portion of poorly managed firms relative to a normal bell-shaped distribution.

There have been several studies showing that differences in corporate management account for as much as a quarter of the difference in the total factor productivity of the US economy and that of other countries.

Exhibit 27: State-Owned Enterprises' Share of Revenue Among Chinese Listed Companies

China has supported SOEs and encouraged their mergers.



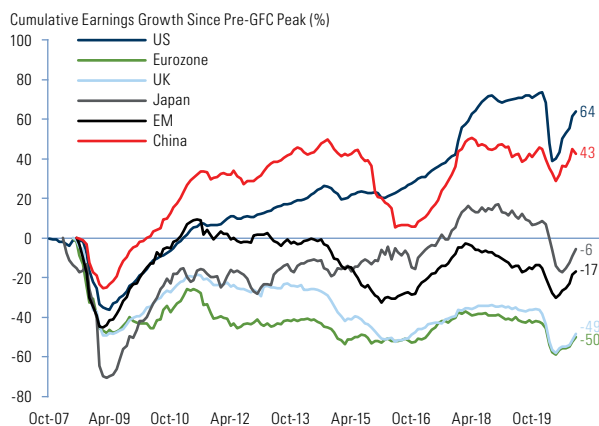
Data through Q1 2020.

Note: Key industries include: defense, electricity, oil and gas, telecom, coal, shipping, aviation, rail. Pillar industries include: auto, chemicals, construction, electronics, equipment manufacturing, nonferrous metals, prospecting, steel, technology. Others include: agriculture, pharmaceutical, real estate, tourism, investment, professional services, general trade, general manufacturing.

Source: Investment Strategy Group, Rhodium Group.

Exhibit 28: Earnings Growth Since Pre-GFC Peak

US companies have exhibited the strongest earnings growth relative to their pre-GFC levels.



Data through December 31, 2020.

Note: Data is based on forward earnings.

Source: Investment Strategy Group, Datastream.

This management score was developed by Professors Nicholas Bloom of Stanford University, Christos Genakos of Athens University, Raffaella Sadun of Harvard Business School and John Van Reenen of London School of Economics. As they noted in their February 2012 NBER working paper, all four are European and came to this project without any biases toward American companies.¹³ The score is based on the extent to which companies monitor performance, set targets for employees and provide the right incentives. Higher scores result in higher productivity, profitability and growth.

Their research shows that publicly owned (i.e., government-owned) firms have worse management practices in which promotions are not based on performance. They also point to evidence that firms with better management

practices are tougher competitors in their product markets. These conclusions bode well for the sustainability of US preeminence, and they undermine the view that China will displace the US in the foreseeable future. China has supported state-owned enterprises (SOEs) and encouraged the merger of some SOEs into national champions. SOEs account for 83.5% of the revenues of listed companies in what China calls “key” industries (defense, electricity, oil and gas, telecommunications, coal, shipping, aviation and rail) and 43.2% of revenues in so-called “pillar” industries (auto, chemicals, construction, electronics, steel and technology, among others), as shown in Exhibit 27. According to the Bloom et al. research, the heavy hand of government points to weaker long-term corporate success.

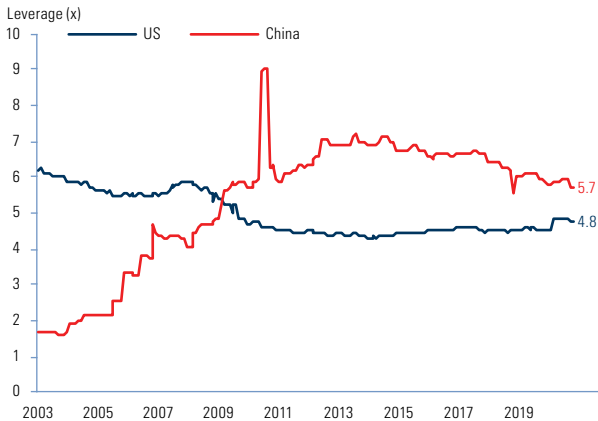
Earnings per Share Growth

One measure of the effectiveness of corporate management is the extent to which it generates sustainable profits for shareholders. US companies have generated much higher earnings per share growth relative to pre-GFC levels than have companies in larger developed economies and China (see Exhibit 28). In fact, corporate earnings in the Eurozone and the UK had not yet recovered to

Publicly owned (i.e., government-owned) firms have worse management practices in which promotions are not based on performance.

Exhibit 29: US and China Corporate Financial Leverage

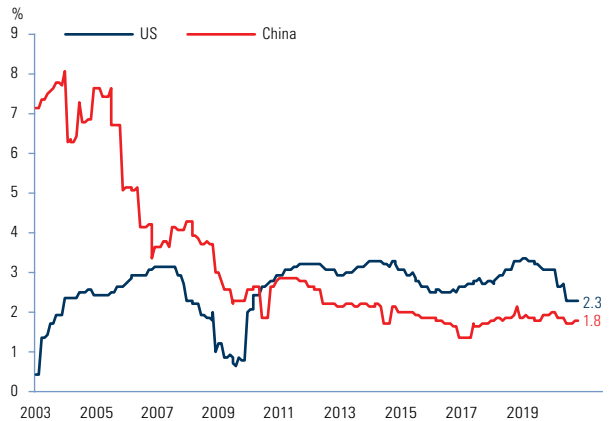
Chinese companies have increased their leverage to offset a declining return on assets.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 30: US and China Corporate Return on Assets

US companies have maintained a higher return on assets.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

pre-GFC levels even before the hit to earnings that occurred during the pandemic.

Chinese companies have outperformed companies in large developed economies, but they have maintained their earnings growth by increasing their use of leverage over the past 17 years. Exhibits 29 and 30 together show the extent to which Chinese companies have increased their leverage to offset a declining return on assets, while US companies have maintained a higher return on assets at lower levels of leverage.

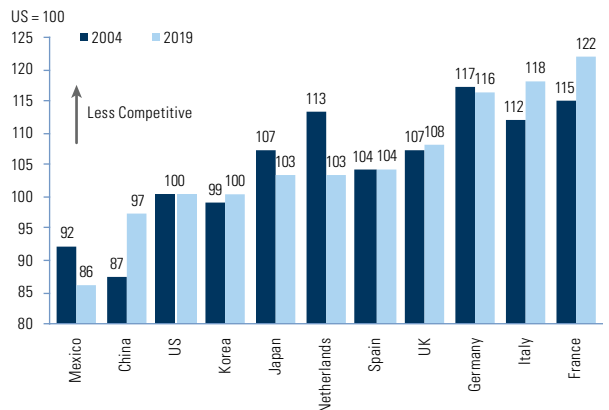
Cost Competitiveness

The US has managed to maintain its cost competitiveness among key exporters. According to the Global Manufacturing Cost-Competitiveness Index constructed by the Boston Consulting Group (BCG), the US is among the most cost-competitive large exporters. As shown in Exhibit 31, the US is on par with Korea, marginally more cost competitive than Japan and substantially more cost competitive than France or Germany. It is marginally less cost competitive than China; however, China's competitiveness has eroded significantly since 2004.

One of the impacts of the pandemic has been a reevaluation of global supply chains, similar to what occurred after the 2011 Japanese Fukushima Daiichi nuclear disaster. As higher wages and a stronger currency erode the cost competitiveness of China at the same time that US-China relations

Exhibit 31: Global Manufacturing Cost-Competitiveness Index

The US is among the most cost competitive major exporters.



Data as of 2019.
Source: Investment Strategy Group, "The BCG Global Manufacturing Cost-Competitiveness Index," BCG, August 19, 2014, Justin Rose, Michael McAdoo and Will Kletter, "A Manufacturing Strategy Built for Trade Instability," Boston Consulting Group, <https://www.bcg.com/publications/2020/manufacturing-strategy-built-trade-instability>.

become increasingly strained, Mexico's cost competitiveness may shift new export-driven manufacturing to Mexico and away from China.

The strength of the US corporate sector is partly attributable to the US's high rankings across a series of what we have called "investment-friendly" metrics. The US ranks in the top 15% of all countries across four key metrics, as shown

Exhibit 32: Country Ranking Across Business-Friendly Metrics

The US ranks in the top 15% of all countries across four key investment-friendly metrics.

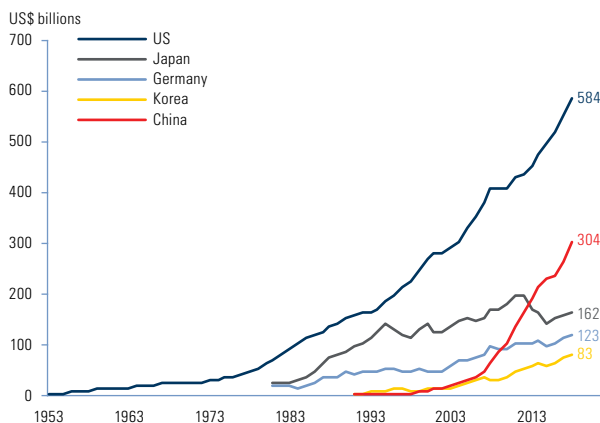
	Economic Freedom Index		Ease of Doing Business		Global Competitiveness Index		World Governance Indicators	
	Rank	Percentile	Rank	Percentile	Rank	Percentile	Rank	Percentile
United States	17	9%	5	3%	2	1%	27	13%
United Kingdom	7	4%	8	4%	9	6%	17	8%
Germany	27	15%	22	12%	7	5%	14	7%
Japan	30	16%	29	15%	6	4%	20	10%
France	64	34%	32	17%	15	11%	25	12%
Russia	94	51%	28	15%	43	30%	144	71%
China	103	55%	30	16%	28	20%	128	63%

Data as of 2019.

Source: Investment Strategy Group, World Bank, World Economic Forum, Heritage Foundation.

Exhibit 33: Research and Development Expenditure Over Time

The US has dominated R&D expenditure for decades.



Data as of December 2018.

Source: Investment Strategy Group, World Bank.

in Exhibit 32. The rankings would be even higher if we excluded small countries such as Singapore, Denmark, Switzerland and New Zealand. The US ranks number one in global competitiveness, as measured by the World Economic Forum's Global Competitiveness Index, which takes into account macroeconomic stability, innovation capability, market size, business dynamism and institutional strengths. In the World Bank's Worldwide Governance Indicators—which incorporate voice and accountability, rule of law, control of corruption, regulatory quality, government effectiveness and political stability—the US ranks in the 13th percentile, below the UK, Germany, Japan and France, but well above China.

Innovation

Finally, and most importantly, the US has been among the most innovative countries in the world—if not the most innovative. To be sure, measuring innovation is difficult. For example, the number of patents filed by a country can be a misleading measure. Some are utility patents, which are for minor inventions with less stringent patentability requirements. Such patents are not even granted in the US, UK and Canada, but they account for over 50% of patents filed by China. We believe the most relevant patents are invention patents, especially those filed in a foreign patent office, because that process is costly and is undertaken only if the filer believes the invention has value in overseas markets.

We look at the following metrics across countries:

- Research and Development (R&D) Expenditure
- Invention Patents Filed Abroad
- Charges for Use of Intellectual Property

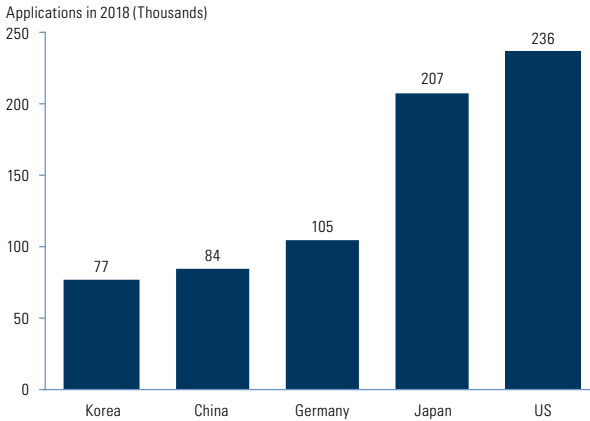
R&D Expenditure

The US has dominated R&D expenditure for decades (see Exhibit 33). At \$584 billion in 2018 (the last year for which comprehensive data is available across all countries), the US spent as much on R&D as the next three countries combined. China has ramped up its R&D expenditures; still, the gap between the US and the other countries with the largest R&D has widened in the past decade.

R&D expenditures are made by the private sector, the public sector and not-for-profit organizations such as foundations and academic institutions. In the US, for example, R&D

Exhibit 34: Applications for Invention Patents Filed Abroad

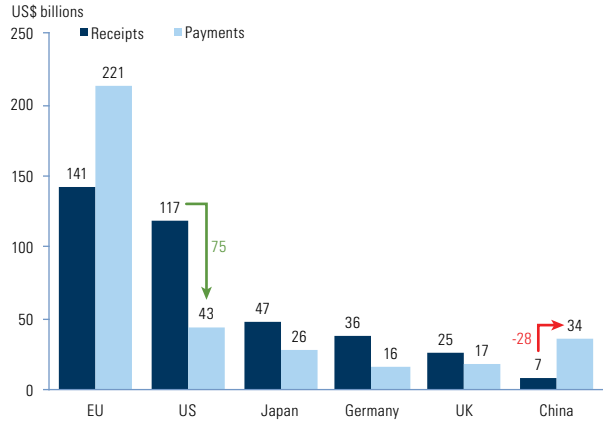
The US files the highest number of invention patents abroad.



Data as of 2018.
Source: Investment Strategy Group, World Bank, United Nations World Population Prospects, World Intellectual Property Organization.

Exhibit 35: Charges for the Use of Intellectual Property

The US has the highest surplus in international intellectual property transactions.



Data as of December 31, 2019.
Source: Investment Strategy Group, World Bank.

expenditures include the R&D budgets of the Defense Advanced Research Projects Agency (DARPA) and Biomedical Advanced Research and Development Authority (BARDA), both of which provided critical early support for the research and development of the mRNA vaccine platform, which is the basis of the Pfizer/BioNTech and Moderna COVID-19 vaccines.

Invention Patents Filed Abroad

The US also dominates in terms of the number of invention patents filed abroad, with the US filing 236,032 patents, followed by Japan at 206,758, Germany at 104,736, China at 84,279 and Korea at 76,824 (see Exhibit 34).

Charges for Use of Intellectual Property

One of the most effective metrics for measuring the value of innovation is what each country receives from other countries for their intellectual property and what each country pays other countries for use of their intellectual property. For example, in 2019, the US earned \$117 billion for the use of its intellectual property and paid \$43 billion for using that of others. The next-highest receipts were earned by Japan at \$47 billion and Germany at \$36 billion. China received \$7 billion and paid \$34 billion (see Exhibit 35).

Of course, the issue of whether and how much China pays for intellectual property is a

Exhibit 36: Large Chinese Companies and US and/or Israeli Predecessors

Some of China's most valuable companies in terms of market capitalization have mirrored mostly US companies.

	Chinese Companies	US/Israeli Companies
E-Commerce	Alibaba (1999)	Amazon (1994)
	JD.com (1998)	eBay (1995)
	Pinduoduo (2015)	Groupon (2008)
Social Network	Tencent (1998)	Facebook (2004)
Instant Messaging	Tencent OICQ/QQ (1998)	ICQ (1996)
Web Search	Baidu (2000)	Google (1998)
Smartphones	Huawei (1987)	
	Xiaomi (2010)	Apple (1976)
Streaming	iQiyi (2010)	Netflix (1997)
Microblogging	Sina Weibo (2009)	Twitter (2006)
Online Payments	Alipay (2004)	PayPal (1998)

Data as of December 31, 2020.
Note: Numbers in parenthesis denote the company's year of foundation.
Source: Investment Strategy Group, Datastream.

controversial one. John Ratcliffe, US director of national intelligence in the Trump administration, recently wrote that the "US government estimates that China's intellectual property theft costs America as much as \$500 billion a year."¹⁴ Some of China's most valuable companies in terms of market capitalization have mirrored products, services and practices, mostly those of US companies, that had at times been in place for more than 10 years (see Exhibit 36).

What explains US dominance in innovation beyond the enormous resources the country devotes to R&D and a highly educated population? Professor Robert Langer believes it is because of an inherent cultural advantage. As one of 11 “institute professors” at the Massachusetts Institute of Technology, Langer has an h-index score (a measure of a scholar’s published papers and how often they have been cited) that is the highest of any engineer in history and is tied for fourth-highest of any individual in any field. He is also one of the co-founders of Moderna. Langer provided the following response on one of our 2020 COVID-19-related client calls: “In my experience, one of the factors that accounts for innovation in the United States is that people sometimes take big risks, recognizing that it’s acceptable to fail, whereas in some other cultures there is more shame in failure and that may inhibit innovation.”

Financial Markets

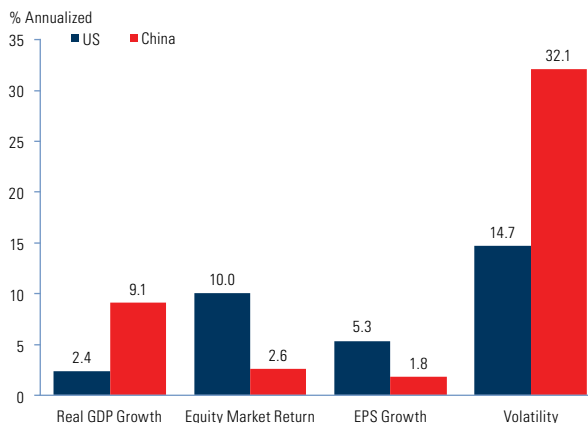
Benjamin Graham, widely known as the father of value investing and author of two classic investing books, *Security Analysis* (with David L. Dodd, first published in 1934) and *The Intelligent Investor* (first published in 1949), wrote, “In the short run, the market is a voting machine, but in the long run, it is a weighing machine.” While investor sentiment—and emotions—can vote the market up or down in the short run, underlying fundamentals drive the long-term performance of equity prices.

We think the stock market offers a useful check on the validity of our US preeminence view. Since the trough of the GFC, US equities have rallied 609%, or 18% annualized, far outperforming the equity markets of other countries, both developed and emerging. The two next best performers were China and Germany, which lagged the US by 290pp and 340pp, respectively, or about 6.3pp and 5.2pp a year over the past 12 years. Such strong outperformance of US equities is certainly one source of affirmation of our view.

A look farther back in time provides similar affirmation. Since the end of 1992, China’s economy has grown 6.7pp faster per year than the US economy. Yet its equity market, as measured by the MSCI China Index, has lagged that of the US by 7.4pp per year, and has been twice as volatile (see Exhibit 37).

Exhibit 37: Real GDP Growth and Equity Market Characteristics

China’s faster GDP growth has not produced higher returns than those of the US.



Data through Q4 2020.

Note: Based on MSCI China and S&P 500 total returns and using data since the inception of the MSCI China Index on December 31, 1992.

Source: Investment Strategy Group, Datastream, MSCI.

In our 2011 *Outlook: Stay the Course*, we thought it important to provide a demographic snapshot of the Investment Strategy Group, lest our clients think we are Pollyannaish America boosters. We make the point, once again, that our strategic and tactical asset allocation team is still composed primarily of investment professionals born outside the US: Brazil, China, Colombia, Czech Republic, Finland, France, Germany, India, Iran, Italy, Kosovo, Mexico, Morocco, Mozambique, Netherlands, Romania, Singapore, the UK and Ukraine. The view of US preeminence is based on the extensive and objective metrics discussed above and reinforced by the team members’ own experiences in different countries.

Objectively speaking, then, and supported by a broad base of persistent supporting factors, we believe that US preeminence is still intact, and we recommend that clients have a greater strategic allocation to US equities relative to market indices.

Staying Invested

Staying invested in US equities has been the second theme that has driven our investment recommendations since the trough of the GFC. As mentioned earlier, we have made this recommendation 98 times in this period. Some of the calls were made after strong market rallies

when clients were concerned about an overvalued equity market. Others were made after market downdrafts when clients were concerned about further slides.

Staying invested has served our clients extremely well. A simple buy-and-hold strategy of investing in the S&P 500 would have increased a client's US equity holdings by 609% over the past nearly 12 years.

Our investment strategy, however, was anything but buy and hold. We had, on average, 11 tactical asset allocation recommendations per year. They varied from tactical tilts in commodities to Eurozone financial stocks to emerging market debt and equity. With respect to the S&P 500, since 2008 we have instituted 20 tactical tilts to add exposure to US equities and an equal number of tilts to reduce that overweight.

As shown in Exhibit 38, not once did we recommend underweighting US equities during this period. Was that because we had a particularly clear crystal ball? Absolutely not. No one in our industry has such an orbuculum, and the track record of high-profile macro hedge funds over the last decade attests to it.

Our investment recommendation to stay invested has been based on five key fundamental observations:

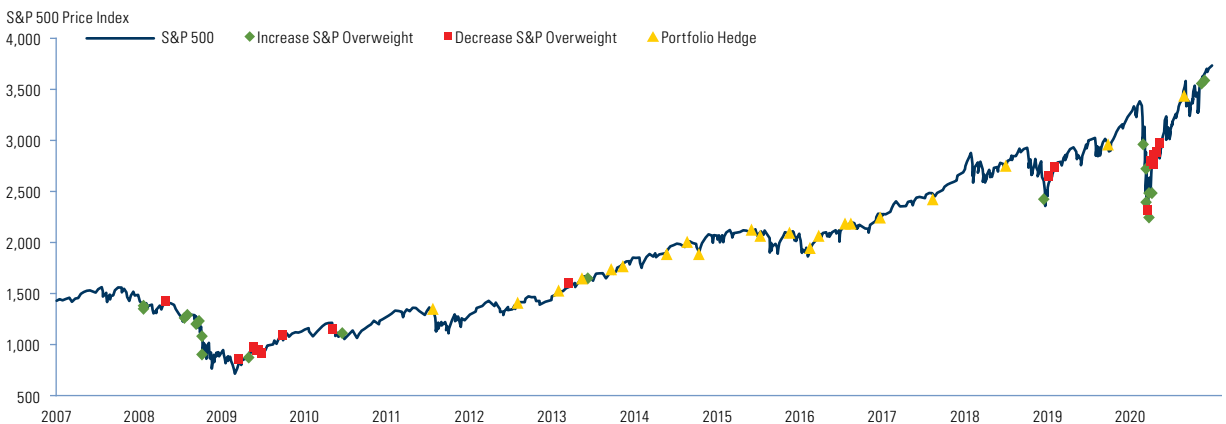
- **Tailwind of Earnings Growth:** The diverse, dynamic and innovative US economy, turbocharged by globalization, has created

opportunities for this country's companies to generate a steady, growing stream of earnings. Since economic growth is the norm and recessions are the exception, earnings grow the majority of the time.

- **Long-Term Trend of Prices:** In the long run, prices of US equities follow the path of corporate earnings. The hurdle to underweight a basket of equities such as those represented by the S&P 500 should be very high. An investor has to have strong conviction based on a combination of fundamental, quantitative and technical analysis to bet against US equities.
- **Catastrophes and Surprises:** Shocks like pandemics, tsunamis and wars are inevitable, but since they cannot be predicted, it is best to ride them out. No equity investor would have predicted a US equity market return of 18% in 2020 in the face of nearly 20 million reported coronavirus infections and 345,000 fatalities, an estimated GDP decline of 3.5%, an estimated earnings decline of 17%, and about 11 million unemployed people in the US.
- **Valuation:** Valuation metrics alone are not an effective signal for underweighting equities. Valuation metrics in conjunction with recession indicators are much more effective for tactical asset allocation.
- **Asymmetry of Tactical Asset Allocation:** Tactical asset allocation is asymmetrical: overweighting equities has a greater probability of success than underweighting equities.

Exhibit 38: S&P 500 Price Index and ISG US Tactical Tilts Since 2007

Over the post-GFC period, we never recommended going underweight US equities.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Overweighting a broad basket of US equities when they are cheap has always produced outsized returns in the past—eventually. However, if an investor underweights equities, the investor is risking exiting the market too early and missing out on potential gains permanently. The investor’s opportunity cost is exacerbated by the dilemma of when to reenter the market if equity prices are higher.

We examine these five factors in greater detail for our clients to provide the context for our current recommendation to stay invested for yet another year.

Tailwind of Earnings Growth

Since the end of WWII, the US economy has grown an average of 2.9% per year. Global GDP growth has averaged 3.5% since 1960, the earliest year for which data is available. Together, these have afforded S&P 500 companies an average earnings growth rate of 6% per year.

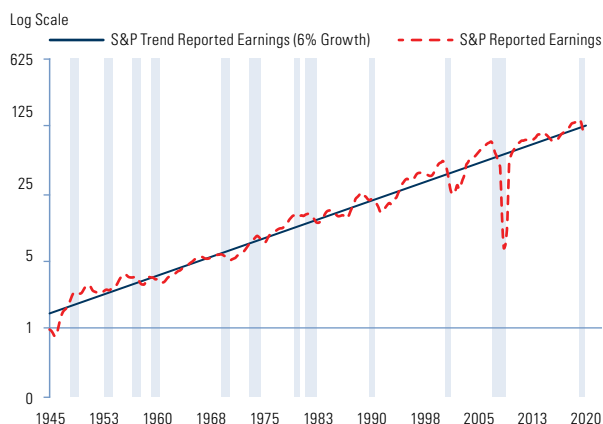
One might ask how 2.9% US and 3.5% global GDP growth rates can result in 6% earnings growth. The answer is threefold.

- First, GDP is measured in real terms, earnings per share growth in nominal terms. So earnings growth should be higher—sometimes inflation explains all the difference. Since WWII, US consumer price inflation has averaged 3.6% per year.
- Second, S&P 500 companies, like most other companies, operate with some level of leverage to boost earnings. Leverage, as measured by debt-to-book value, has averaged about 30% over the past 30 years for S&P 500 companies.
- Third, as referenced earlier, Bloom et al. have noted that US companies are the best managed in the world, making them more efficient. These academics have also noted that multinationals achieve higher management

If an investor underweights equities, the investor is risking exiting the market too early and missing out on potential gains permanently.

Exhibit 39: Historical S&P 500 Earnings Growth

US trend earnings growth has been 6% over the post-WWII period.



Data as of Q3 2020.
Note: Shaded periods denote recessions.
Source: Investment Strategy Group, S&P Global.

scores than domestic companies, irrespective of where they are located. For example, Brazilian multinationals have much higher scores than Brazilian domestic companies and higher scores than German domestic companies. So the multinational companies in the S&P 500 operate at high levels of profitability.

It is also the case that earnings grow more often than not, as shown in Exhibit 39. Since WWII, trailing 12-month earnings have increased 69% of the time and declined 31% of the time.¹⁵ If one considers declines greater than 5%, the frequency drops to 21%.

In our view, clients should focus on the frequency of declines greater than 10%, because those are the ones that tend to be associated with the largest downdrafts in equity markets and are mostly associated with recessions. On this score, earnings declines of more than 10% have occurred only 14% of the time since WWII, commensurate with the 16% incidence of recessions over the same period.

Long-Term Trend of Prices

Even if equity prices do not immediately reflect the increase in the value of companies stemming from the growth in their earnings, prices will eventually catch up to reflect the true value of those underlying assets.

Sir John Templeton, who was a widely respected investor, wrote: “In the long run, the stock market indexes fluctuate around the long-term upward trend of earnings per share.”¹⁶

As shown in Exhibit 40, the S&P 500 price index does indeed follow the path of earnings over time. While short-term deviations are inevitable, equity markets and earnings converge in the long run. The correlation between 10-year price returns and 10-year earnings growth is 0.50.

Therefore, since earnings grow at a steady pace 70% of the time and equity prices follow earnings, underweighting equities is a bet against both of these correlated trends.

Since the end of WWII, the S&P 500 has returned an average of 11.3% per year. Over this 75-year period, the S&P 500 has experienced 13 bear markets, in which the price of the index dropped by 20% or more from peak to trough. If we include the impact of dividends, there have been only 10 occurrences in which the S&P 500 dropped more than 20%. Three of the worst four of these instances are relatively fresh in the minds of most investors:

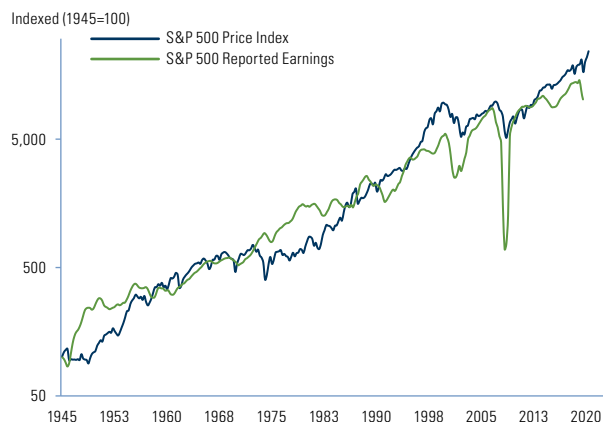
- The bursting of the dot-com bubble in March 2000, when the S&P 500 had a total return of -47% over 31 months
- The GFC, when the S&P 500 had a total return of -55% over 17 months
- The COVID-19 pandemic, when the S&P 500 declined 34% in just over one month

If we set aside the pandemic as an exogenous shock that was unpredictable, the other two recent bear markets were associated with either excessive overvaluation in equities, economic imbalances or both. In the absence of factors that could trigger a recession, staying invested is a more prudent strategy, unnerving as it may be to some. We believe the odds of recession are low at this time, as we discuss later in this report.

Another widely respected investor, Peter Lynch, once said: “In the stock market, the most important organ is the stomach. It’s not the brain ... The question is: Are you ready—do you have the stomach for this?”¹⁷

Exhibit 40: S&P 500 Performance vs. Earnings

The S&P 500 follows the path of earnings over time.



Data as of December 31, 2020.

Source: Investment Strategy Group, Robert J. Shiller.

The trend of earnings growth and the fact that prices follow earnings tell our brains to stay invested. Market volatility tells our stomachs to exit the market. Our responsibility in the Investment Strategy Group is to help clients stay focused on the signals from the brain and ignore the noises from the stomach.

Catastrophes and Surprises

As many of our long-standing clients know, the first pillar of our investment philosophy is that history is a useful guide (see Exhibit 41). One of the key messages from the history of equity market responses to exogenous shocks is that it is impossible to consistently predict the equity market’s reaction to specific events.

The path of the S&P 500 in 2020 in response to the pandemic is further evidence of this unpredictability (see Exhibit 42). What appeared as a localized virus outbreak in Wuhan, China, rapidly morphed into a deadly global pandemic.

In the stock market, the most important organ is the stomach. It’s not the brain ... The question is: Are you ready—do you have the stomach for this?

— Peter Lynch

Exhibit 41: Pillars of the Investment Strategy Group's Investment Philosophy

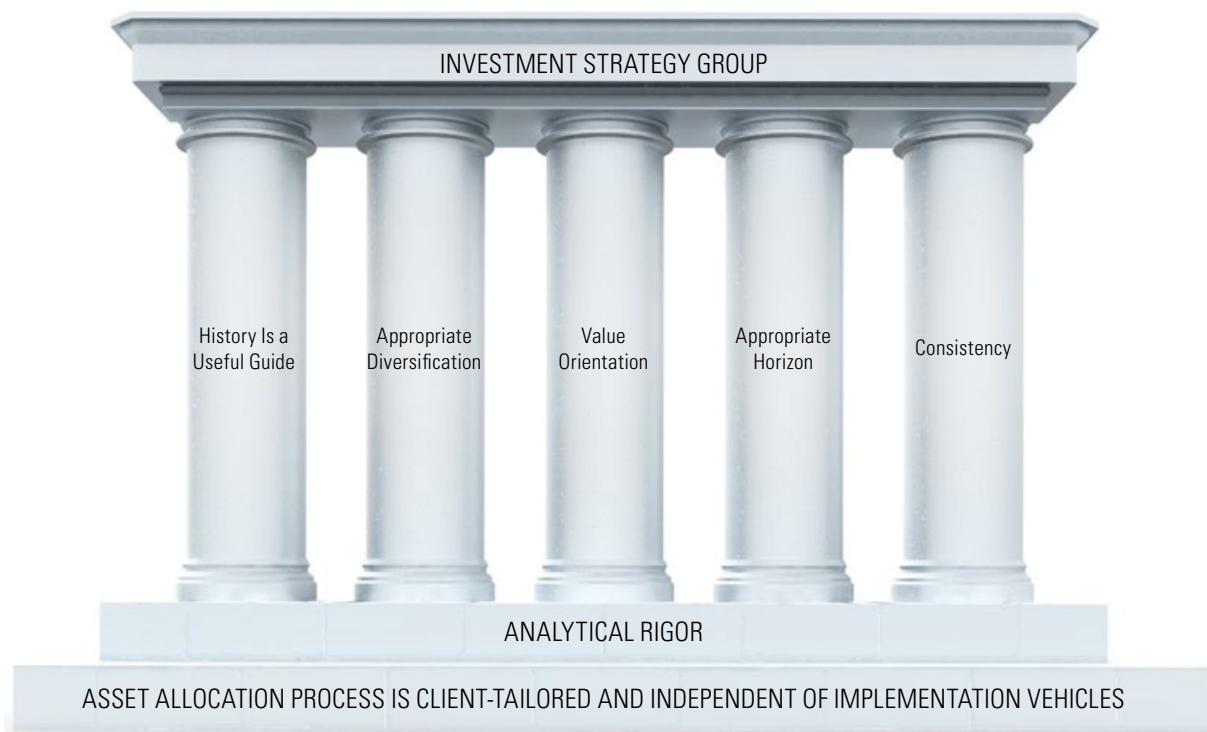
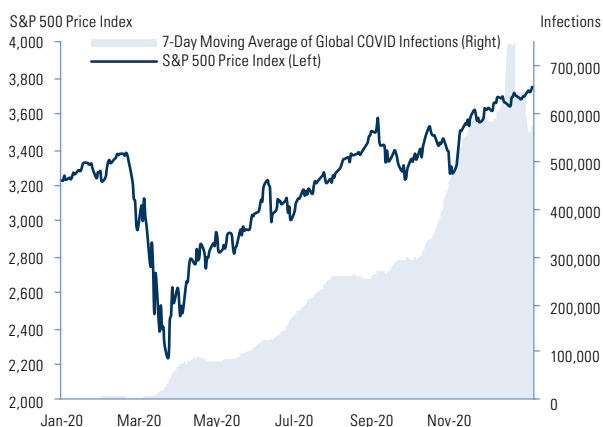


Exhibit 42: S&P 500 Index Performance in the Context of COVID-19 Infections

The S&P 500 charted a counterintuitive path in 2020.



Data as of December 31, 2020.

Source: Investment Strategy Group, Datastream, WHO, National Health Commission of PRC, John Hopkins University, NEJM.

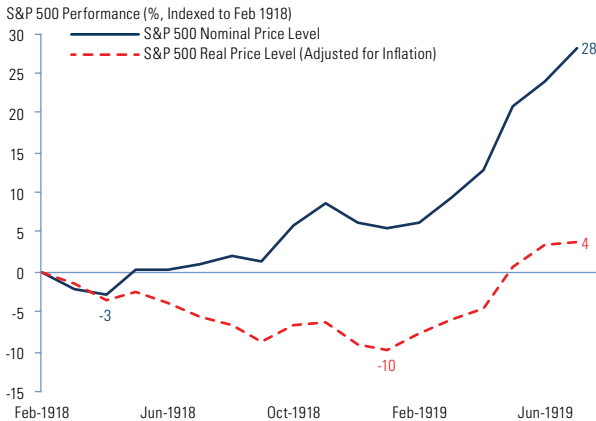
The equity market initially shrugged off the spread of the virus and rallied through February 19. At the time, it was virtually impossible to know the extent of the coming downturn or how quickly the

market would recover. Our strategy was simply to start increasing equity exposure as the S&P 500 became cheap enough to offer compelling value for a long-term investor. The bear market lasted just over one month while the pandemic raged on. In the US, the prompt and extensive monetary and fiscal policy responses, the reopening of the economy, and progress on therapies and vaccines have all driven the market to new highs. Even the increases in infections and fatalities in the US and elsewhere, and the spread of two new and more transmissible strains, have not deterred the upward march of US equities. Clearly, the equity market is looking beyond the immediate threat of the virus and its short-term implications to a long-lasting economic and earnings recovery.

The path of the S&P 500 during the 1918–20 Spanish flu, which some have looked to as a potential analog, is equally perplexing. We have limited data from that period on the number of infections and fatalities (however, estimates of US deaths alone are on the order of 675,000). We also have limited data on equity prices. The S&P 500 was developed in 1926 as a 90-stock index and was expanded to 500 in 1957, so index data for 1918–20 is, at best, a rough approximation.¹⁸

Exhibit 43: S&P 500 Performance During the Spanish Flu

After an initial drawdown, US equities rose over the course of the Spanish Flu.



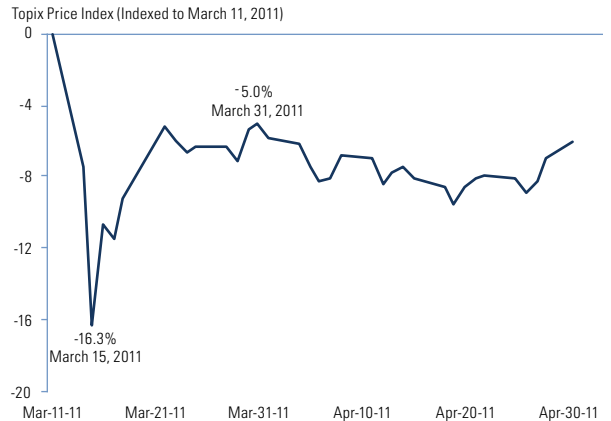
Data updated as of 2015 (Stock Market Data Used in "Irrational Exuberance," Robert J. Shiller, Princeton University Press.).

Note: Exhibit uses monthly data.

Source: Investment Strategy Group, Robert J. Shiller.

Exhibit 44: TOPIX Reaction to the Japanese Tsunami and Fukushima Nuclear Disaster

An equity market's response to an exogenous shock is not consistently predictable.



Data as of 2011.

Source: Investment Strategy Group, Bloomberg.

As shown in Exhibit 43, the peak-to-trough decline of the S&P 500 was about 10% in real terms (adjusted for inflation) toward the end of the large second wave of the pandemic in January 1919. The drop in the index was 3% in nominal terms shortly after the disease first appeared at Camp Funston, Kansas, in April 1918. In fact, from the beginning of the pandemic to when it had largely subsided by the summer of 1919, the equity market was up 28% in nominal terms and 4% in real terms. We believe that one cannot draw any conclusions from these figures since it appears that WWI had a bigger impact on the equity market than the pandemic.

What came in the wake of the 2011 Japanese Fukushima Daiichi nuclear disaster is another example of how the equity market response to exogenous shocks is not predictable. With a loss of 30% of Japan's electricity-generating capacity, the evacuation of about 150,000 people and the melting of three reactor cores, Fukushima Daiichi qualified as the worst nuclear accident since Ukraine's Chernobyl in 1986. Yet the equity market reaction in Japan was short-lived. As shown in Exhibit 44, Japan's TOPIX declined 16.3% over two trading days between March 11 and March 15 of that year but recovered much of this loss by the end of March.

Predicting financial markets' reaction to unanticipated events is a futile exercise. Political surprises are no exception. In the 2016 US national elections, the polls had predicted a Hillary Clinton victory. On the night of the election, as the voting results started to point toward a Trump victory, the S&P 500 futures declined by 5% before the CME's limit-down curbs halted trading. Investors expected the market to decline further at the unexpected election results. However, the equity market quickly turned around and the S&P 500 rallied 6.5% from its lows to close the next day of trading 1.2% higher than the pre-election close.

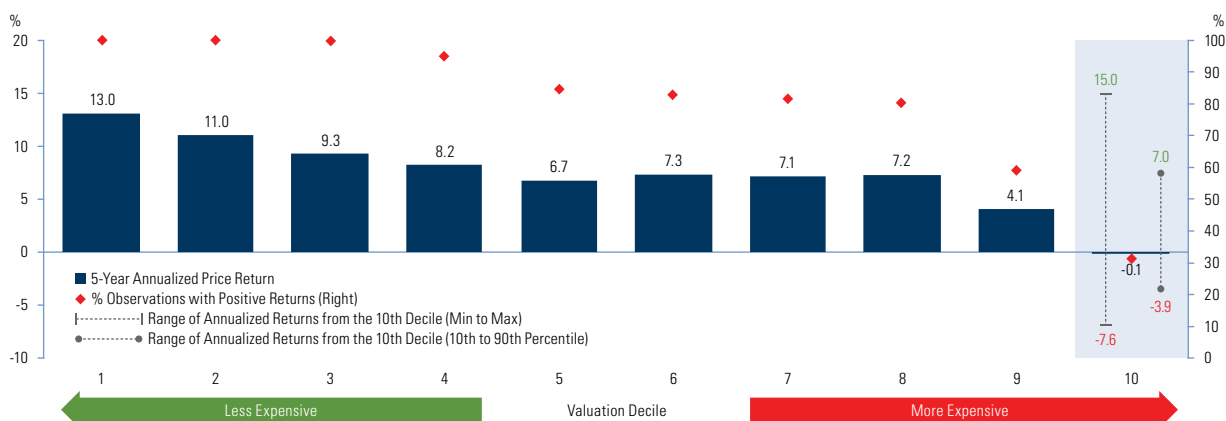
Valuation

Another pillar of our investment philosophy is value orientation. We invest in asset classes to the extent these add value to the risk/return profile of clients' portfolios. However, financial market history has

Predicting financial markets' reaction to unanticipated events is a futile exercise. Political surprises are no exception.

Exhibit 45: S&P 500 Price Returns from Each Valuation Decile

Average returns from the 10th decile belie considerable dispersion.



Data as of December 31, 2020.

Note: Based on five valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12m Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets ("deciles"). The subsequent realized, annualized five-year price return is then calculated for each observation and averaged within each decile.

Source: Investment Strategy Group, Bloomberg, Robert J. Shiller, Datastream, S&P Global.

taught us that while cheap valuation is a useful signal for overweighting equities, expensive valuation alone is not a signal to underweight equities.

Exhibit 45 is one of our most frequently used charts. We use a series of valuation metrics that are put into 10 buckets and plotted from the cheapest to the most expensive decile using post-WWII data. When equities are at their historically cheapest levels and appear in the first decile of valuations, the five-year annualized price return has been 13%, as shown by the blue bar. These price returns have been positive 100% of the time, as shown by the red diamond. Clearly, when equity valuations are cheap, investors are rewarded for overweighting equities.

When valuations are in the 10th decile, at their most expensive, the average five-year annualized price return is -0.1%, or for all practical purposes zero. The probability of a positive price return from this starting point is also low, at 31%.

Financial market history has taught us that while cheap valuation is a useful signal for overweighting equities, expensive valuation alone is not a signal to underweight equities.

Why then, one might ask, do we not underweight equities when the S&P 500 Index is in the 10th decile of valuation with an average expected price return of practically zero and a low probability of a positive price return?

First, the near-zero average belies considerable dispersion. The highest price return from the 10th decile was 15% per year for five years (a cumulative total return of 101%), and the most negative returns were -7.6% per year for five years (a cumulative loss of 33%).

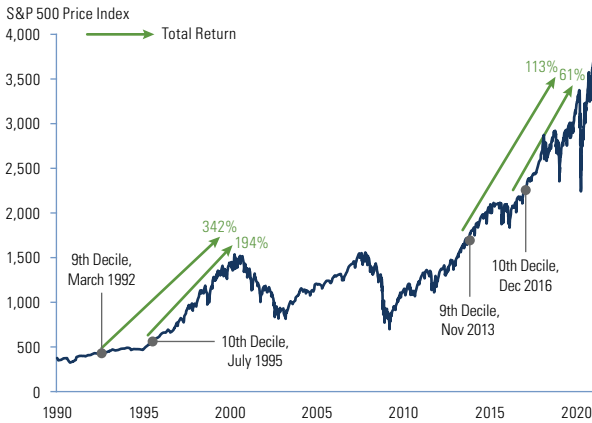
Second, as shown in Exhibit 46, equities have rallied substantially over the last two major bull markets from a starting position in the 10th decile. After equities entered the 10th decile of valuations in July 1995, they rallied a further 194% until March 2000. Similarly, after equities entered the 10th decile of valuations in December 2016, equities rallied a further 61% until February

19, 2020, before the pandemic hit US equities. An investor exiting the market once equities landed in the 10th decile would have forgone substantial returns in the two bull markets.

We also believe it is important to look at valuations in the context of periods of low and stable inflation. Using a Hidden Markov Model, our Strategic Asset Allocation team identified three inflation regimes since 1957 (when

Exhibit 46: S&P 500 Total Returns After Crossing into the 9th and 10th Deciles of Valuation

Equities continued to rally even after valuations became more expensive in the last two bull markets.



Data as of December 31, 2020.

Note: Based on five valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12-month Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets ("deciles"). Source: Investment Strategy Group, Bloomberg, Robert Shiller, Datastream, S&P Global.

core inflation data became available); low and stable inflation, moderate inflation with moderate volatility of inflation and high inflation with high volatility of inflation.

As shown in Exhibit 47, median valuations are much higher during periods of low and stable inflation than the median levels over the post-

WWII period. Therefore, what might appear to be very overvalued compared to median post-WWII levels is not so when viewed in the context of the low and stable inflation regime that has persisted since April 1996.

We have, therefore, recommended clients stay invested because:

- Valuations alone have not been a useful tool in exiting the market.
- Valuations have not been all that excessive given the current low and stable inflation regime and today's historically low level of interest rates.
- Our estimated probability of recession has been low since the GFC.

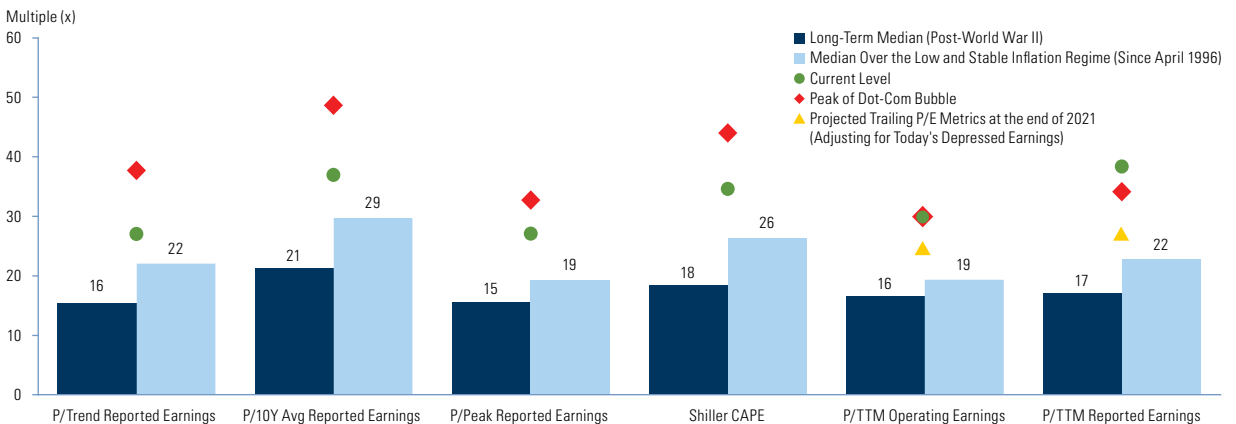
Asymmetry of Tactical Asset Allocation

Finally, we believe there is an asymmetry to tactical asset allocation. We discussed this concept in our 2020 *Outlook: Room to Grow*, but perhaps the preponderance of our pandemic communications overshadowed this important message for our clients: the probability of adding value to a portfolio by overweighting US equities when they are cheap is much greater than the probability of adding value by underweighting equities when they are expensive.

Exhibit 48 illustrates the point. The graph is a plot of the S&P 500 price index in the post-WWII period. The green portions of the graph show bull

Exhibit 47: S&P 500 Valuation Multiples

Valuations have been higher during periods of low and stable inflation than over the entire post-WWII period.

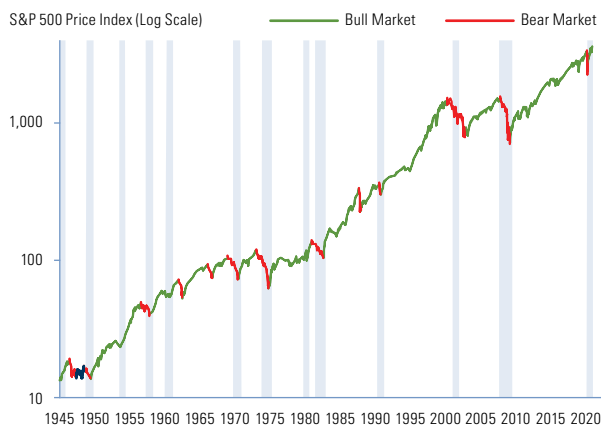


Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

Exhibit 48: S&P 500 Index Over the Post-WWII Period

US equities have generated positive returns most of the time over the long run.



Data as of December 31, 2020.

Note: Shaded periods denote recessions. 1947-1948 is colored blue because it was neither a bull nor a bear market.

Source: Investment Strategy Group, Bloomberg, NBER.

markets, the red portions show bear markets in which prices dropped by more than 20% and the shaded areas show periods of recession.

The graph offers five key takeaways on the asymmetry of tactically shifting allocation to equities:

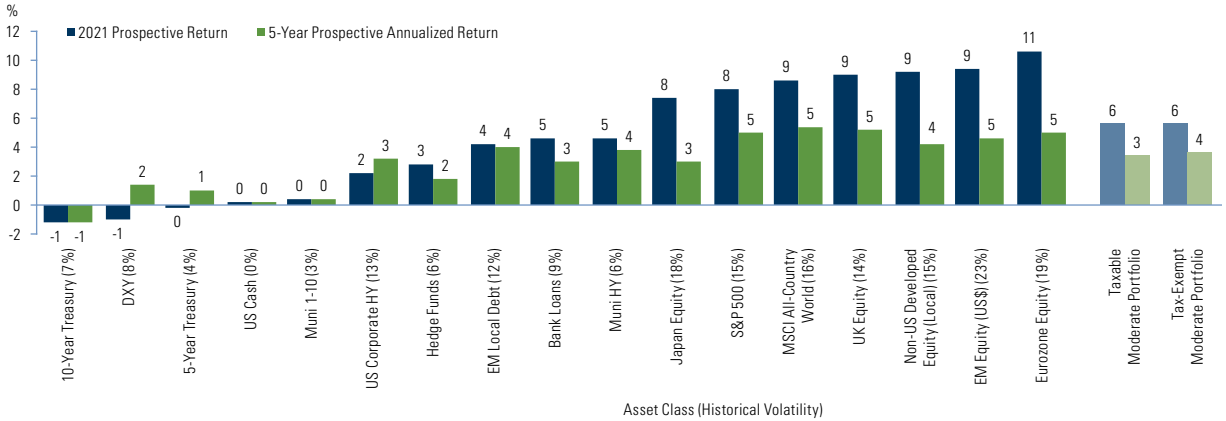
- The long-term trend is up. Clearly, as pointed out earlier, equities are upward trending, so staying invested adds value to a portfolio over time.
- The stock market always recovers from setbacks. While the downdrafts can be large and some can last a while, equity markets recover and resume their upward trajectory. There have been 13 bear markets in the post-WWII period. Total returns during those markets have ranged from -15% to -55%. These have lasted from as little as 33 days,

The decision to overweight equities entails one decision. But the decision to underweight equities to avoid a downdraft is, in fact, two decisions.

which was the duration of the bear market at the start of the 2020 pandemic, to as long as 31 months, after the bursting of the dot-com bubble. The average duration of a bear market has been 13 months, and the median has been 12 months. Even if an investor does not exit the market before a downdraft, history has shown that his or her investments will eventually regain the lost value, typically within two years, on average.

- Adding exposure during a downdraft is a sound strategy. If an investor begins to overweight equities during a bear market as prices decline, it is most likely that the investments will not be made at the bottom of the bear market. It is more likely that the investor is early and has to tolerate some further downside. Importantly, however, that decision eventually pays off. The only uncertainty is how long an investor has to wait before those red portions turn green. That was our experience in the Investment Strategy Group in 2001, in 2008 and in 2020. Irrespective of how early we were in increasing the allocation to equities in a declining market and how difficult it was to withstand the pain of a declining equity market, those recommendations added value to portfolios when equities recovered.
- It's much harder to effectively time underweight decisions. The decision to overweight equities entails one decision. But the decision to underweight equities to avoid a downdraft is, in fact, two decisions. As such, it requires two successful timing decisions: one decision to avoid exiting the market too early—as a result of which an investor risks missing out on potential gains—and a second decision to reenter the market before it appreciates above the level at which one exited. Imagine a value investor who exited the market in December 2016 because equities had entered the 10th decile of equity valuations. Even though equities have had several large downdrafts and a 34% bear market during the pandemic, that investor never had a chance to get back into the market at a lower level. Similarly, investors who exited the market in the mid-1990s because of high valuations never had a chance to reenter the market at cheaper levels.

Exhibit 49: ISG Prospective Total Returns



Data as of December 31, 2020.

Source: Investment Strategy Group. See endnote 19 for list of indices used.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved.

- Bear markets are relatively rare. Bear markets have occurred 18% of the time in the post-WWII period. That means that although investors experienced material downdrafts 18% of the time, returns on average were positive 82% of the time. This limited frequency of bear markets further supports the attractive risk/reward benefits of staying invested.

Still, as mentioned earlier, we do not endorse a buy-and-hold investment strategy. We are simply highlighting the greater likelihood of success when overweighting equities as they become cheaper in a downdraft. The likelihood of success when underweighting equities is lower unless one is faced with the combination of excessively high valuations and high probability of a recession.

There are times when the probability of an equity market downdraft increases due to an upcoming monetary policy meeting or heightened geopolitical tensions; in such cases, instead of underweighting equities for smaller declines, we have generally recommended using portfolio hedges such as put options to reduce the risk to a portfolio. In Exhibit 38, shown earlier, we have marked the instances in which we have recommended the use of portfolio hedges to reduce risks.

We recall for now what Warren Buffett wrote in Berkshire Hathaway’s 2016 investment letter to shareholders: “American business—and consequently a basket of stocks—is virtually certain

to be worth far more in the years ahead. Innovation, productivity gains, entrepreneurial spirit and an abundance of capital will see to that.”²⁰

We recommend clients stay invested at this time. For a more detailed discussion of the investment rationale underpinning our recommendation, including our earnings and valuation targets for 2021, please turn to Section III.

Our One- and Five-Year Expected Total Returns

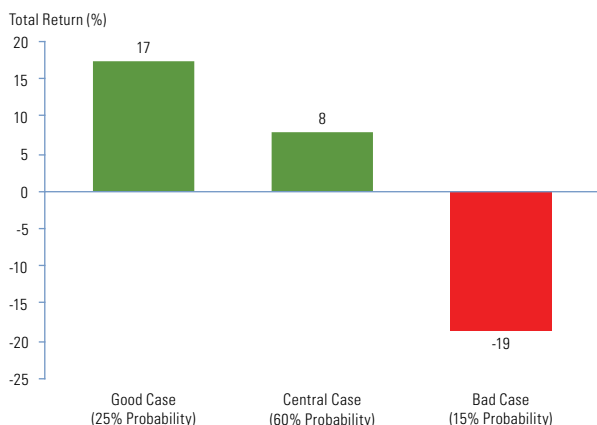
After a 609% total return—18% annualized—since the trough of the market on March 9, 2009, and a 56% return over the last two years, it may seem implausible that we put forth yet another forecast of positive total returns for US equities, especially a total return that is above our prior forecasts.

As shown in Exhibit 49, we expect a base case total return of 8% for US equities and 8.6% for the MSCI All Country World Index, driven by our outlook for economic growth of 5.4% in the US and 5.2% globally, earnings growth of 26% in the US and slightly higher globally, and a low probability of recession (10% for the US and 10% globally).

We also assign a probability of 25% that 2021 equity returns will exceed our base case expectations and 15% odds that they will fall short of our expectations, leaving a 60% probability

Exhibit 50: ISG S&P 500 Total Return Forecast—Year-End 2021

Our central case implies an attractive total return for US equities in 2021.



Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved. Indices are gross of fees and returns can be significantly varied. Please see additional disclosures at the end of this *Outlook*.

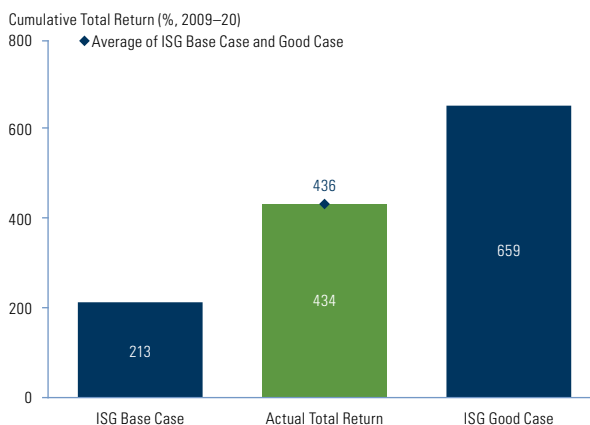
for our base case. For the US, we estimate a high return of 17% in our good case scenario and -19% in our bearish scenario (see Exhibit 50).

Our clients may well ask why we provide three scenarios. Given the long-term volatility of 15% for equities, the immense difficulty of forecasting financial markets, and the tremendous uncertainties and risks we have faced since the GFC, it seems only prudent for us to provide a range of possible outcomes and convey the probabilities surrounding our views. We want to ensure that clients know that investing in financial markets requires weighing the probabilities of various outcomes and acting accordingly.

A look back at our scenarios and the probabilities we have assigned to those scenarios since the GFC illustrates the benefits of our approach. Since the beginning of 2009, a few months before the market reached its trough, through the end of 2020, the S&P 500 returned 434%. Our base case forecasts for this period, based on the expected returns published in our annual *Outlook* reports, totaled 213%. Our good case scenario forecasts totaled 659%. Given that we had assigned a higher probability to the good scenarios than the bearish scenarios in eight of the last 12 annual forecasts, we believe

Exhibit 51: S&P 500 Returns vs. ISG Expectations

The midpoint of ISG's base and good case projections was in line with the S&P's cumulative gain post-GFC.



Data as of December 31, 2020.

Source: Investment Strategy Group, Datastream.

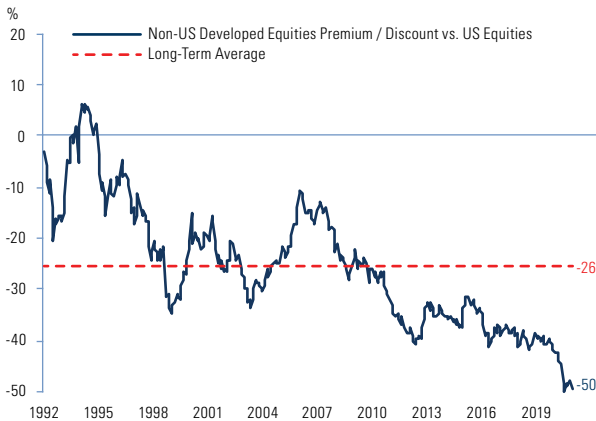
that we should examine both our base case and good case scenarios to see if our forecasts were generally right. A simple average of the two sets of forecasts is 436%, very close to the 434% that was realized (see Exhibit 51). Having assigned a higher probability to the more bullish scenarios than the bearish scenarios also supported our recommendation to stay invested, as it does now.

Our base case expected returns rest on the assumption that the pandemic will be under control by the middle of 2021 in the US and the rest of the developed world, and by the end of 2021 in emerging market countries, through a broad-based and effective vaccination program. The more bullish scenario is driven by more widespread vaccinations that would bring the acute phase of the pandemic under control sooner and by better-than-expected economic growth. The downside scenario is driven by the materializing of one or more of the various risks reviewed a little later in this report, including the risk of virus mutations that evade the current and forthcoming vaccines.

We expect non-US developed equities and emerging market equities to outperform US equities this year but match or lag US equities over the next five years. Even though non-US developed and emerging market equities are valued at a

Exhibit 52: Non-US Developed Equities' Valuation Premium / Discount to US Equities

Non-US developed equities' discount to the US has widened and remains well below its long-term average.



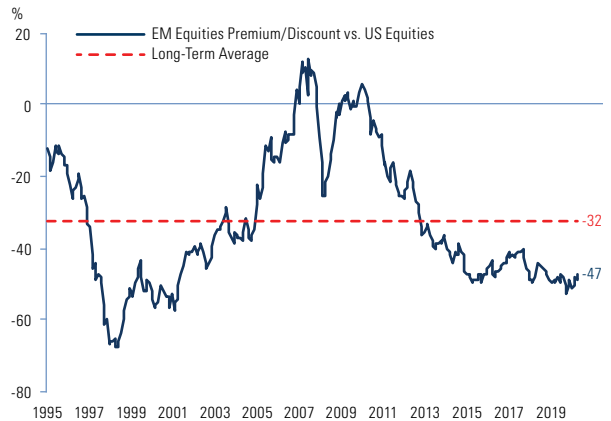
Data through December 31, 2020.

Note: Non-US Developed Equities' valuation is based on MSCI EAFE. Each regions' valuations are based on an average of the following metrics: price to 10y earnings, price to 10y cash flow, price to book, price to peak earnings, price to peak cash flow, and price to dividend.

Source: Investment Strategy Group, Datastream.

Exhibit 53: EM Equities' Valuation Premium / Discount to US Equities

EM equities continue to trade at a large valuation discount to US equities.



Data through December 31, 2020.

Note: EM and US market valuations are based on an average of the following metrics: price to 10y earnings, price to 10y cash flow, price to book, price to peak earnings, price to peak cash flow, and price to dividend.

Source: Investment Strategy Group, Datastream.

significant 50% and 47% valuation discount to US equities, respectively, we do not recommend an overweight to non-US equities beyond the few selected tactical tilts outlined below and any other tactical tilts we might initiate in 2021.

Our rationale is the same as that of prior years. First, past discounted valuations relative to US equities have not led to outperformance in subsequent one- and five-year periods. As can be seen in Exhibits 52 and 53, the discount in non-US developed equities has continued to deteriorate since the peak in 2006 and has remained below its long-term average for over 11 years. The discount in emerging markets has declined since 2008 and has remained below its long-term average for over seven years.

Second, earnings outside the US have substantially lagged those of the US across most sectors since the peak in earnings growth in 2007. For example, earnings growth in the health-care sector in the US has outpaced that of non-US developed and emerging market companies by 6.3pp and 7.4pp per year, respectively, for over 13 years (see Exhibit 54). In the throes of the pandemic in the second quarter of 2020, aggregate earnings declined 33% from the prior year in the US, while they

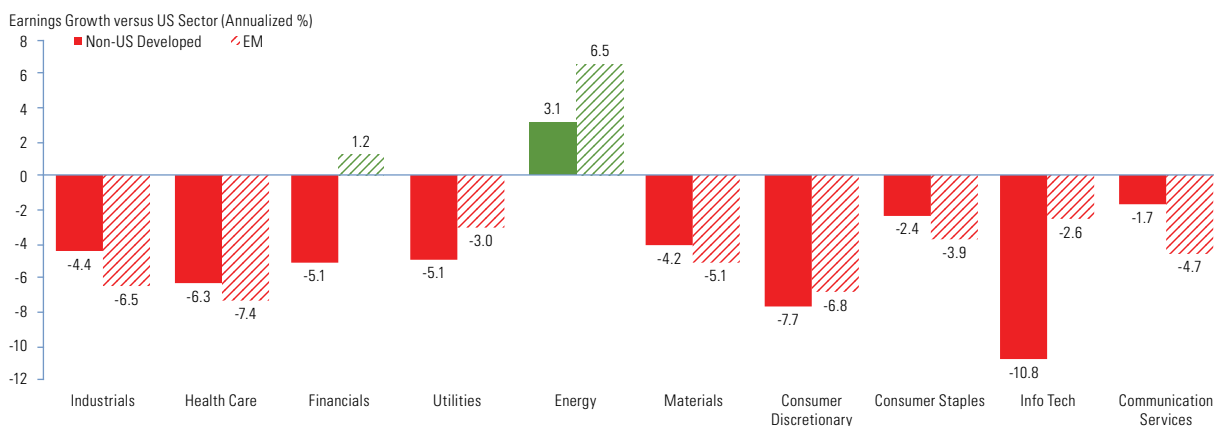
declined 56% in Europe and 57% in Japan. In the third quarter, the gap narrowed, but earnings growth in the US still outpaced that of Europe and Japan by 8pp and 10pp, respectively.

The divergence in earnings can be partly attributed to the higher exposure of the US equity market to the broader technology sector: information technology, internet and direct marketing retail like Amazon, and interactive media services such as Facebook. This mix of technology sectors accounts for 32.6% of earnings in the S&P 500, 12.1% of non-US developed equities, 28.5% of emerging market equities and 24.6% of Chinese equities. However, even adjusting for sector weights, US companies in aggregate outearn their non-US counterparts, as highlighted earlier in our US preeminence overview.

Our base case expected returns rest on the assumption that the pandemic will be under control by the middle of 2021 in the US and the rest of the developed world, and by the end of 2021 in emerging market countries.

Exhibit 54: US vs. Non-US Earnings Growth Since 2007

Earnings growth across almost all non-US developed and EM sectors has lagged that of US peers.



Data through December 31, 2020.

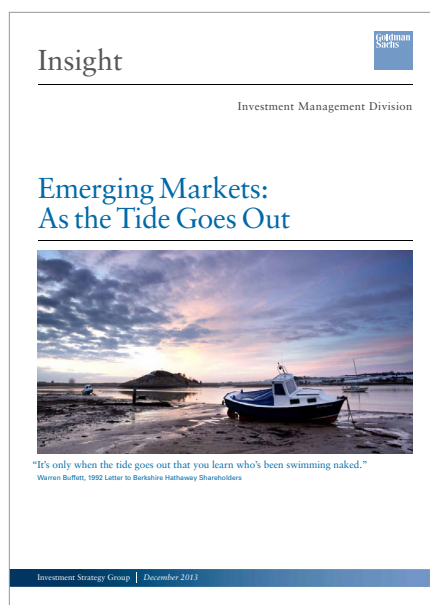
Note: Non-US developed equities' earnings are based on MSCI EAFE. Indices are based on annual MSCI data, beginning in 2007. Analysis uses 12-month forward earnings in order to mitigate the impact of negative earnings periods.

Source: Investment Strategy Group, Datastream.

Finally, as we have written extensively over the years, including in our 2013 *Insight* on emerging markets, *As the Tide Goes Out*, we are concerned about the structural fault lines of emerging market countries, especially those of China. These fault lines were not addressed during the Goldilocks period of 2003–07 when China's economic growth had taken off after joining the World Trade Organization and its demand for commodities boosted the exports of several large emerging market countries. It is unlikely that these countries can address the fault lines in the near future, given the damage to their economies from the GFC and the pandemic.

With respect to our prospective returns for high-quality fixed income, we expect negative returns across US Treasuries over the next one and five years. This is the first time since the GFC that we have forecast a negative return over a five-year period. The pandemic and the subsequent aggressive easing of monetary policy lowered the 10-year Treasury rate from 1.92% at the beginning of 2020 to a historic intraday low of 0.31% on March 9. The 10-year Treasury closed the year at 0.91%.

While we expect well-above-trend growth in the US and the rest of the world, such growth is occurring after a deep but short recession in most countries in 2020. This being the case, there will be plenty of excess capacity in most industries and in the labor pool, preventing any inflationary pressure from building up—beyond those arising temporarily as prices recover from currently depressed levels. In fact, the US and China are the only two large



economies where we expect the combined 2020–21 GDP to be above the GDP levels at the end of 2019. Therefore, the upward pressure on Treasury rates will be muted. Nevertheless, we expect the 10-year Treasury to reach 1.25% by year-end, resulting in a marginally negative return.

The healthy returns forecast for equities and the below-average returns forecast for fixed income securities result in an expected total return of 5.7% for our moderate-risk portfolios for taxable clients and 5.6% for tax-exempt clients for 2021. The expected returns for the 2021–25 five-year period

Exhibit 55: Tactical Tilt Realized Volatility

We entered 2020 with a relatively low level of risk.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 56: S&P 500 Price Index and ISG Tactical Tilts

Tactical Tilts

We recommended 19 tactical tilts on the S&P 500 Index last year.



Data as of December 31, 2020.
Note: Tactical tilts shown are only those published during the year 2020 related to the S&P 500. Total return figures are for the S&P 500 Index and are gross of fees.
Source: Investment Strategy Group, Bloomberg.

drop to 3.4% and 3.6% for the taxable and tax-exempt portfolios, respectively, reflecting a 45% probability of a recession sometime over the next five years. In both our 2019 and 2020 *Outlook* reports, we had assigned a 75% probability of recession over the next five years. Since we are exiting the 2020 recession, the likelihood of a new recession is reduced.

Our Tactical Tilts

The sharp and rapid moves in the markets and a commensurate increase in market volatility that exceeded that of the GFC provided many opportunities for adding value to our clients' portfolios in 2020.

The highest-impact asset allocation shift was the recommendation to rebalance the portfolio to the client's long-term strategic asset allocation targets. For example, a portfolio of 50% municipal bonds and 50% MSCI All Country World Index that was systematically rebalanced when the portfolio deviated by as much as 5% from its strategic target would have earned an incremental 1.9% in 2020.

We also implemented a particularly large number of tactical tilts. We entered 2020 with a relatively low level of risk, as seen in Exhibit 55. However, as the market downdraft began, we

rapidly increased the allocation to tactical tilts through a series of S&P 500 recommendations, starting on February 28. Between increasing equity exposure during the downdraft and removing the increased exposure during the market recovery, we recommended 19 tactical tilts on the S&P 500 (see Exhibit 56). We also had a large number of non-S&P 500 tilts during the year.

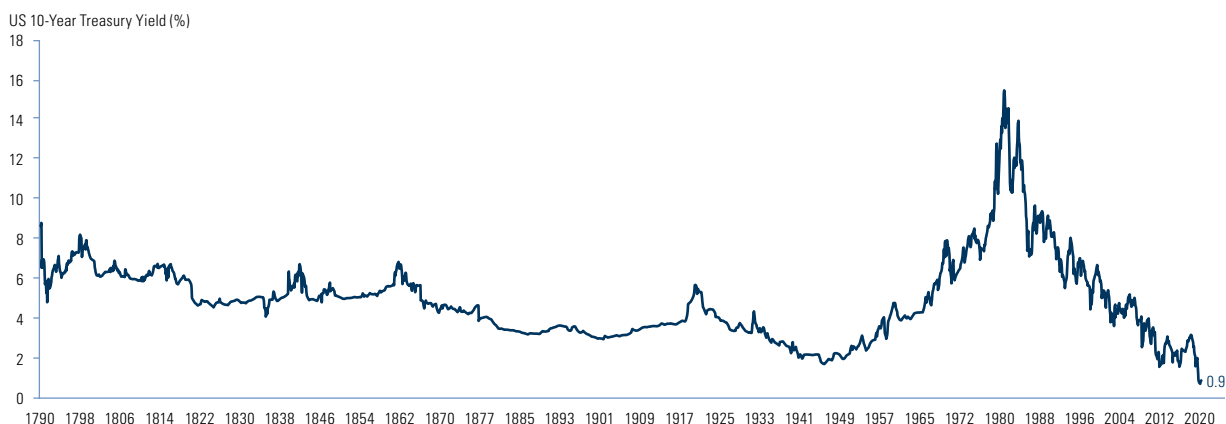
After an 18% total return in the S&P 500 and a 17% total return in the MSCI All Country World Index in 2020, current valuations do not provide as many opportunities for tactical asset allocation. As a result, we have significantly reduced the number of our tactical tilt recommendations and lowered our overall risk from 2020's peak levels.

Underweight Fixed Income: We have recommended underweighting fixed income since the trough of the GFC and we continue to do so. Typically, our tactical tilts have been funded from fixed income because we have expected higher returns from the tilts.

However, as highlighted earlier, this is the first time that we have forecast negative returns for US Treasury securities for the next one- and five-year periods. With the 10-year Treasury at 0.9% and an expected economic recovery of 5.4%, the most likely trajectory of interest rates is slowly upward, with a target of 1.0–1.5% by the end of 2021. Since our 2013 *Outlook: Over*

Exhibit 57: US 10-Year Treasury Yield Since 1790

Interest rates can remain low for a long time.



Data through December 31, 2020.
Source: Investment Strategy Group, Global Financial Data.

the Horizon, we have highlighted the fact that interest rates can stay low for a very long time. It is worth reviewing the data shown in Exhibit 57 again for clients who may be concerned about a rapid rise in interest rates. As discussed in Section II, we are not concerned about inflation for the foreseeable future.

Allocation to a 30-Year Treasury Swap: A Treasury swap occurs when a buyer of the swap is basically making a fixed interest rate payment over the life of the swap in exchange for receiving a floating interest rate. If the floating rates received are greater than the fixed rate paid, the buyer's swap is profitable. We recommended this tilt in July 2020 as the US economy was on a path to recovery, yet the swap rates were close to the trough levels seen in March 2020, when the economy was headed into the worst recession in US history.

While the extent of the mispricing is currently less than it was in July 2020, we believe there is further upside in this tilt and continue to recommend it (see Exhibit 58). While we expect interest rates to rise very gradually, we believe that 30-year Treasury swaps are mispricing the path of interest rates over the next 30 years—the fixed payment was too low in July 2020 and remains so, in our opinion. In fact, the swap market pricing is inconsistent with other market-based measures of inflation expectations, such as inflation-linked securities.

Allocation to Bank Loans: We expect bank loans to outperform cash and high-quality fixed income

in 2021 by mid-single digits. Our investment rationale is threefold:

- Valuations are attractive. Bank loans currently offer about 490 basis points of incremental yield relative to the three-month LIBOR. This incremental yield is about 80 basis points above the long-term average during expansions, and 35 basis points above the median since 1992. We expect some price appreciation as the incremental yield reverts to the long-term averages.
- We believe default rates will decline from the peak levels seen in September 2020, which will, in turn, drive spreads lower and result in some price appreciation.
- We expect the outflows from bank loan funds and exchange-traded funds (ETFs) to reverse as the mid-single-digit yield levels of bank loans attract investors.

Overweight to US Energy Infrastructure Master Limited Partnerships (MLPs): The allocation to MLPs has been one of our longest-standing and most volatile tactical tilts. We have frequently adjusted the weight of this tilt, which we initiated as an option trade in October 2015 and transformed into a long MLP position in January 2016. While this tilt has an inception-to-date return of 7.6%, it has been negatively impacted by the volatility in oil prices, which have ranged from a low of \$10 per barrel in 2020 (excluding the technically driven one-day price of -\$37) to a high of \$76 in October 2018. The sector had

Exhibit 58: US 30-Year Swap Rate

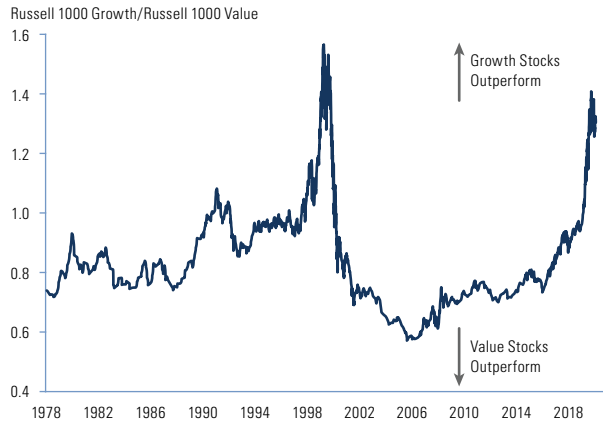
Long-end rates remain low relative to the robust economic recovery that we expect.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 59: Relative Performance of US Growth vs. Value Stocks

Growth stocks have outperformed value stocks significantly in recent years.



Data through December 31, 2020.
Note: Exhibit shows Russell 1000 Growth versus Value relative total return indices.
Source: Investment Strategy Group, Bloomberg.

also been hampered by lack of restraint on capital expenditures, in which corporate management had prioritized production growth over return on investors' capital. The hit to global demand as a result of the pandemic and the oil price spat between Saudi Arabia and Russia in March 2020 forced the management of MLPs to reduce capital expenditure plans.

We maintain our investment in MLPs based on the following rationale:

- Valuations are attractive after a 32% decline in the Alerian MLP Infrastructure Index in 2020. Valuation, as measured by the ratio of enterprise value to earnings, is more than one standard deviation below its long-term average.
- Corporate management will continue to improve its capital expenditure discipline, since it has learned that the market penalizes MLPs for sole focus on growth.
- The tax-advantaged distribution yield of nearly 10% is enticing for investors in an era of low interest rates.
- We expect buybacks to provide incremental price appreciation, as about 10 MLPs and C corporation midstream energy companies have instituted programs to buy back \$7.2 billion of their partnership units and corporate shares. The buybacks account for 6–11% of each company's free float, respectively, and thus could have

material impact on their prices. Recent buyback announcements have resulted in 15–20% price appreciation for some companies.

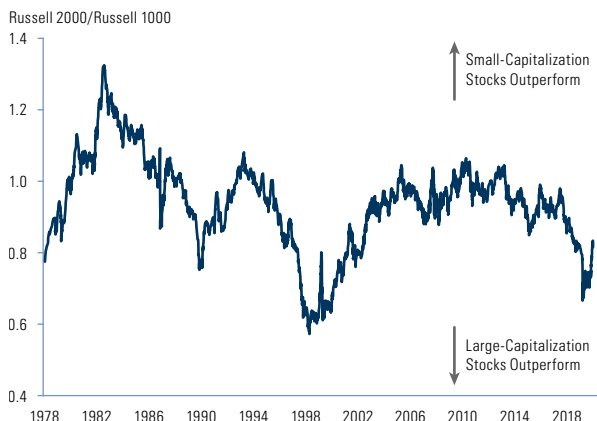
We expect a low-double-digit total return in 2021 based on a West Texas Intermediate price range of \$45–65 per barrel.

Overweight to Energy Stocks: Energy stocks were the worst-performing sector of 2020, with a total return of -34%, compared with 18% for the S&P 500 Index and 44% for information technology stocks.

This gap between energy and information technology stocks is directionally consistent with the gap between value and growth stocks. Growth stocks had started to outperform value stocks in August 2006, well before the GFC. On a cumulative basis, growth stocks have outperformed by 345pp (or 6.4pp annualized) over the last 14.4 years, as measured by the Russell 1000 Growth Index and the Russell 1000 Value Index. The performance differential increased significantly as growth stocks outperformed value stocks by 36% in 2020 (see Exhibit 59). The pandemic and the monthslong “shelter in place” guidelines and closures of businesses favored the broader technology sector and negatively impacted energy, financials and real estate.

Exhibit 60: Relative Performance of US Small-vs. Large-Capitalization Stocks

Since the trough of the GFC, small-capitalization stocks have underperformed large-capitalization stocks.



Data through December 31, 2020.

Note: Exhibit shows Russell 2000 versus Russell 1000 relative total return indices.

Source: Investment Strategy Group, Bloomberg.

Exhibit 61: Russell 2000 12-Month at-the-Money Implied Volatility

12-month implied volatility for an ATM put remains elevated.



Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

To take advantage of this dislocation, and considering our view of an improving economy and oil prices in the \$45–65 range, we introduced two tactical tilts to large-capitalization energy stocks: one through direct exposure to energy stocks and one through a more conservative call option. We expect energy stocks to appreciate by low double digits in 2021. We expect a more muted total return in the high teens from the call option strategy.

Exposure to Small-Capitalization Stocks: The dislocation between growth and value stocks has also occurred between small-capitalization and large-capitalization stocks. In fact, at a glance, one can say that small-capitalization stocks have lagged large-capitalization stocks for nearly four decades, since July 1983, by about 1.4% a year. Since the trough of the GFC, small-capitalization stocks, as measured by the Russell 2000 Index,

have underperformed large-capitalization stocks, as measured by the Russell 1000, by 54% (or 0.8% per year), as shown in Exhibit 60.

However, similar to our approach of using a more conservative option tilt for part of our energy exposure, we initiated our exposure to small-capitalization stocks through selling put options on the Russell 2000. We collected a significant option premium given the elevated volatility in small-capitalization stocks (see Exhibit 61). Should small-capitalization stocks decline by 10% or more, we would become a buyer of small-capitalization stocks, and our exposure through options would become an outright long exposure. We are currently comfortable owning such a basket of stocks during an economic recovery.

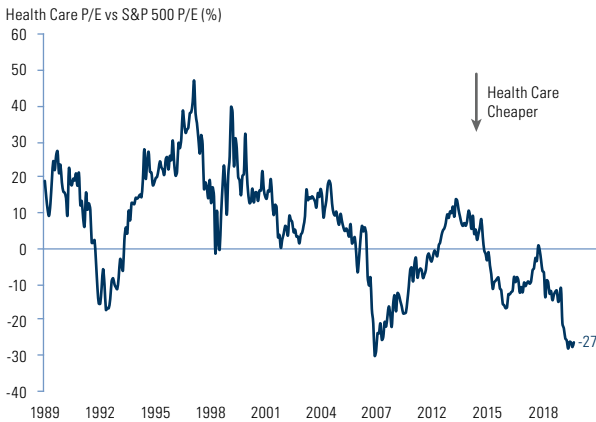
We have taken advantage of elevated volatility levels in the broader equity market as well, by selling put options on the S&P 500. Given our 8% base case return for the S&P 500 in 2021, we believe that we can collect an attractive option premium to enhance the returns of clients' portfolios.

The dislocation between growth and value stocks has also occurred between small-capitalization and large-capitalization stocks.

Exposure to Health-Care Stocks: Health-care stocks are cheap relative to the S&P 500 across multiple valuation metrics, as shown in Exhibits 62, 63 and 64. All three valuation metrics are in their bottom deciles in data going back to

Exhibit 62: Health-Care P/E Relative to Market

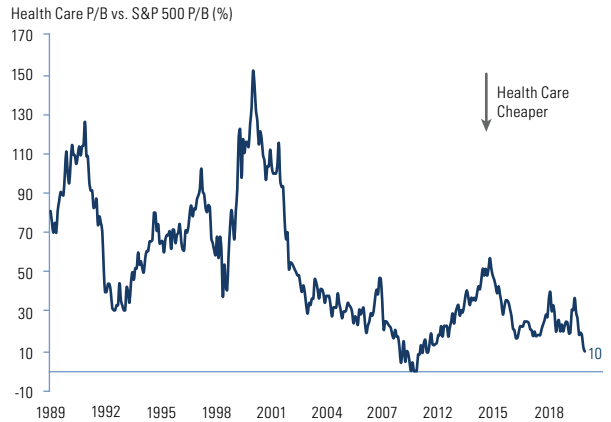
The health-care sector is undervalued relative to the S&P 500 based on the P/E ratio.



Data through December 31, 2020.
Note: Based on the next 12 months P/E ratio.
Source: Investment Strategy Group, Bloomberg.

Exhibit 63: Health-Care Relative P/B Premium

The health-care sector's P/B multiple is near its historic low relative to the S&P 500.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

1990, meaning they have been more expensive 90% of the time.

The health-care sector also offers faster earnings growth rates. Since 2000, the sector's earnings have grown faster than those of S&P 500 stocks, and the earnings per share growth has been much less volatile (see Exhibit 65). We expect this faster earnings per share growth to continue. The health-care sector is the only sector in the S&P 500 that is cheaper than the overall market but has a faster expected growth rate.

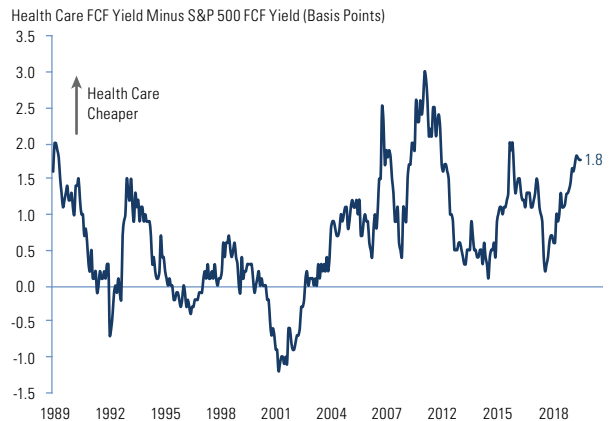
Health-care stocks have underperformed for the last several years due to concerns about health-care reform, more restrictive drug pricing and direct price negotiation for Medicare purchases. In the absence of significant health-care reform, which is our base case, we expect a mid-teens return, compared to our base case return of 8% for the S&P 500 Index.

Allocation to Two Systematic Strategies: We deploy systematic strategies as a way to provide uncorrelated sources of alpha by taking advantage of market dislocations. They are:

- **Systematic Downside Mitigation Tilt:** This equity strategy is designed to hedge some of the risk of the overall portfolio without incurring the high cost of buying put options or risking exiting the market too early. We believe this strategy has given us greater staying power to

Exhibit 64: Health-Care Relative Free Cash Flow Spread vs. S&P 500

The health-care sector is undervalued relative to the S&P 500 based on the free cash flow yield.



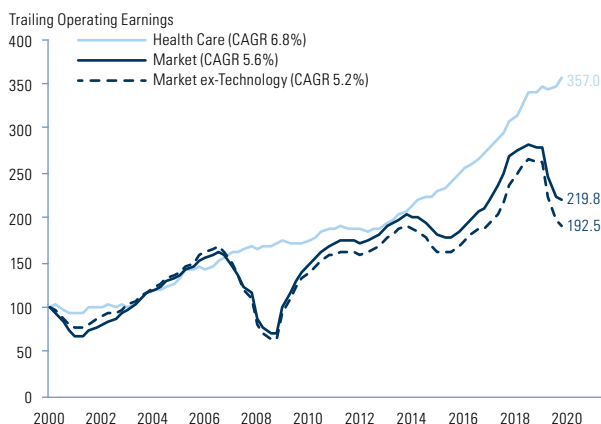
Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

stay invested. We have deployed this strategy since November 2017. Given our expectation of a long-lasting recovery and an 8% return for US equities in 2021, we have reduced the allocation to this strategy.

- **Systematic Upside Improvement Tilt:** This equity strategy is designed to take advantage of dislocations in value versus growth stocks. Given the outperformance of growth stocks relative to

Exhibit 65: Historical Earnings Growth

Health-care earnings have grown faster than those of the S&P 500 over the past 20 years.



Data as of December 31, 2020.
Source: Investment Strategy Group, Compustat, Standard & Poors, Goldman Sachs Global Investment Research.

Exhibit 67: Eurozone Banks' Historical Valuation

Eurozone banks' valuation stands in its 7th historical percentile.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 66: ISG Valuation Spread Z-Score

The valuation spread between cheap and expensive stocks is near its widest levels, post dot-com bubble.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

value stocks, as highlighted earlier, the valuation spread between our basket of cheap stocks and our basket of expensive stocks is 1.5 standard deviations above its long-term average and near its widest levels since the dot-com bubble (see Exhibit 66). We believe that this strategy provides a more effective approach to capturing the dislocation between growth and value stocks because it screens for cheap stocks that also have high earnings quality, favorable technical signals,

and what we consider favorable positioning of market participants. We have slightly increased our exposure to this strategy and expect a mid-teens return this year given that we believe we are in the early stages of a recovery.

Overweight to Eurozone Banks: The Eurozone bank exposure was initiated in June 2018. Like MLPs, it has been one of our most volatile tilts. Like MLPs, it was also heavily hit by the pandemic. We increased our exposure after the sector declined 52% from peak to trough over two months after the onset of the pandemic. The investment rationale to continue holding this tilt is:

- Valuations are cheap, with a price-to-book ratio at 0.48x, which is at the seventh percentile of valuations since 1998, meaning Eurozone banks have been more expensive 93% of the time (see Exhibit 67). The trough was 0.31x, which compares to 0.35x for US banks at their trough valuations during the GFC. Our clients may recall that we had a tactical tilt recommendation to US banks after the trough of the GFC.
- We see improved profitability as banks decreased the level of provisions needed to withstand pandemic-related loan losses, found that nonperforming loan formation was not as dire as expected and made meaningful cost reductions.
- Consensus earnings for 2021 have been revised upward.

- The European Central Bank announced that it will eliminate the dividend restrictions it had placed on banks by the end of the third quarter of 2021.
- We expect further consolidation in the sector.

Our base case return for this tactical tilt is in the low double digits.

Our one-year expected returns across asset classes and the tactical tilts just reviewed are driven by a strong economic recovery and a relatively stable domestic and international policy backdrop. However, there are a number of risks that could derail our economic and financial market outlook.

Risks to Our 2021 Outlook

As has been the case since the GFC, there are no shortages of risks that could derail our economic and financial market outlook. Remarkably, the key risks have remained the same.

In our 2011 *Outlook: Stay the Course*, we quoted Professor Joseph Nye of Harvard University on a range of risks. Nye is a University Distinguished Service Professor, Emeritus. He was dean of the John F. Kennedy School of Government at Harvard University, deputy to the undersecretary of state from 1977 to 1979 and assistant secretary of defense from 1994 to 1995. Nye has also been recognized as one of the most influential scholars in American foreign policy. The risks that we then highlighted drew upon his views from his *Foreign Affairs* article “The Future of American Power.”²¹ He warned that:

- “One must beware of misleading metaphors of organic decline. Nations are not like humans with predictable life spans.”
- “China’s size and high rate of economic growth will most certainly increase its relative strength vis-à-vis the United States. This will bring China close to the United States in power resources, but it does not necessarily mean that China will surpass the United States as the most powerful country.”
- “The greater threat may come from modern barbarians and non-state actors,” including:
 - “Hackers who threaten cybersecurity”
 - “Terrorists who traffic weapons”
 - “Challenges such as climate change”
 - “Challenges such as **pandemics**” (our emphasis)

Ten years later, the risks he emphasized remain. On December 30, 2020, Nye wrote an opinion piece warning of the need for a more “complex strategy” in dealing with China, especially on transnational issues “such as climate change and pandemics.”²²

In our view, the COVID-19 pandemic and the virus’s new more transmissible variants pose the greatest risk to global growth and financial markets. The second most important risk is deterioration in US-China relations. Other risks we consider:

- Effectiveness of a divided government where neither party has a sufficiently large majority to address key domestic and foreign policy issues such as health-care reform over the next decade
- “Techlash” and the impact of possible antitrust regulation on the growth trajectory of the broader technology sector in the US
- Cybersecurity
- Geopolitical concerns regarding Russia, Iran and North Korea
- Recession

COVID-19 Pandemic

We have become all too familiar with the data on total reported coronavirus infections and fatalities. US preeminence notwithstanding, the US rate of infections, at 60,326 per million, has surpassed that of other countries by a notable margin. Italy, Spain and the UK are the only countries with a higher fatality rate (see Exhibits 68 and 69). Estimates of the percentage of the US population that has been infected by the virus range from 14% to 32%.²³

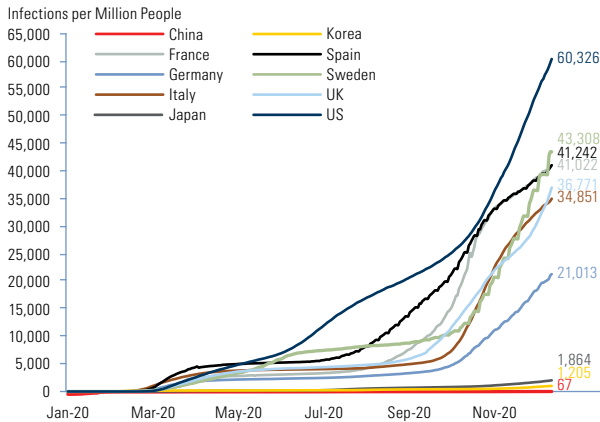
Dr. Scott Gottlieb, former US Food and Drug Administration commissioner, had expected that the US would reach peak levels of infection in



The global pandemic has turned everyone’s personal and professional lives upside down.

Exhibit 68: Global COVID-19 Infections

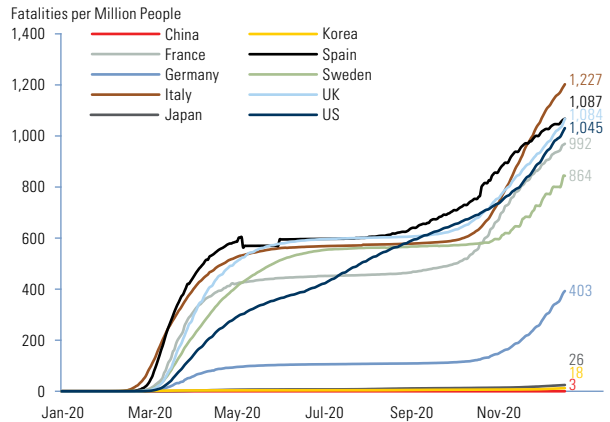
The US rate of COVID-19 infections has surpassed that of other countries by a notable margin.



Data as of December 31, 2020.
Source: Investment Strategy Group, Our World in Data.

Exhibit 69: Global COVID-19 Fatalities

Only Italy, Spain and the UK have higher COVID-19 fatality rates than the US.



Data as of December 31, 2020.
Source: Investment Strategy Group, Our World in Data.

early January 2021 and peak fatalities a few weeks later.²⁴ This estimated timeline has been pushed back as a result of:

- Much slower rollout of vaccinations than was expected in the US and elsewhere, with the exception of Israel (population of 9 million).
- Appearance of a new variant of the virus referred to as B.1.1.7 in England that is considered much more transmissible and has already spread all over the world. While viruses mutate and coronaviruses are expected to mutate more slowly, researchers have identified about 12,000 mutations to date, including the mutation of a D614 to G614 variant. The G614 was more transmissible than its predecessor as well, but the B.1.1.7 is estimated to be from 50% to 75% more transmissible.²⁵ A second variant that has appeared in South Africa, known as 501Y.V2, may be associated with more transmissibility as well.
- Less social distancing than advised. In the US alone, travel picked up substantially during the Thanksgiving and Christmas/New Year holidays, as shown in the high-frequency data from the Transportation Security Administration (TSA) in Exhibit 70. Holiday travel exceeded 1 million travelers per day for nine of the last 14 days of the year.

There is a risk, albeit a low one according to scientists, that the current and forthcoming vaccines (such as the ones from Johnson & Johnson and Novavax) will not provide protection against the new variant. While the prevailing assumption is that the new variant will not evade the “massive immune response” generated by the new vaccines²⁶ or the natural immunity from prior infection,²⁷ there is still much uncertainty.

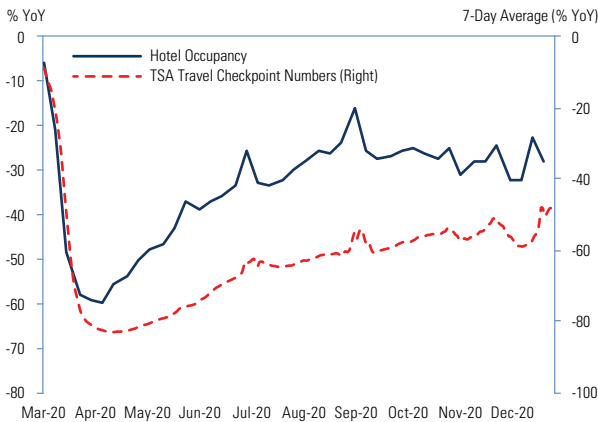
Even if the vaccines are not as effective as expected, the new mRNA vaccine technology allows vaccines like the Pfizer/BioNTech and Moderna offerings to be “adjusted” if necessary. According to Ugur Sahin, CEO of BioNTech, “should the vaccine need to be adjusted for the new variant, the company could do so in about six weeks.”²⁸

In addition to concerns about vaccine efficacy, there is also a risk that the current and forthcoming

While viruses mutate and coronaviruses are expected to mutate more slowly, researchers have identified about 12,000 mutations to date, including the mutation of a D614 to G614 variant.

Exhibit 70: US Air Travel and Hotel Occupancy

Holiday travel exceeded 1 million travelers per day for 9 of the last 14 days of the year.



Data through December 31, 2020.
Source: Investment Strategy Group, TSA, STR.

therapies are less effective against the new variants of the virus. According to Dr. Michel Nussenzweig of Rockefeller University, the risk is low. The new class of antibodies that can bind to multiple receptor binding domains will make it “very, very hard for the virus to make mutations that annul two [classes of antibodies] together, and that’s the concept in the Regeneron cocktail. It is also true for the antibodies that we have.”²⁹

Considerable uncertainty remains. The reality is that we do not know the full impact of the new variant on the efficacy of vaccines and therapies, infection rates, fatalities, the need for more significant lockdowns, and the duration of immunity. From our first COVID-19-related client call on February 4, 2020, when we were joined by Professor Barry Bloom of Harvard University and Dr. Luciana Borio of In-Q-Tel, we have emphasized the uncertainty caused by this novel coronavirus: the uncertainty of the reproduction number, the incubation period and the case fatality ratio in the early months of the pandemic. We continue to face uncertainties regarding the trajectory of the pandemic and the impact of mutations of the virus. While this is a risk that can delay the economic recovery and lead to market volatility, we believe that vaccine and therapy innovation will keep pace and limit the impact to the short term.

US-China Relations

The second-greatest risk to our outlook is further deterioration in US-China relations. This risk has both short-term and long-term implications and spans a broad range of topics that go beyond the trade tensions that dominated the US-China discourse during the Trump presidency.

Origins of the Virus: Trump Administration Deputy National Security Advisor Matthew Pottinger has said “there is a growing body of evidence that the lab [Wuhan Institute of Virology] is likely the most credible source of the virus ... Even establishment figures in Beijing have openly dismissed the wet market theory.”³⁰ While the origins of the virus may never be known with certitude, we have already seen increased calls for more answers from China on this issue.

Unfavorable View of China: Deteriorating US-China relations have been compounded by an increasingly unfavorable view of China in the US and other large developed economies. A picture is worth a thousand words; six pictures must be worth six thousand words (see Exhibits 71–76). Across the countries shown in these exhibits, Pew Research shows that a growing share of the adult population in these Western developed countries have an unfavorable view of China.³¹

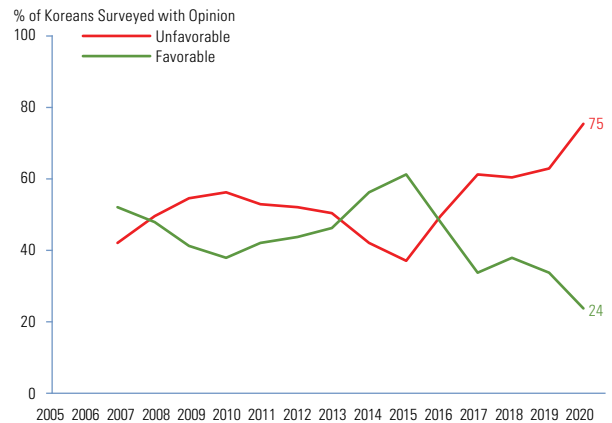
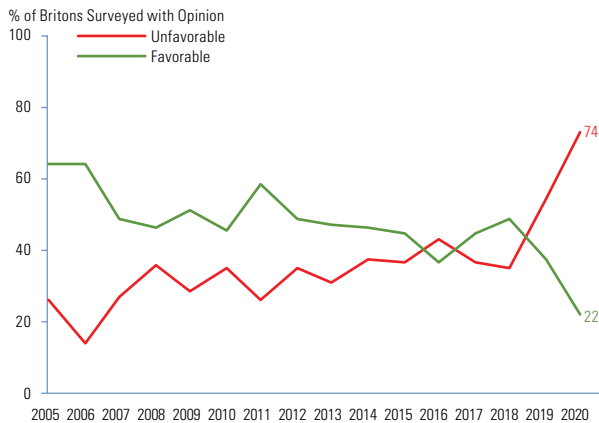
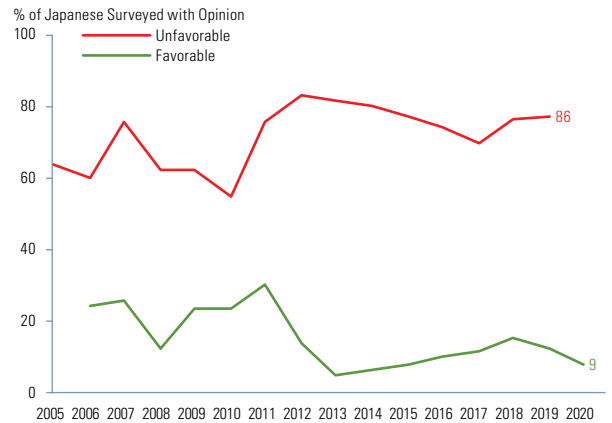
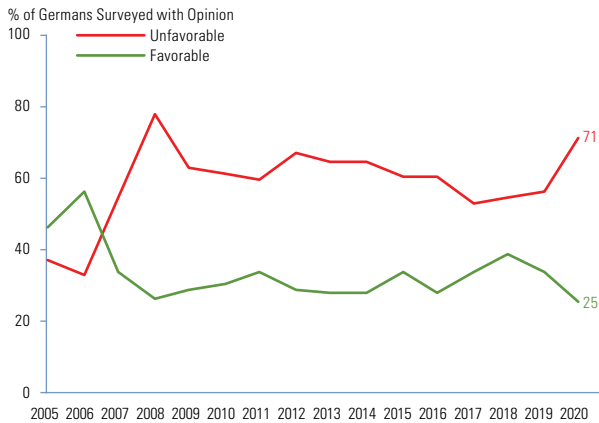
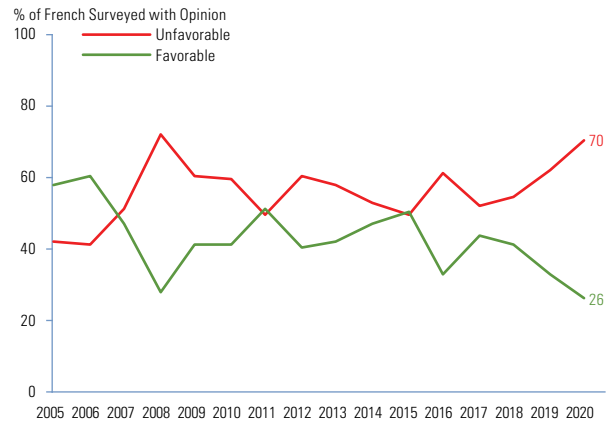
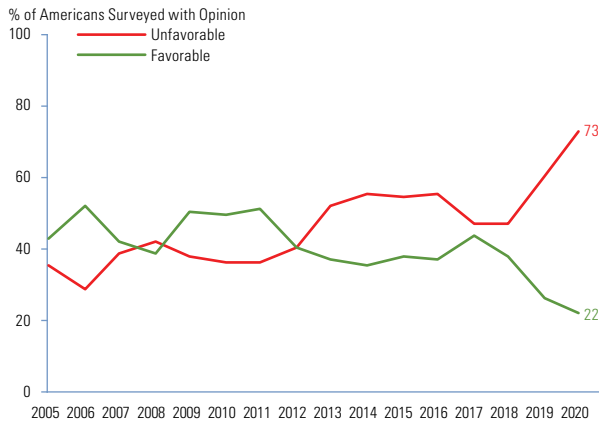
It has become much more commonplace for US government officials and policy experts to openly question China’s motives and policies. John Ratcliffe, Trump administration director of national intelligence, stating that the “People’s Republic of China poses the greatest threat to America today, and the greatest threat to democracy and freedom worldwide since World



Second to COVID-19, the next-largest risk to our outlook is further deterioration in US-China relations.

Exhibit 71–76: Countries’ Perception of China

A growing share of the population of Western developed countries have an unfavorable view of China.



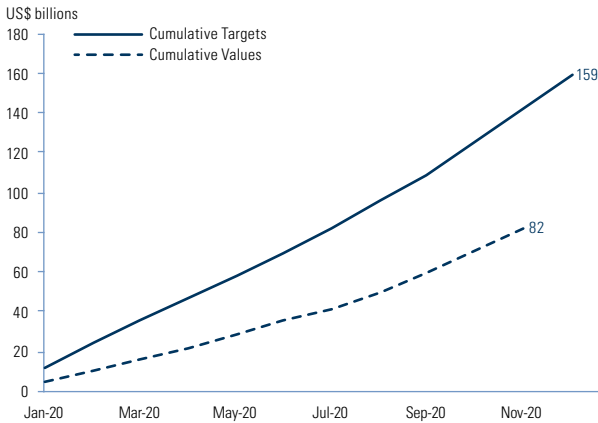
Data as of 2020.
 Note: 2020 survey was midyear. All other years’ surveys were as of the end of the year.
 Source: Investment Strategy Group, Pew Research.

War II” is a case in point.³² President-Elect Joe Biden’s comments are even more explicit, declaring that the goal of his administration’s trade policies will be to “produce progress on China’s abusive

practices—that’s stealing intellectual property, dumping products, illegal subsidies to corporations, and forcing tech transfers from American companies to their Chinese counterparts.”³³

Exhibit 77: US-China Phase One Trade Agreement Implementation

China has fallen short of its commitments to import more US goods.



Data as of December 2020.

Source: Investment Strategy Group, Chad P. Bown. 2020. US-China Phase One Tracker: China's Import Purchases, Peterson Institute for International Economics, U.S. Bureau of the Census.

Phase One Trade Agreement Challenges: According to the Peterson Institute for International Economics, China has fallen short of its commitments to import more US goods. As shown in Exhibit 77, China's purchases of US goods have lagged the stated target of the agreement and were at 58% of the year-to-date targets as of the end of November. It remains to be seen whether the Biden administration will enforce the deal.

Expansion of US-China Tensions: In its annual forecast of the top political risks that are likely to play out in 2021, the Eurasia Group states that 2021 "will experience an expansion of a high level of US-China tensions"³⁴ driven by:

- The Biden administration's efforts to work closely with US allies and present a united front on China issues.
- US and China competing to provide vaccines to other countries. While Ian Bremmer and Cliff Kupchan, co-authors of the report, think "China is poised to outperform," we believe the \$4 billion contribution from the US to Gavi, the Vaccine Alliance, for the COVAX AMC mechanism to acquire and distribute vaccines to low- and middle-income countries around the world will have much more meaningful impact given that China had not contributed anything to this mechanism as of the end of 2020.

- US and China rivalry in green technologies. Eurasia Group thinks that the US will aggressively pursue policies to "re-shore portions of these clean energy supply chains back to the US, seek to shame Chinese coal investments abroad, and rally allies to pressure China on climate and clean energy issues."

While US-China relations are likely to deteriorate, neither President-Elect Biden nor Chinese President Xi Jinping is likely to seek an escalation in the near term. Ash Carter, the Barack Obama administration secretary of defense, does not see "a crisis or confrontation brewing over the next year."³⁵

Domestic Policies

A blue wave that would sweep the White House, the Senate and the House did not materialize in the 2020 elections. In fact, the Democrats lost a big share of their 36-seat lead over Republicans in the House of Representatives. The lead has shrunk to 11, as of this publication, and will temporarily shrink to eight seats due to appointments of three Democratic representatives to the new administration.

In the Senate, following the Georgia runoff elections, it appears, as of the time of publication, the 53-seat Republican majority was eroded to an evenly divided split between Republicans and Democrats. There have been three such occurrences in US history: 1881, 1954 after the passing of a senator, when the even split lasted for a few months, and 2001 between January and June, after which a Republican senator became an independent but joined the Democratic caucus.

With so few precedents, it is unclear how the Republicans and Democrats will share power. For example, in 2001, the parties split committee members evenly and the leadership of both parties attempted to work together to avoid gridlock for the six months that the Senate was evenly split.

The legislative agenda is likely to reflect the absence of a significant majority in either chamber of Congress. The parties are most likely to seek common ground on further COVID-19-related stimulus, some improvement in the country's infrastructure and some modest tax increases to address the growing debt-to-GDP ratio.

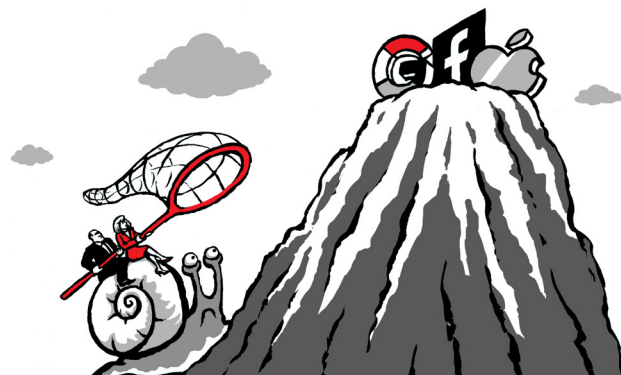
What is clear is that the US economy and corporate America will not be faced with the multitrillion-dollar fiscal policy expansion and significantly higher corporate and personal

income taxes that had been proposed by President-Elect Biden during the presidential campaign. We do not think that the new administration's domestic policies pose a risk to the US economy or financial markets. In fact, the anticipated more coordinated COVID-19 policy and less restrictive immigration policy bode well for the US economy.

“Techlash”

The backlash against technology companies has picked up momentum both at the consumer level and in governments in developed economies:

- 81% of Americans are either very concerned or somewhat concerned about the amount of data platforms hold.³⁶
- 79% of Americans think that mergers and acquisitions pursued by large technology companies are unfair because they undermine competition and limit consumer choice.³⁷
- 77% of Americans and 72% of Europeans agree that “the US/EU governments should be more active in regulating technology companies.”³⁸
- California’s Consumer Privacy Act went into effect in January 2020, following the European Union’s General Data Protection Regulation implementation.
- The US House Judiciary Committee released a critical report after their 16-month investigation of Amazon, Apple, Facebook and Google on October 6, 2020.
- The US Department of Justice sued Google on October 20, 2020, over allegations that its search and advertising practices violated



The backlash against technology companies has picked up momentum at both the consumer and government level.

David Simonds for the Economist

federal antitrust laws. Ten states led by the Texas attorney general filed a somewhat similar antitrust lawsuit on December 16, 2020.

- The US Federal Trade Commission, joined by attorneys general from 46 states; Washington, D.C.; and Guam sued Facebook on December 9, 2020, for maintaining its social networking monopoly through anticompetitive conduct over many years.
- French tax authorities instituted a new digital tax service on November 25, 2020, and the French data protection agency fined Google and Amazon on December 10, 2020, for placing cookies on users’ devices without their consent.

Our colleague David Kostin, chief equity strategist in Goldman Sachs’ Global Investment Research, wrote a report in June 2019 titled “Concentration, Competition, and Regulation: Superstar Firms and the Specter of Antitrust Scrutiny.”³⁹ He and his team concluded that in all past examples of regulatory scrutiny of large companies (see Exhibit

Exhibit 78: Historical Examples of Regulatory Scrutiny

Regulatory scrutiny has historically resulted in slower growth.

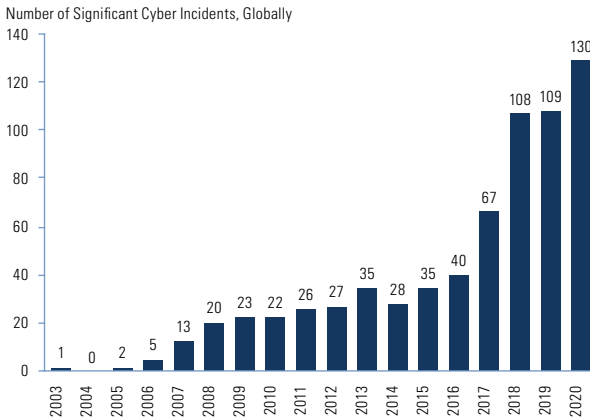
Company	Lawsuit Filing Year	Impact Between Lawsuit & Resolution	Resolution Year	Resolution	Impact Post-Resolution
AT&T	1974	Valuations fall	1982	Breakup ordered	Growth slows, valuations rise
Microsoft	1998	Valuations fall	2000/2001	Settlement, ordered to change practices	Growth slows, valuations continue to fall in settlement era through 2011
IBM	1969	Valuations fall	1982	Dropped lawsuit	Growth slows, valuations initially rise but then continue to fall

Data as of 2020.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 79: Significant Global Cyber Incidents

Cyber incidents are on the rise and pose a significant and growing threat.



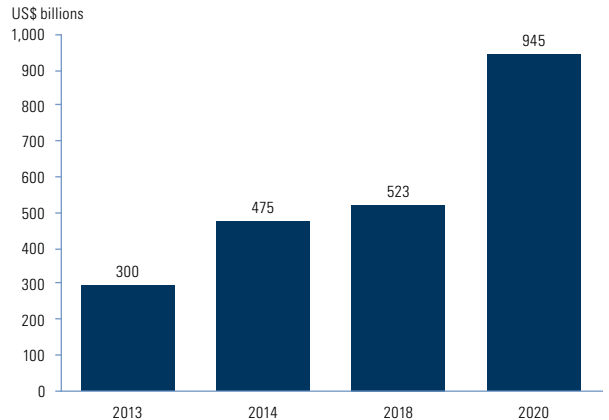
Data as of December 2020.

Note: Significant cyber incidents are attacks on government agencies, defense companies, and high tech companies, or economic crimes with losses of more than \$1 million.

Source: Investment Strategy Group, CSIS.

Exhibit 80: Monetary Loss from Cybercrime

The costs from cybercrime have escalated in recent years.



Data as of 2020.

Note: \$1 trillion estimated cost of cybercrime reflects both the monetary loss from cybercrime (\$945 billion) and global spending on cybersecurity, which was expected to exceed \$145 billion in 2020.

Source: Investment Strategy Group, McAfee.

78), growth slowed and valuations fell between the filing of the lawsuits and the year of resolution, a period that lasted 13 years for IBM and eight years for AT&T. It is likely that the regulatory scrutiny and antitrust lawsuits against large technology companies will have a similar impact, but may take some time to materialize.

Irwin Stelzer, senior fellow at the Hudson Institute, US economic and business columnist for the *Sunday Times*, and consultant on antitrust matters, provided additional perspective on the trajectory of these lawsuits: while “some level of abuse of antitrust powers is common to all ... it will take a long time” to work through these antitrust cases. These companies will “invite regulation. Regulation makes it very difficult for other companies to enter the market.”⁴⁰

Ludwig Siegele, US technology editor of the *Economist*, suggested the word “techslog” is more appropriate than “techlash,” since technology regulation will be a very slow process.⁴¹

We do not expect any material impact of this shifting regulatory environment on the technology sector in the near term.

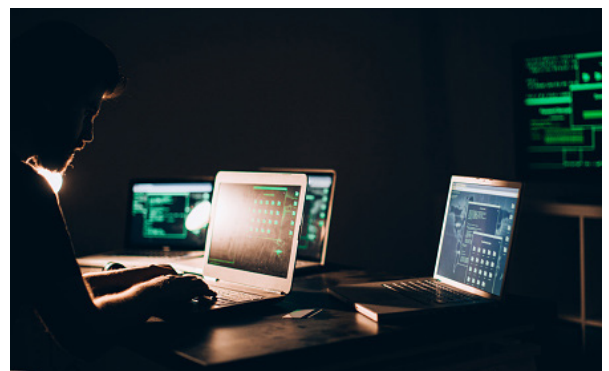
Cybersecurity

Cyber incidents are on the rise and pose a significant and growing threat to governments and corporations all over the world. We first discussed cybersecurity in our 2011 *Outlook*, when we shared the insights provided by Nye discussed

above. Since then, significant cyberattacks have increased fivefold, as shown in Exhibit 79.

A new report by McAfee and the Center for Strategic and International Studies in Washington, D.C., estimates that globally, cybercrime cost the economy over \$1 trillion in 2020,⁴² made up of \$945 billion of cybercrime and \$145 billion spent on cybersecurity (see Exhibit 80).

The most recent cyberattack, perpetrated by the Russians (according to Trump Administration Secretary of State Mike Pompeo), signifies a more sophisticated and significant level of cyberattacks on the US.⁴³ The hackers compromised SolarWinds, an American company that makes and maintains a network management system called Orion that is widely used by government agencies and



The number and type of cyberattacks and their associated risks will increase globally.

Fortune 500 companies. The hackers inserted their own malicious software in the updates that the company was sending to customers between March and June of 2020. The hack was not discovered until December 2020. According to Microsoft, 80% of targeted companies were US-based, but the attack also affected companies in the UK, Canada, Mexico, Belgium, Spain, Israel and the United Arab Emirates. Even FireEye, Inc., itself a cybersecurity company, was a victim of the attack.

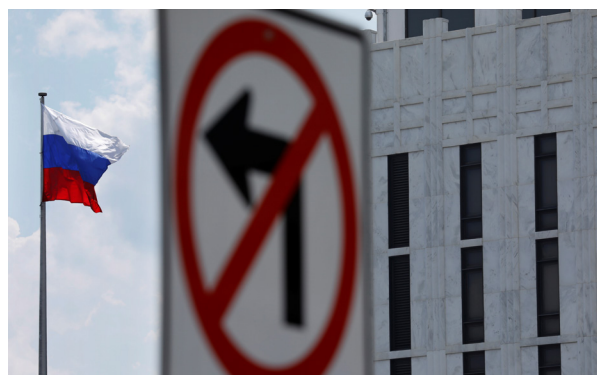
Cyberattacks are a threat from both state and non-state actors. China, Russia, Iran and North Korea are the key state actors using their cyber capabilities for purposes including stealing intellectual property, collecting data without permission, undermining US institutions and posing a risk to critical infrastructure. Non-state actors focus on criminal activity, on collecting ransom and on selling their capabilities to the highest bidder.

Cybersecurity is sixth in Eurasia Group's list of 10 top risks for 2021. In their report, Bremmer and Kupchan state that "cyber conflict will create unprecedented technological and geopolitical risk."⁴⁴ They believe that 2021 can be the year of the "cyber tipping point."

Geopolitical Risks

Writing about geopolitical risks reminds us of Captain Louis Renault's famous line from the 1942 movie *Casablanca*, which won an Oscar for best picture: "Round up the usual suspects." Over the years, Russia, Iran and North Korea have been the primary suspects of geopolitical tensions.

Our base case is that Russia and Iran will not instigate any crisis or confrontation with the US early in the first year of the Biden administration. To quote Carter, "all will be quiet on the Western front."⁴⁵



Russia is likely to take a wait-and-see approach with the new administration.



We do not expect a significant shift in US-Iran relations.

Russia: The US will likely respond to Russia's cyberattack on SolarWinds, but the response will be measured since President-Elect Biden has stated a goal of initially building back up its relationships with its allies and strengthening NATO against Russia. Additional sanctions are a possibility. Russia, too, is likely to take a wait-and-see approach with the new administration.

Iran: As long as Iran does not get too close to weapons-grade uranium and building a nuclear bomb, there will not be a significant shift in US-Iran relations. Iran will hold a presidential election in June, so the likelihood of President Hassan Rouhani being able to negotiate any kind of deal is extremely low. From the US's perspective, it will take time to develop a strategy to deal with the aftermath of the US's withdrawal from the Joint Comprehensive Plan of Action (JCPOA) and address issues that were not in the JCPOA. Iran, on the other hand, is unlikely to give up the progress it has made in rebuilding some of its nuclear capabilities since the US withdrew from the JCPOA. Of course, there is always some risk of groups affiliated with Iran throughout the region to instigate some type of confrontation with US forces.

North Korea: North Korea has made considerable progress during the Trump administration in building its nuclear weapons and increasing its long-range missile capabilities. It is uncertain whether North Korea will continue its tradition of conducting nuclear or missile tests early in the new administration as it has done at the start of



The US does not have as much leverage as it used to given the progress that North Korea has made on its nuclear weapons and missiles.

the last two presidencies. The US does not have as much leverage as it used to given the progress that North Korea has made on its nuclear weapons and missiles. At this point, both sides may prefer avoiding the risk of any significant confrontation.

Recession Risks

The greatest risk of a recession in the US and most other countries in the world is the worsening of the pandemic caused by the new virus variants, as discussed earlier.

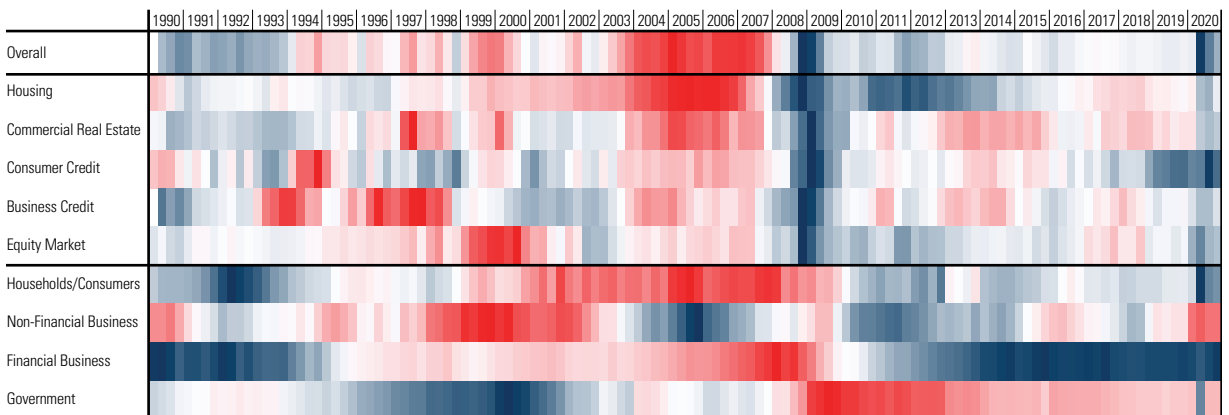
Otherwise, we assign a 10% probability to a recession in the US and the global economy this year, which is well below the average frequency of a recession in the post-WWII period of 16%.

Typically, US recessions are caused by one of three factors, of which the first two can be readily dismissed at this time:

- Monetary policy tightening by the Federal Reserve. Given the new framework announced by the Federal Reserve in August 2020 when it introduced its “flexible average inflation targeting” (FAIT), it is likely that the Federal Reserve will not raise the federal funds rate for at least three years, posing no risk to the recovery.
- Imbalances in the economy such as those seen during the dot-com bubble in stock prices and household and financial-sector leverage prior to the GFC, which led to imbalances in the housing sector. As shown in Exhibit 81, the US economy is well balanced, according to research prepared by David Mericle, chief US economist in Goldman Sachs’ Global Investment Research, and his team. While government debt has increased as a result of the two large COVID-19 fiscal packages, and non-financial corporate debt has increased as companies issued debt to build liquidity during the pandemic, the overall measure for the US economy is very well balanced. The blue shading shows that the overall level is benign.
- Exogenous shocks such as the COVID-19 pandemic in 2020 and the Arab oil embargo in 1973. By definition, shocks are not predictable, and a much greater deterioration in the trajectory of this pandemic is one such potential shock.

Exhibit 81: GIR Financial Excess Monitor

The recession in 2020 was not the result of imbalances in the economy or financial markets.



Data through Q4 2020.
 Note: Red shading indicates periods of financial excess, blue shading indicates periods of benign conditions.
 Source: Goldman Sachs Global Investment Research.

Key Takeaways

Every year we pull together key takeaways so that our clients and colleagues can easily glean the key messages from our *Outlook*. But this past year has been like no other—full of surprises, mostly bad but some good ones, too. Our team’s goal throughout 2020 was to help clients navigate the uncharted waters of the pandemic. We brought together top experts ranging from infectious disease specialists to former government policymakers to leading innovators, among many others, to help us in this endeavor.

This year promises—or threatens—more surprises. Critically, the new, more transmissible variants of SARS-CoV-2 have added to the uncertainty about the trajectory of the pandemic. But the current vaccines and the forthcoming ones may prove to be effective against these and other variants and help roll back the pandemic.

We often underscore the difficulty, under the best of circumstances, of forecasting economic growth and asset class returns. These are certainly not the best of circumstances. While we believe that our two key investment themes of “US preeminence” and “staying invested” will endure, our team has put forth our 2021 *Outlook* with a stronger dose of humility than usual.

Key takeaways from our 2021 *Outlook* are:

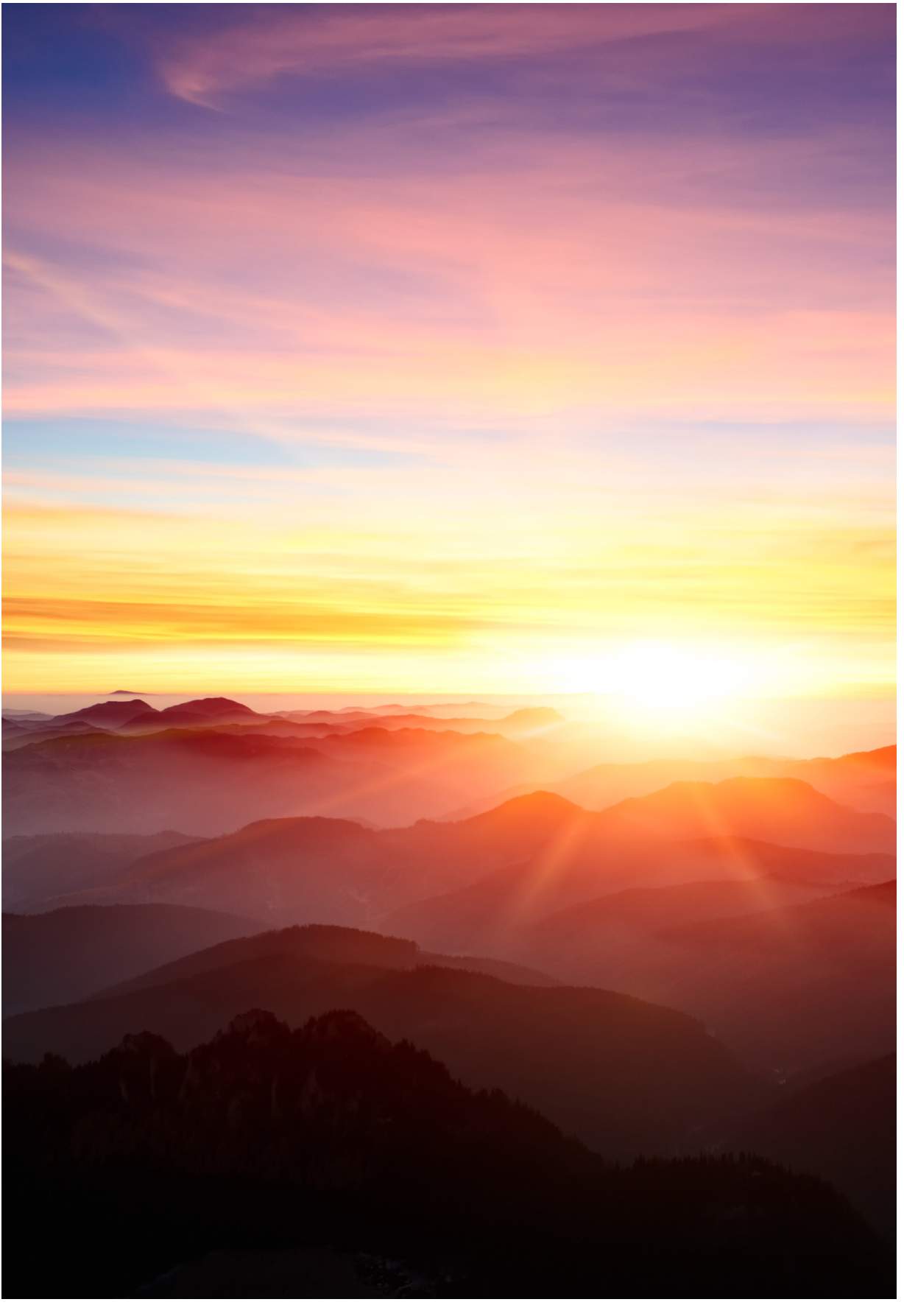
- **Strong pickup in global growth:** We expect most countries to grow above trend as they recover from the pandemic-induced recession. The US and China will likely be the only two large economies whose GDP levels at the end of 2021 will be higher than in 2019. Other countries’ economies are not likely to fully recover from the pandemic until 2022.
- **Accommodative monetary policy:** Central banks will maintain their accommodative monetary policy. Among those in developed economies, we expect the US Federal Reserve to be the first to raise policy rates, but our base case is that the first such tightening is some three years away.

- **Accommodative fiscal policy:** Fiscal policy will remain accommodative through 2021. There is greater likelihood of further fiscal stimulus in the US under the Biden administration.
- **Low risk of recession:** We have assigned a 10% risk of recession in the US and globally over the next year.
- **Abundance of risks:** The two greatest risks we face are a worsening of the pandemic and a deterioration in US-China relations. Other risks include rising geopolitical tensions with Russia, Iran and North Korea. Cybercrime is a major threat and costs are rapidly mounting, exceeding \$1 trillion last year.
- **Attractive portfolio returns:** We expect moderate-risk and well-diversified portfolios to return just under 6% in 2021, driven by 8–10% return from US and non-US equities and modestly negative returns in high-quality fixed income securities.
- **Stay invested:** While the margin of safety has declined given current high valuations in equities, we recommend clients stay invested at this time. We believe we are in the nascent stage of a multiple-year economic expansion that supports mid-single-digit annualized equity returns that are superior to cash and bonds. As we witnessed in 2020, financial market reaction to the pandemic was unpredictable. However, we remain vigilant with respect to the risks outlined in this report and are watchful for early signs of other risks that will surely surface.
- US preeminence is intact, supported by economic strength, abundant natural resources, human capital advantages, and a vibrant, innovative and efficient private corporate sector.

2021 Global Economic Outlook: A New Dawn

Readers need little reminder of the widespread economic devastation wrought by last year's pandemic. As global lockdowns brought activity to an abrupt halt, second-quarter GDP growth turned negative for every one of the 37 countries in the OECD. More broadly, 86% of the nearly 200 countries for which the IMF has released updates are expected to see their GDP decline in 2020. The breadth of this economic tragedy is second only to its magnitude. The worldwide version of Goldman Sachs' Current Activity Indicator (CAI)—a proxy for real-time GDP growth—plummeted to -44% in April of last year, while global GDP for the whole of the second quarter fell a staggering \$10 trillion.⁴⁶

While the last year has been dark and full of hardships, there are signs of light. The initial economic recovery from the pandemic was as swift as the downturn itself, with every OECD country posting positive quarterly GDP growth in the third quarter. This rapid rebound was aided significantly by two factors, both of which bode well for the durability of the recovery. First, the recession was not the result of the kind of global economic excesses that take a long time to correct.



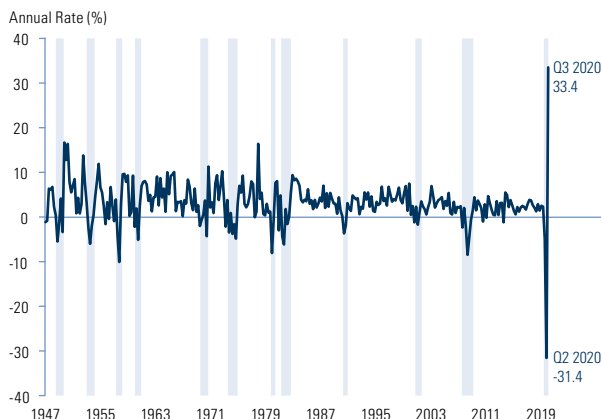
Second, worldwide policymakers were quick to provide fiscal and monetary support, limiting the kind of damage to corporate and household balance sheets that typically hobbles recoveries. To appreciate the scope of this support, consider that last year's global monetary and fiscal stimulus totaled \$21 trillion—about the size of US GDP—with central banks effectively buying about \$1 billion of assets every hour.⁴⁷

We expect this nascent upturn to be bolstered by widespread vaccinations in the first half of 2021, with our base case calling for a robust recovery (see Exhibit 82). Although global GDP growth slowed with the resurgence of the virus late last year, we think this setback will prove temporary once the operational challenges of mass vaccinations are surmounted in the coming months. Today's historically easy financial conditions should also support growth, as will the ongoing commitment of policymakers to support the recovery with additional stimulus. At the same time, the still-large economic slack across much of the world should temper inflationary pressures—beyond those arising temporarily as prices recover from currently depressed levels.

Of course, there are a number of risks that could prolong the gloom in the year ahead (see Section I, Risks to Our 2021 Outlook). But after careful inspection, none garners a high enough probability to undermine our core view of a new dawn for the global economy this year. And in that forecast, we are reminded of a quote by the French poet Victor Hugo: “Even the darkest night will end and the sun will rise.”

Exhibit 83: US Quarterly Change in Real Gross Domestic Product

The contraction in Q2 and subsequent recovery in Q3 2020 are unprecedented in post-WWII history.



Data through Q3 2020.
 Note: Shaded periods denote recessions.
 Source: Investment Strategy Group, Bureau of Economic Analysis, NBER.

United States: One for the Record Books

The V-shaped recovery of the US economy is a poignant reminder that records are made to be broken. As seen in Exhibit 83, both the 31% collapse in annualized US real GDP in last year's second quarter and the 33% rebound that followed were unprecedented in post-WWII history. Similarly, the US workforce had never before lost 22 million jobs over the course of just two months—as it did in March through April of 2020—nor had it ever before managed the feat of

Exhibit 82: ISG Outlook for Developed Economies

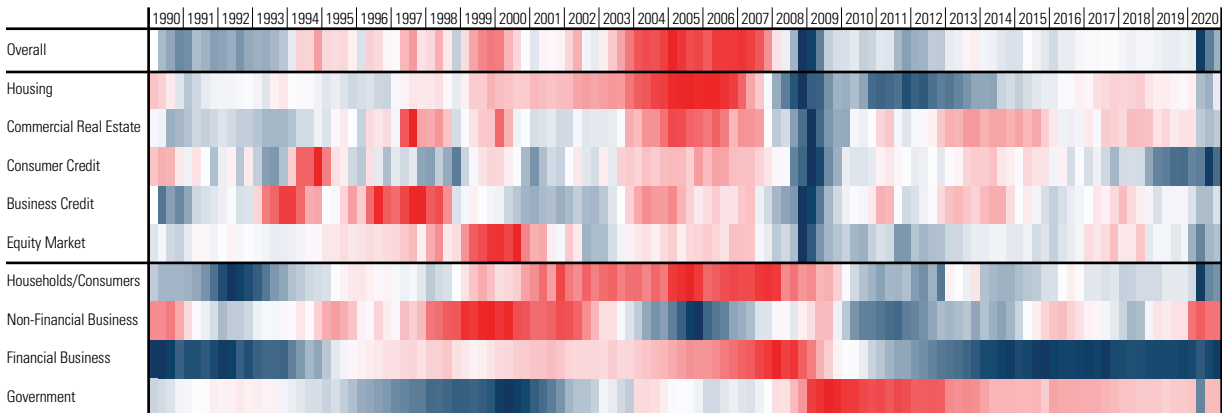
	2020	Real GDP Growth Annual Average				Headline Inflation* Annual Average		Core Inflation* Annual Average		Policy Rate** End of Year		10-Year Bond Yield*** End of Year	
		2021 Base Case	2021 Good Case	2021 Bad Case	2020-21 Combined Base Case	2020	2021	2020	2021	2020	2021	2020	2021
United States	-3.5%	5.4%	6.4%	3.6%	1.7%	1.3%	2.1–3.1%	1.7%	1.9–2.3%	0.125%	0.125%	0.9%	1.0–1.5%
Eurozone	-7.5%	4.6%	6.8%	2.4%	-3.2%	0.3%	0.7–1.3%	0.7%	0.7–0.9%	-0.5%	-0.5%	-0.6%	-0.6–0.0%
United Kingdom	-11.3%	5.2%	7.0%	3.3%	-6.7%	0.9%	1.1–1.7%	1.4%	1.3–1.5%	0.1%	0.1%	0.2%	0.2–1.0%
Japan	-5.3%	2.6%	4.1%	1.2%	-2.7%	0.0%	-0.1–0.5%	-0.2%	-0.2–0.2%	-0.1%	-0.1%	0.0%	-0.1–0.1%

Data as of December 31, 2020.
 Source: Investment Strategy Group, Haver Analytics, Bloomberg.
 * Inflation refers to CPI inflation. Japan core inflation excludes fresh food, but includes energy.
 ** The US policy rate refers to the midpoint of the Federal Reserve's target range. The Eurozone policy rate refers to the ECB deposit facility. The Japan policy rate refers to the BOJ deposit rate.
 *** For Eurozone bond yield, we show the 10-year German bund yield.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved.

Exhibit 84: GIR Financial Excess Monitor

The recession in 2020 was not the result of imbalances in the economy or financial markets.



Data through Q4 2020.

Note: Red shading indicates periods of financial excess, blue shading indicates periods of benign conditions.

Source: Goldman Sachs Global Investment Research.

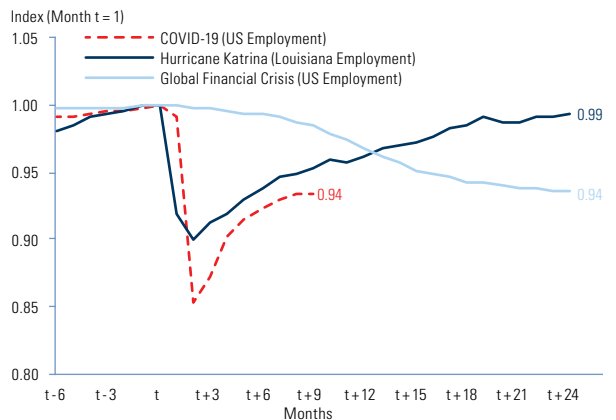
adding more than 11 million jobs in a five-month period, as it did between May and September. This rapid recovery surprised even the most optimistic economists, as Goldman Sachs' measure of economic surprises has remained in positive territory since June of last year.

We think two factors in particular helped the US economy regain its footing so quickly, and both have positive implications for the durability of the recovery. First, the recession was not the result of financial or economic excesses that take time to correct, unlike the notable imbalances that preceded the past two economic contractions (see Exhibit 84). As a result, the sharp rebound was akin to one that follows a natural disaster (see Exhibit 85).

Second, both fiscal and monetary policy reacted quickly and forcefully, greatly limiting the damage to corporate and household balance sheets that typically slows post-recession recoveries. Consider that it took just 12 days for the Federal Reserve to slash its policy rate to 0–0.25% during the pandemic, and that it launched more programs in a single week last year than it did during the entirety of the global financial crisis (GFC) of 2007–09. Around the same time in March 2020, Congress made \$3.4 trillion of gross financial support available as stimulus, a peacetime record amounting to a staggering 16% of 2019 US GDP.⁴⁸ Crucially, compared with those seen in response to the GFC, these fiscal stimulus measures were collectively larger (more than twice the size), were introduced faster (in

Exhibit 85: Total Private Employment Indexed to Start of Selected Past Downturns

The path of employment during the pandemic has resembled that of a natural disaster.



Data through November 2020.

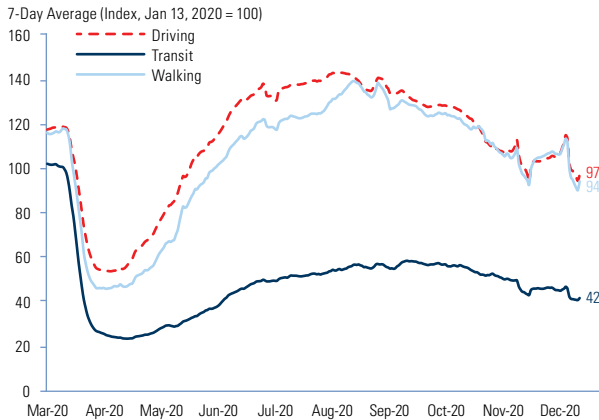
Source: Investment Strategy Group, Haver Analytics.

weeks versus months) and were more front-loaded (concentrated in the first year versus over two years).

We expect the US economy to continue to benefit from very accommodative monetary policy in the year ahead. The Federal Reserve has communicated that it intends to remain on hold “until labor market conditions have reached levels consistent with the Committee’s assessments of maximum employment and inflation has risen to 2% and is on track to moderately exceed 2%

Exhibit 86: US Apple Mobility Trackers

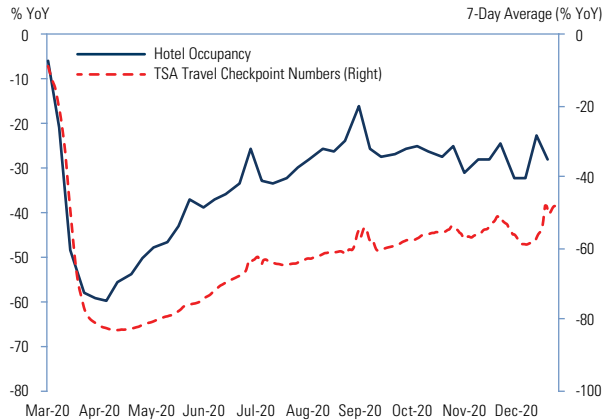
Mobility indicators have softened in recent months.



Data through December 31, 2020.
Source: Investment Strategy Group, Apple.

Exhibit 88: US Air Travel and Hotel Occupancy

Activity in sectors particularly reliant on social contact remains depressed.



Data through December 31, 2020.
Source: Investment Strategy Group, TSA, STR.

Exhibit 87: US OpenTable Seated Diners

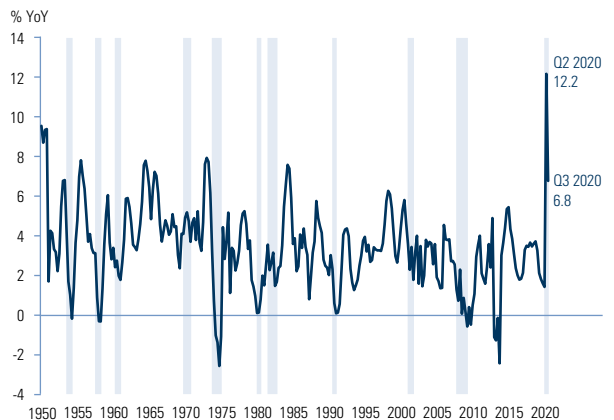
Seated dining indicators have weakened in recent months with the rise in infections.



Data through December 31, 2020.
Source: Investment Strategy Group, OpenTable.

Exhibit 89: US Real Disposable Personal Income Growth

Last year's government transfer payments drove the fastest rise in real disposable income on record.



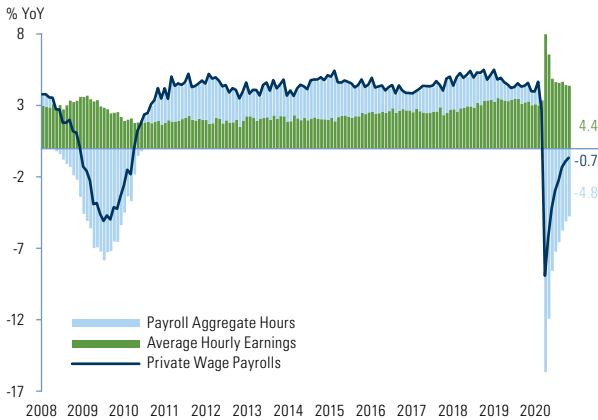
Data through Q3 2020.
Note: Shaded periods denote recessions.
Source: Investment Strategy Group, Haver Analytics.

for some time.”⁴⁹ Although the labor market has staged an impressive recovery, the current 6.7% unemployment rate is still well above the 4.1% level that members of the Federal Open Market Committee (FOMC) associate with full employment. The pace of economic growth has also slowed in recent months, according to high-frequency data, further tempering the FOMC’s need to tighten policy (see Exhibits 86-88).

While we do expect to see inflation breach the FOMC’s 2% target this year given the depressed base effects from the pandemic, Chairman Jerome Powell said the FOMC would view that as “a transient increase in the price level”⁵⁰ that it is likely to look past. This is particularly true now that the Federal Reserve has stated it is going to tolerate inflation above its target to compensate for undershooting it throughout much of the last

Exhibit 90: US Private Wage Payrolls

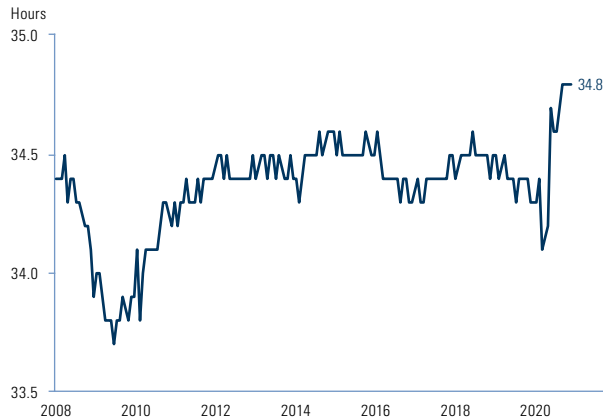
Labor income has recovered surprisingly quickly.



Data through November 2020.
Source: Investment Strategy Group, Haver Analytics.

Exhibit 91: US Average Weekly Hours of All Employees, Private Sector

Average weekly hours surged in the second half of 2020.



Data through November 2020.
Source: Investment Strategy Group, Haver Analytics.

expansion. Against this backdrop, we expect the Federal Reserve to keep policy rates pinned at the zero bound, although it may adjust its Section 13(3) emergency lending facilities and pace of asset purchases as the economy strengthens.

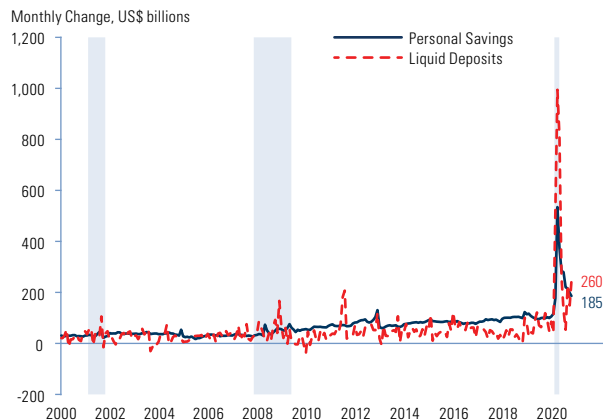
Fiscal policy will also be highly accommodative with \$900 billion of additional stimulus passed by Congress to round out 2020. Given the balance of power in Congress, some additional fiscal stimulus is likely. But we do not expect sizable policy shifts, as the Biden administration will be constrained in delivering on its most ambitious campaign promises on taxes and infrastructure spending.

Overall, we are optimistic about the economic recovery this year despite the winter surge in COVID-19 cases. The linchpin of this view is the high likelihood we attach to widespread vaccinations bringing the pandemic under control in the first half of 2021. Combined with warmer spring weather, broad vaccinations should foster a meaningful acceleration in economic activity, particularly in currently depressed services sectors (e.g., dining, travel, leisure).

That pickup in spending activity is likely to be funded by consumers' ongoing income gains and historically high level of savings. Last year's transfer payments from the CARES Act drove the fastest rise in real disposable personal income (DPI) on record, in sharp contrast to all other post-WWII recessions, which saw flat-to-declining DPI growth (see Exhibit 89). Labor income has also recovered surprisingly quickly—improving to a year-over-year decline of

Exhibit 92: US Household Savings and Liquid Deposits

Household savings and liquid deposits increased sharply last year and should support spending going forward.



Data through November 2020.
Note: Liquid deposits include demand deposits, other checkable deposits, savings deposits, small-denomination time deposits and retail money funds. Shaded periods denote recessions.
Source: Investment Strategy Group, Haver Analytics.

less than 1% in November from -9% in April 2020 (see Exhibit 90)—aided by a surge in average weekly hours (see Exhibit 91). Combined with the decline in spending, these income gains contributed to an unprecedented rise in household savings and liquid deposits last year (see Exhibit 92).

Household incomes should be further bolstered by additional labor market gains. Although

Exhibit 93: Goldman Sachs US Financial Conditions Index

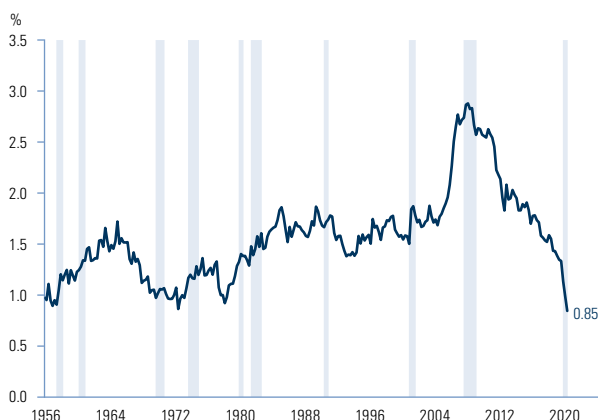
Very easy financial conditions support economic growth.



Data through December 31, 2020.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 95: US Homeowner Vacancy Rate

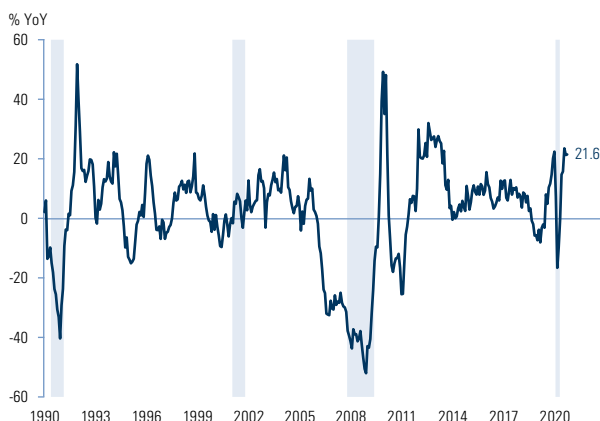
Low vacancy rates continue to support the housing market.



Data through Q3 2020.
Note: Shaded periods denote recessions.
Source: Investment Strategy Group, Haver Analytics.

Exhibit 94: US Housing Units Authorized: 1-Unit Structures

Housing construction has rebounded sharply, driven by strong demand for homes away from city centers.



Data through November 2020.
Note: Shaded periods denote recessions.
Source: Investment Strategy Group, Haver Analytics.

summer after widespread vaccinations allow more face-to-face interactions. Even so, we expect it will be some time before we see full employment, helping the Federal Reserve to keep the policy rate pinned at the zero bound.

Growth should be further aided by historically easy financial conditions, such as low interest rates and narrow credit spreads (see Exhibit 93). Indeed, our colleagues in Goldman Sachs Global Investment Research (GIR) estimate that a one percentage point easing in financial conditions could lead to a 0.7 percentage point increase in GDP growth over the next four quarters.⁵¹ Already, low interest rates have spurred a breathtakingly swift rebound in housing construction, aided by surging demand for homes away from city centers (see Exhibit 94).

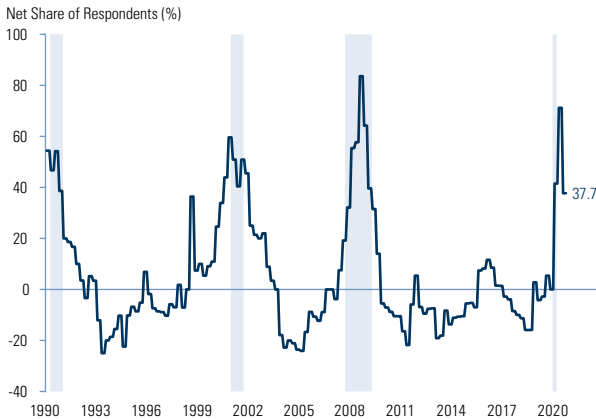
We expect this recent housing strength to continue on the back of low vacancy rates as new construction remains robust to keep pace with supportive demographics-based demand trends (see Exhibit 95). It is also likely that business investment—which remains subdued given tighter lending standards and elevated economic policy uncertainty (see Exhibits 96 and 97)—will pick up as confidence in the economic expansion grows by the middle of this year.

Despite our above-trend GDP growth forecast, we do not expect inflation to be problematic this year. While the recovery has unfolded quickly so far, the still-sizeable slack in the economy—evident in depressed capacity utilization rates and elevated

the unemployment rate has already fallen a remarkable eight percentage points from its peak, the economy would still need to see an additional 10 million jobs just to return to February 2020 levels. We expect the recovery in labor-intensive services sectors—such as leisure, hospitality and education—to help narrow this remaining unemployment gap, especially in the spring and

Exhibit 96: Share of US Banks Tightening Loan Standards for Large and Middle-Market Firms

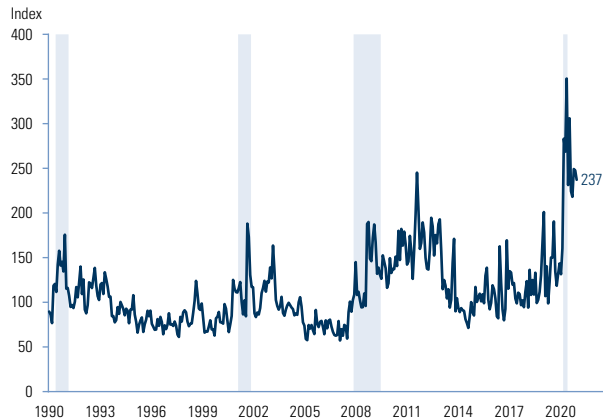
Lending standards tightened during the pandemic but have begun to ease.



Data through Q4 2020.
 Note: Based on the FRB Senior Loan Officer Survey. Reflects net tightening of standards for commercial and industrial loans. Shaded periods denote recessions.
 Source: Investment Strategy Group, Haver Analytics.

Exhibit 97: US Economic Policy Uncertainty Index

Uncertainty remains elevated, weighing on business investment.



Data through December 2020.
 Note: Shaded periods denote recessions.
 Source: Investment Strategy Group, Economic Policy Uncertainty Index (www.policyuncertainty.com).

unemployment levels—represents a powerful headwind to inflation. We do expect positive base effects and faster growth to push headline personal consumption expenditure (PCE) inflation to 2.1% this year, but this largely reflects transitory drivers.

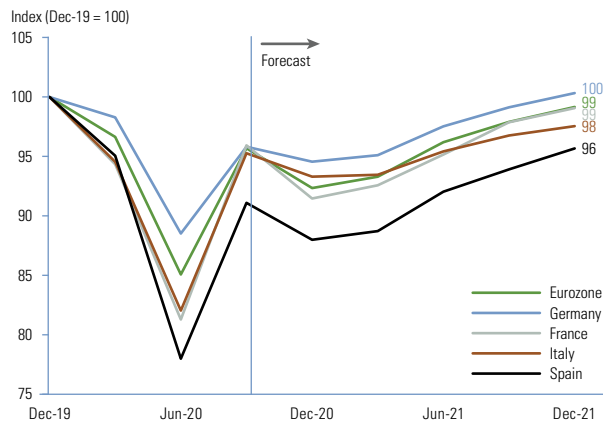
Taken together, these elements support our expectations for above-trend GDP growth of 5.4% and below-average recession odds of just 10% in 2021. While this outcome would not shatter any records, it would likely be a welcome reprieve from the wild economic swings of last year.

Eurozone: A Tale of Divergences

This year’s Eurozone forecast features a number of divergences. For one, we expect divergent economic growth over the course of 2021, with weakness early in the year from virus-containment measures ultimately giving way to above-trend growth by midyear as widespread vaccinations, warmer weather and easing of lockdown measures unfold. The performance of various economic sectors is likely to be equally uneven. Here, we expect the current tailwind to the manufacturing sector from rebounding global trade to moderate later in the year as household spending on services becomes the dominant driver of economic activity. Finally, the growth rates of individual Eurozone countries will also be far from uniform, given the

Exhibit 98: Eurozone Real GDP—ISG Baseline Forecast

We expect diverging economic performance across Eurozone member states in 2021.

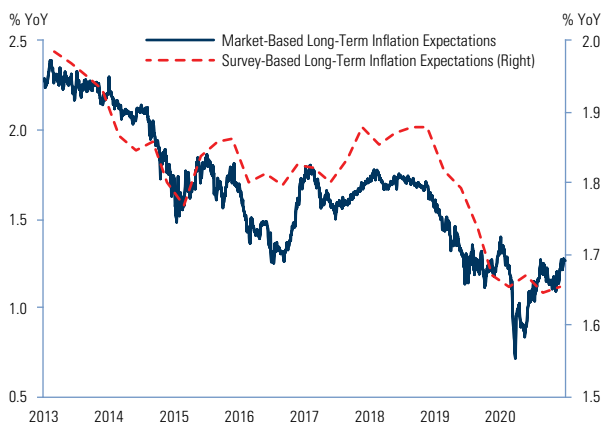


Data through Q3 2020, forecasts through Q4 2021.
 Source: Investment Strategy Group, Eurostat.
 Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved.

diversity of their virus-containment approaches, mix of economic sectors and capacity for fiscal stimulus. For example, Germany is likely to outperform initially given its cyclical industry exposure and capacity for further fiscal spending, while France, Italy and Spain underperform (see

Exhibit 99: Eurozone Inflation Expectations

Long-term inflation expectations remain anchored at low levels.



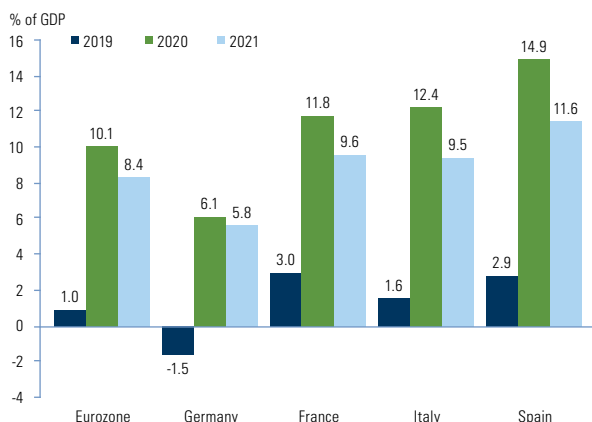
Data through Q4 2020.

Note: Market-based expectations based on 5-year, 5-year EUR inflation swap rate. Survey-based expectations based on the ECB's Survey of Professional Forecasters.

Source: Investment Strategy Group, ECB, Bloomberg.

Exhibit 100: Eurozone Government Deficit-to-GDP Ratios

We expect fiscal policy to remain very expansionary in 2021.



Data through 2019, ISG forecasts through 2021.

Note: Eurozone computed as a weighted average of Germany, France, Italy, and Spain.

Source: Investment Strategy Group, European Commission.

Exhibit 98). Yet these laggards will begin to catch up later in the year as grants and loans under the Next Generation EU fund are disbursed.

Despite these divergences, our 2021 economic outlook also features three themes that have been quite consistent over time in the Eurozone. First, inflation is likely to remain subdued given a large negative output gap, a flat relationship between economic slack and price pressure (i.e., the Phillips curve), and long-term inflation expectations that are anchored below the ECB's target (see Exhibit 99).

Second, we expect monetary policy to remain highly accommodative in light of persistently low inflation. In fact, the ECB's upcoming strategy review will likely affirm a symmetric medium-term inflation target of around 2%, which will require easy monetary conditions for many years to come given the dearth of inflationary pressures in the Eurozone. While the ECB has not completely ruled out cutting its policy rate further into negative territory, we think it is unlikely given mixed opinions on the effectiveness of such a move. Instead, the ECB is likely to continue asset purchases and its targeted longer-term refinancing operations (TLTROs) in support of banks until the recovery is well underway.

Finally, expansionary fiscal policy is set to persist in the form of extended income support to households, job retention schemes and loan guarantees to firms (see Exhibit 100).

Taken together, these elements imply that Eurozone GDP will grow at an above-trend pace of 4.6% this year. That said, any delay in controlling the spread of COVID-19 or the failure of monetary and fiscal policies to prevent large-scale bankruptcies poses downside risks to our forecast. Political developments—especially around the German general elections in September—could result in either modestly positive or negative growth impulses. On the one hand, a pivot to a fiscally conservative administration in Germany in the wake of Chancellor Angela Merkel's retirement could result in premature tightening of fiscal policy. On the other hand, a German coalition government that features a greater role for the Green party—which is an advocate of European fiscal union—could be a positive for the longer-term outlook, although it would be unlikely to significantly impact 2021 performance given that broader integration across Europe is a protracted process. To be sure, we will be closely monitoring this year's German general election.

United Kingdom: A Long Road to Recovery

Last year was particularly challenging for the UK. While the uncertainties surrounding Brexit continued to drag down activity and confidence, the pandemic also crippled the UK's services-

Exhibit 101: UK Consumer Confidence and Household Consumption

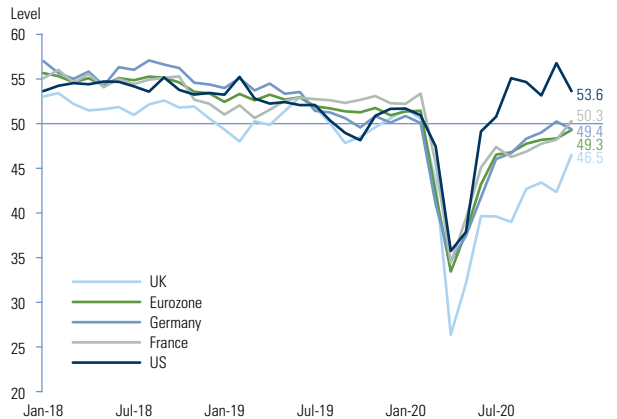
UK consumer confidence remains depressed.



Data on consumer confidence through December 2020, household consumption through Q3 2020. Note: Consumer confidence based on the GfK Consumer Confidence Barometer. Source: Investment Strategy Group, Haver Analytics.

Exhibit 102: Composite Employment Purchasing Managers' Indices (PMIs)

The outlook for UK employment is lagging other developed nations and remains fragile.



Data through December 2020. Note: December 2020 PMIs based on preliminary readings. PMI readings above 50 indicate an increase compared to the previous month; readings below 50 indicate a decrease. Source: Investment Strategy Group, Haver Analytics.

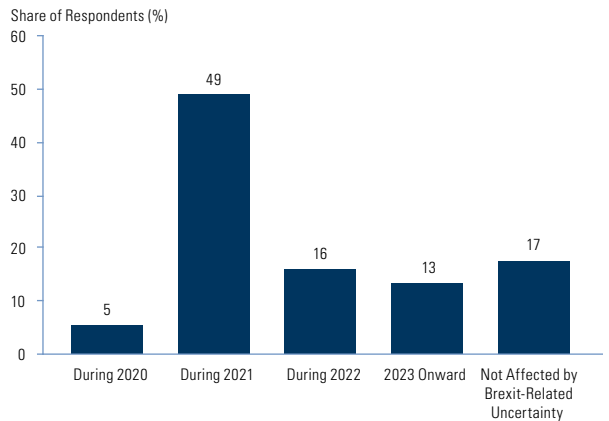
dominated economy. UK GDP collapsed by around 11% in response, the sharpest annual contraction in more than 300 years and one of the largest declines among major developed economies.

Although we expect GDP to grow by 5.2% this year, the UK economy is still facing a long road to recovery. Even with this year's expected rebound, real GDP will remain far below its pre-pandemic level at the end of 2021. Growth is also likely to be uneven; weak near-term momentum amid elevated numbers of COVID-19 cases and associated containment measures should give way to improving growth as the pandemic abates after the second quarter. Similarly, unemployment is likely to rise through the first half of this year, reflecting the continued economic drag from COVID-19 containment measures and the planned expiration of the government's Coronavirus Job Retention Scheme in April. As economic activity normalizes later in the year, the unemployment rate is likely to resume its decline, but remain above its pre-pandemic level at the end of the year.

The risks to this forecast are skewed to the downside, however. The normalization we expect in consumption requires an improvement in consumer sentiment and the employment outlook, yet the latter remains fragile (see Exhibits 101 and 102). Meanwhile, the recently agreed trade arrangement with the EU—while certainly better than its no-deal alternative—will still introduce

Exhibit 103: Expected Date When Brexit-Related Uncertainty Will Be Resolved

Some Brexit-related uncertainties will likely persist beyond 2021.

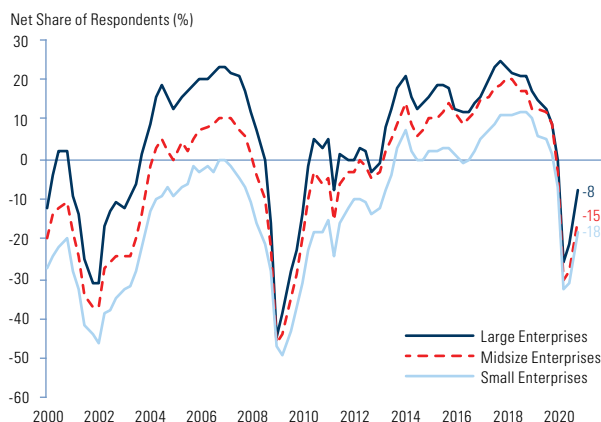


Data as of July 2020. Note: Based on the BOE Decision Maker Panel. Source: Investment Strategy Group, BOE.

barriers to free trade, including customs and regulatory requirements for goods, and changes to cross-border trade across some services. The new regime will also take time to implement, and some uncertainties will extend beyond even this year (see Exhibit 103). In short, the outlook for investment and exports continues to be clouded by uncertainty, at a time when a significant share

Exhibit 104: Japan Tankan Survey of Business Conditions

Soft business confidence will likely weigh on investment.

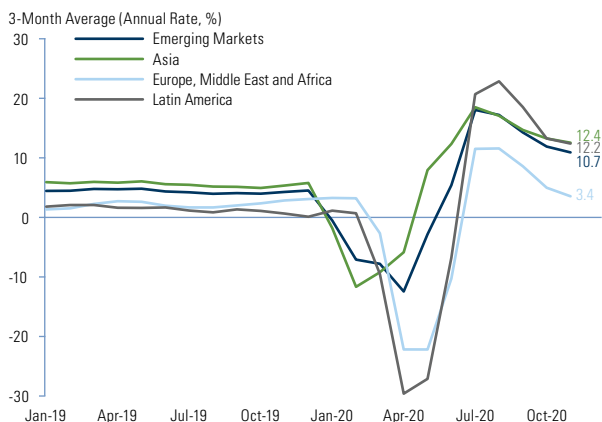


Data through Q4 2020.

Note: Net share of enterprises reporting "favorable" versus "unfavorable" business conditions. Source: Investment Strategy Group, Haver Analytics.

Exhibit 105: Emerging Market Current Activity Indicators

Activity has rebounded and momentum continues into 2021.



Data through November 2020.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

of UK firms reported being only partially prepared for the transition on January 1. The reemergence of questions involving Scottish independence only compounds these worries.

The silver lining is that today's large output gap and lingering uncertainties imply muted inflationary pressures and hence an extended period of easy monetary policy. Here, we expect the Bank of England (BOE) to continue asset purchases, but refrain from cutting its policy rate into negative territory this year unless inflation meaningfully disappoints and the pound appreciates. If additional accommodation is required, asset purchases should remain the BOE's preferred tool. We also expect the powerful coordination between fiscal and monetary policies to continue, supporting the UK economy on its long road to recovery.

Japan: Slow but Steady Progress

The global pandemic did not spare Japan's economy, but things could have been worse. While real GDP collapsed by 29.2% annualized in the second quarter—the largest quarterly drop for Japan on record—the contraction was smaller than in other developed market countries thanks to Japan's effective virus-containment efforts. We expect Japan to deliver GDP growth of 2.6% this year, although even that above-trend output growth would still leave the economy below its pre-pandemic level.

We see two factors driving the recovery. First, the rebound in the global economy should boost Japan's exports. Second, continued accommodative financial conditions and additional fiscal measures should support private consumption.

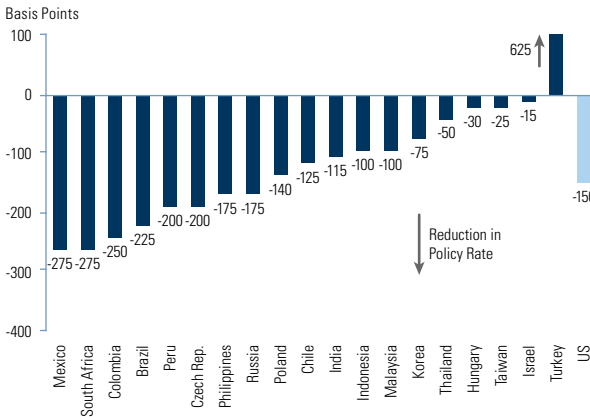
The outlook for private investment is more nuanced. In the near term, uncertainty about the pandemic and still-recovering business confidence is likely to subdue outlays (see Exhibit 104). Yet beyond these immediate headwinds, the pandemic may actually serve as a catalyst for greater investment in digital technology and e-commerce, areas in which Japan is lagging. Moreover, investment subsidies to small and medium-size enterprises (SMEs) are likely to remain in place for the foreseeable future, as Prime Minister Yoshihide Suga's economic agenda is centered on structural reforms to promote SMEs' capital spending and productivity.

Against this backdrop, we expect core inflation to remain muted, averaging 0% in 2021. In turn, the BOJ is likely to maintain its current accommodative policy framework for the foreseeable future. Specifically, we expect the BOJ to continue its asset purchase and credit easing programs and, absent a sharp appreciation of the yen, to keep the main policy rate and the 10-year Japanese government bond yield target at their current levels of -0.1% and 0.0%, respectively.

The main downside risk to our central case is a deleterious turn in the pandemic. Smaller upside potential resides in better-than-expected economic

Exhibit 106: Emerging Market Policy Rate Changes Since End of February 2020

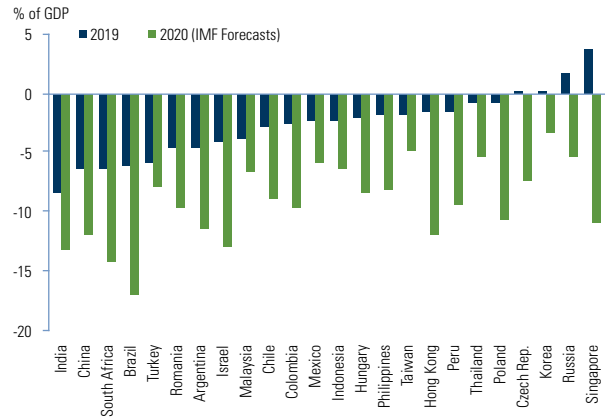
Most EM central banks were able to provide substantial countercyclical stimulus during the crisis.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 107: Emerging Market Fiscal Balances

Larger fiscal deficits reflect substantial fiscal stimulus.



Data as of October 2020.
Source: Investment Strategy Group, IMF.

activity arising from the Tokyo Olympic Games in 2021 and the opportunity for Prime Minister Suga to garner a strong endorsement in this year's general election, which would enable him to more forcefully pursue his structural reform agenda.

Emerging Markets: Maintaining Healthy Momentum

Emerging market (EM) countries are no strangers to large economic shocks, but the contraction wreaked by the COVID-19 pandemic was the largest ever experienced by many of these nations. In total, EM GDP shrank 2.2% in 2020, the worst performance in data going back to 1980. Thankfully, the recession was as short-lived as it was deep, with most economies rebounding by last summer. Although activity levels remain depressed compared to their levels at the end of 2019, EM economies are entering 2021 with healthy momentum (see Exhibit 105).

Part of this spirited recovery can be tied to the quick response of policymakers. Unlike during many past economic crises, EM policymakers rapidly responded to the pandemic with countercyclical stimulus measures. With only a few exceptions, EM central banks cut their policy rates (see Exhibit 106), while governments provided substantial

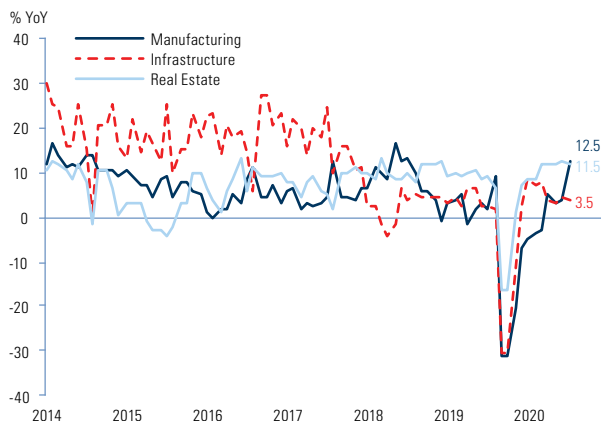
fiscal stimulus (see Exhibit 107). The IMF projects that the overall fiscal deficit of EM countries more than doubled in 2020, widening to 10.4% of GDP. Meanwhile, flexible exchange rates absorbed the shock from sharply weaker external demand, as well as the sudden stop in capital inflows in the spring. Together, these policy and currency adjustments improved the external balances of many countries, and thus far, no major EM country has had to apply for IMF assistance.

Although near-term growth could be challenged by the recent resurgence in the virus, we think EM countries are in a good position to extend the recovery that began last year. Today's subdued inflation and considerable economic slack suggest that policy will remain accommodative, even if some stimulus is withdrawn later in the year as growth accelerates. Moreover, the recovery we expect in large developed market economies will provide a tailwind for EM exports. Against this backdrop, our forecast calls for EM GDP growth to rebound to 5.9% this year.

Thankfully, the recession was as short-lived as it was deep, with most economies rebounding by last summer.

Exhibit 108: China Fixed Asset Investment Growth by Sector

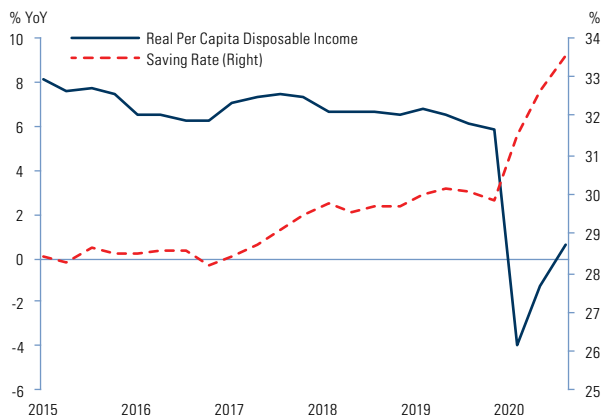
Fixed investment drove the initial leg of the Chinese recovery.



Data through November 2020.
Source: Investment Strategy Group, Haver Analytics.

Exhibit 109: China Disposable Income Growth and Saving Rate

Accumulated savings and rising disposable incomes should support household consumption.



Data through Q3 2020.
Source: Investment Strategy Group, Haver Analytics.

China

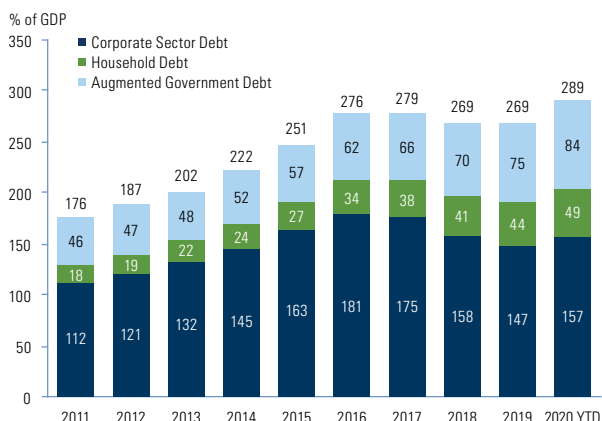
While China was the initial epicenter of the COVID-19 pandemic, it was also the first country to recover. After a record 6.8% decline in the first quarter of last year, the Chinese economy recaptured its 2019 year-end level by the summer. This rapid recovery was aided by one of China’s traditional growth engines: fixed investment (see Exhibit 108). Consumption was slower to recover initially but is now catching up.

Chinese consumers, like those in other countries, increased their savings at the outset of the pandemic because they had fewer opportunities to spend and were confronted with an increased risk of job loss. But as the virus is increasingly brought under control and mobility restrictions are lifted, pent-up demand, coupled with an improving labor market, rising disposable incomes and continued strong investment, should act as a potent driver of GDP growth this year (see Exhibit 109). Indeed, we expect 2021 GDP growth to accelerate to 7.5% from just 2% last year.

While fiscal and monetary policy will remain accommodative to support the recovery, policymakers may slowly dial back the level of stimulus as the recovery becomes more self-sustaining and is propelled by private sector activity. Keep in mind that China’s policymakers must thread a narrow path between supporting the economy with more credit and risking a destabilizing buildup of debt. We estimate that China’s total debt stood at 289% of GDP as of November 2020 (see

Exhibit 110: China Total Debt by Sector

Total debt in the economy increased sharply in 2020.



Data through November 2020.
Note: Augmented government debt includes central and local government debt and the debt of local government financing vehicles.
Source: Investment Strategy Group, CEIC, Haver Analytics.

Exhibit 110). That is up sharply from 269% at the end of 2019. Even worse, it marks a reversal of the deleveraging campaign launched in 2016 that had managed to stabilize the debt-to-GDP ratio and reduce the high indebtedness of the corporate sector. Those achievements were lost last year as policymakers reached for the familiar tool kit to boost economic growth and injected a large dose of new credit. For that reason, we believe Beijing

will err on the side of caution and provide only measured policy support this year, while counting on consumers to pick up the growth baton—in China and in the rest of the world.

Finally, while the foreign policy of the new US administration may be less outwardly combative, pressure on China is unlikely to abate. If such pressure succeeds in curtailing China's expansion into foreign markets, its long-run growth potential could be tempered.

India

The Indian economy was also seriously affected by the pandemic, with strict and wide-ranging lockdown measures causing GDP to plunge nearly 24% in the second quarter of 2020. While the Reserve Bank of India responded forcefully by lowering the policy rate and taking measures to support liquidity in the banking system, the fiscal policy response—in terms of discretionary spending—has been limited.

We expect growth to rebound sharply in 2021, with GDP climbing by 8.5% after declining by a similar amount last year. This recovery will be helped by a continuation of accommodative monetary policy and a recovery in consumption and investment. Earlier and wider availability of vaccines could further bolster growth, although some of the vaccines likely to be secured by India are still in the testing phase, and uncertainties remain about their efficacy and distribution timeline. While structural reforms introduced last year are undoubtedly positive for medium-term growth, they will be of limited importance in shaping the recovery this year.

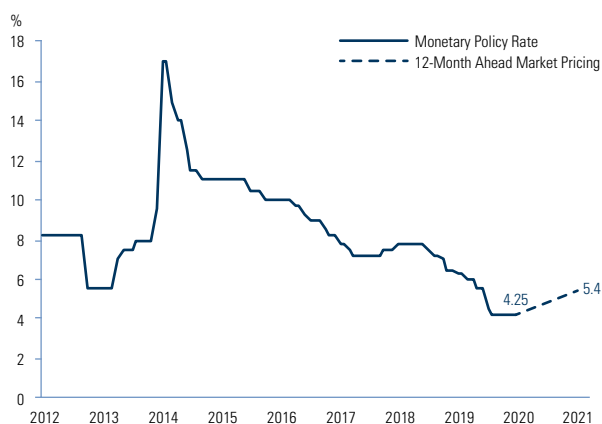
Brazil

After the peak of lockdown-related disruptions in April, the Brazilian economy has seen a steady recovery. Along with accommodative monetary policy, a powerful impulse was provided by fiscal policy that included direct cash transfers to informal workers with a high likelihood of spending additional income. Retail sales and industrial production have risen above their pre-pandemic levels, while services consumption has lagged. Exports have held up well, reflecting both the depreciation of the Brazilian currency and recovering demand from China.

Although Brazil's emergency fiscal stimulus has aided its economic recovery, it has also worsened an already bleak fiscal picture. Brazil's deficit increased to as much as 11% of GDP in the second quarter of last year, which limits the country's ability to deploy

Exhibit 111: Russia Monetary Policy Rate

Monetary policy is expected to remain accommodative.



Data on policy rate through December 2020, market pricing as of December 31, 2020. Source: Investment Strategy Group, Bloomberg.

further fiscal aid now. The lack of fiscal support this year will have a constraining effect on growth, which we forecast to be at 3.8%. More broadly, failing to rein in these deficits could lead to a loss of confidence in Brazil's fiscal discipline and an increase in the risk premium investors demand in exchange for holding the country's debt, while also hastening a return to tighter monetary policy.

Russia

In addition to the sharp contraction in consumption arising from lockdowns, the Russian economy suffered from its exposure to energy, as the deterioration in oil demand and the consequent production cuts agreed upon with OPEC weighed on exports. While a rebound in consumption drove a strong recovery in the third quarter of last year, a resurgence of infections in the fourth quarter pulled back some of the gains.

We forecast the Russian economy will grow by 3.3% in 2021. The ill effects of the late-2020 virus surge are likely to persist into the early months of this year, after which growth should accelerate, aided by a rebound in oil exports. While the likelihood of rate hikes has increased recently (see Exhibit 111), we expect a stabilization of the ruble to provide room for monetary accommodation. One key downside risk to our forecast would be a rise in geopolitical tensions between Russia and the new Biden administration, as any resulting sanctions would weigh on economic activity and further pressure the ruble, which could force an unwelcome tightening of monetary policy.

2021 Financial Markets Outlook: Sails Up

The gale-force winds of the pandemic roiled not only the world's economies but also its financial markets last year. At the worst of the equity downdraft in March, all but one of the 93 primary equity indices tracked by Bloomberg showed a loss for the year.⁵² The breadth of the decline was matched by its speed, as global equities forfeited nearly a third of their market value in a single month—the fastest bear market on record. Collectively, those declines amounted to nearly \$28 trillion in market value,⁵³ the equivalent of every person on the planet losing \$3,500.

Thankfully, the recovery from that fierce squall has been swift. Stocks posted their fastest-ever rebound from a bear market last year, with the value of global equities rising 71% from their March lows and gaining nearly 17% for the year.⁵⁴ In fact, the majority of those same Bloomberg equity indices that collapsed in unison in March ended 2020 with a gain.



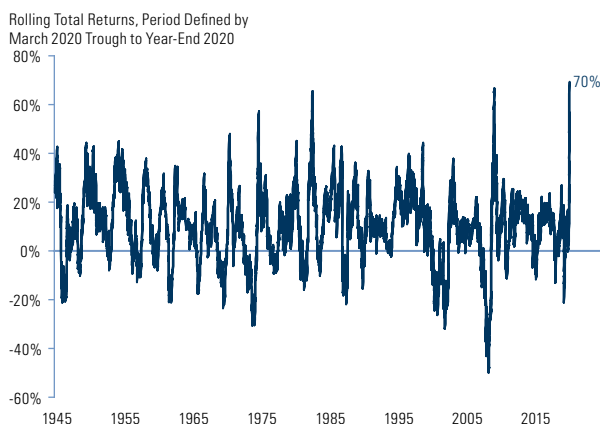
This abrupt reversal of fortune reflects several factors that we think will continue to buoy stocks. The most important of these are a strengthening economic recovery and rising corporate earnings, both of which stand to benefit from widespread vaccinations in the first half of the year. Highly accommodative policy measures should also bolster the recovery. Consider that last year's monetary and fiscal stimulus totaled \$21 trillion⁵⁵ globally and policymakers have committed to do more as needed. Importantly, we think the economic tailwind for equities is still in its infancy, as last year's recession has left ample slack in global labor markets and production capacity that will take years to fill.

Against this backdrop, our forecasts call for solid performance across global equities in the year ahead (see Exhibit 112). These returns look particularly attractive relative to cash and bonds, reflecting near-zero policy rates in many of the largest developed markets and the sobering reality that two-thirds of the world's government bonds now yield less than 1%. While we are cognizant of the concerns around current valuations, we believe higher valuations are justified by today's extraordinarily low interest rates and low and stable inflation.

As we reflect on the tumultuous path of financial markets over the past year and our continued recommendation for clients to stay invested, a quote from author Gregory S. Williams comes to mind: "On the other side of a storm is the strength that comes from having navigated through it. Raise your sail and begin."

Exhibit 113: Rolling S&P 500 Total Returns

The rally from last year's March low is the largest advance over a comparable time period in post-WWII history.



Data through December 31, 2020.

Note: Rolling return period is defined as equivalent to that from the S&P 500's March 23, 2020, trough to year-end 2020.

Source: Investment Strategy Group, Bloomberg.

Past performance is not indicative of future results.

US Equities: The Investor's Dilemma Intensifies

Few would fault investors for questioning the upside remaining in US equities. Since bottoming in March 2020, the S&P 500 has rallied 70%, the largest advance over a comparable time period in post-WWII history (see Exhibit 113). The resulting 18% total return for the S&P 500 last year builds on more than a decade of double-digit annualized appreciation, which has generated a more than 600% cumulative total return since the financial crisis trough in March 2009.

Exhibit 112: ISG Global Equity Forecasts—Year-End 2021

	2020 YE	End 2021 Central Case Target Range	Implied Upside from End 2020 Levels	Current Dividend Yield	Implied Total Return
S&P 500 (US)	3,756	3,950–4,050	5–8%	1.6%	7–9%
Euro Stoxx 50 (Eurozone)	3,553	3,790–3,900	7–10%	2.5%	9–12%
FTSE 100 (UK)	6,461	6,700–6,900	4–7%	3.3%	7–10%
TOPIX (Japan)	1,805	1,880–1,930	4–7%	2.0%	6–9%
MSCI EM (Emerging Markets)	1,291	1,350–1,410	5–9%	2.0%	7–11%

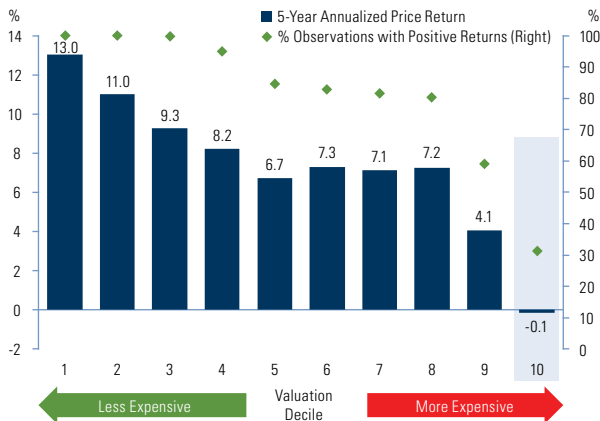
Data as of December 31, 2020.

Source: Investment Strategy Group, Datastream, Bloomberg.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved. Indices are gross of fees and returns can be significantly varied. Please see additional disclosures at the end of this *Outlook*.

Exhibit 114: US Equity Price Returns from Each Valuation Decile

Subsequent returns from high valuation levels have been muted historically.



Data as of December 31, 2020.

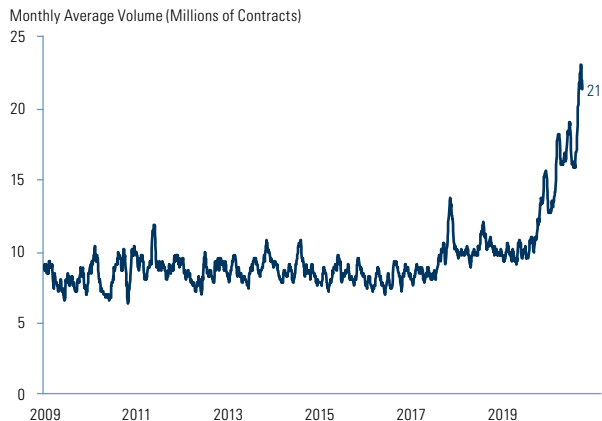
Note: Based on five valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12m Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets ("deciles"). The subsequent realized, annualized 5-year price return is then calculated for each observation and averaged within each decile.

Source: Investment Strategy Group, Bloomberg, Datastream, Robert Shiller.

Past performance is not indicative of future results.

Exhibit 115: Monthly Trading Volume in US Call Options

Call option trading volume more than doubled last year compared with its relatively stable historical average.



Data through December 31, 2020.

Note: The data represents the monthly average of total equity and index call option volume traded per day in the US market.

Source: Investment Strategy Group, Bloomberg.

These extraordinary gains have made US stocks expensive on a historical basis, increasing the penalty for being wrong in one's investment outlook. As seen in Exhibit 114, valuations now stand in their 10th decile, indicating equities have been cheaper at least 90% of the time. Such elevated valuations in past periods have weighed on equity returns over the subsequent five years and lowered the odds of positive outcomes.

This narrower margin of safety arrives at a time when pockets of speculative excess are becoming more visible. As seen in Exhibit 115, the monthly trading volume in bullish call options more than doubled last year compared with its relatively stable historical average. Investors also poured \$167 billion into initial public offerings (IPOs)—the highest total on record—resulting in an average first-day gain for operating company offerings of more than 40%.^{56,57} Such strong initial performance has not been seen since the technology bubble of the late 1990s.⁵⁸ Of equal worry, more than half of last year's IPOs were composed of special purpose acquisition companies (SPACs).⁵⁹ These "blank check" vehicles are created exclusively to acquire or merge with another company, rather than operate as a stand-alone business.⁶⁰ Similar markers of investor

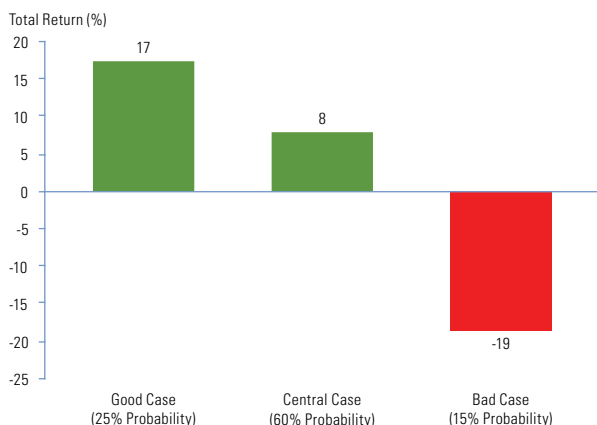
optimism are evident in surveys that show bullish investors vastly outnumbering bearish ones.

It is not surprising, then, that the dilemma confronting investors that we discussed in last year's *Outlook* has only intensified. Put simply, investors face the difficult choice between bearing the risk of loss that comes with staying invested and forgoing further potential upside by exiting the market prematurely. This quandary is made even more challenging by the fact that safer alternatives to equities, such as cash and bonds, are expected to have negative returns after adjusting for inflation.

While we are mindful of the risks, we continue to recommend that clients stay invested in US equities. Our rationale is threefold. First, we expect attractive returns this year, an expectation supported by a variety of fundamental and technical factors. Second, we think equity returns are likely to be superior to those of cash and bonds for the foreseeable future, given our view that a multiyear economic expansion is underway. Finally, we do not believe any of the risks presented in this year's *Outlook* will be disruptive enough to reverse this economic expansion, although they could certainly lead to periodic bouts of market volatility (see Section I, Risks to Our 2021 Outlook).

Exhibit 116: ISG S&P 500 Total Return Forecast—Year-End 2021

Our central case implies an attractive total return for US equities in 2021.



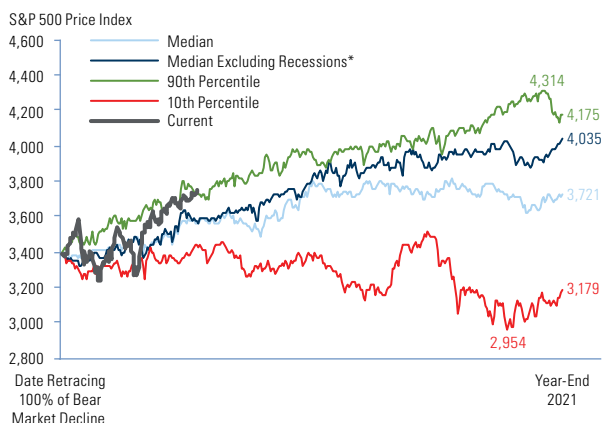
Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved. Indices are gross of fees and returns can be significantly varied. Please see additional disclosures at the end of this *Outlook*.

Exhibit 118: S&P 500 Paths Implied by Past Bear Market Recoveries

Our forecasts are consistent with the path of equities following historical bear market recoveries.



Data through December 31, 2020.

Note: S&P 500 fully retraced its bear market decline on August 18, 2020.

Source: Investment Strategy Group, Bloomberg.

* Excluding periods that ended within 6 months from the start of a recession, given our low 10% recession odds in 2021.

Turning first to the year ahead, our central case implies an attractive high-single-digit total return for US equities (see Exhibit 116). We assign 25% odds to the S&P 500 reaching 4,350, reflecting a faster and more widespread rollout of vaccinations and better-than-expected economic growth (see Exhibit 117). Our downside scenario of 3,000—which receives a 15% probability—reflects the potential for a more deleterious turn in COVID-19 developments and unfriendly regulatory or tax policies. As shown in Exhibit 118, these targets

are consistent with the path of equities following historical bear market recoveries.

Our favorable view on equities is underpinned by an expected 24–27% recovery in corporate profits this year. In turn, upward revisions to consensus earnings should support equities moving forward, as our S&P 500 earnings forecast of \$167–172 per share stands above the current consensus of \$167. Although a portion of this strength comes from recapturing last year's 17% profit decline, the strong rebound

Exhibit 117: ISG S&P 500 Forecast—Year-End 2021

2021 Year-End	Good Case (25%)	Central Case (60%)	Bad Case (15%)
End 2021 S&P 500 Earnings	Op. Earnings \$182 Rep. Earnings \$160 Trend Rep. Earnings \$149	Op. Earnings \$167–172 Rep. Earnings \$146–151 Trend Rep. Earnings \$149	Op. Earnings ≤ \$136 Rep. Earnings ≤ \$103 Trend Rep. Earnings ≤ \$149
S&P 500 Price-to-Trend Reported Earnings	27–29x	25–27x	18–20x
End 2021 S&P 500 Fundamental Valuation Range	4,050–4,400	3,750–4,050	2,750–3,050
End 2021 S&P 500 Price Target (Based on a Combination of Trend and Forward Earnings Estimate)	4,350	3,950–4,050	3,000

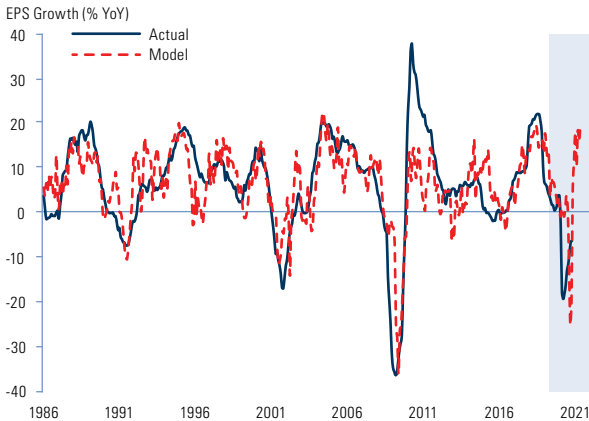
Data as of December 31, 2020.

Source: Investment Strategy Group.

Note: Forecasts are estimated, based on assumptions, are subject to revision and may change as economic and market conditions change. There can be no assurance the forecasts will be achieved. Indices are gross of fees and returns can be significantly varied. Please see additional disclosures at the end of this *Outlook*.

Exhibit 119: S&P 500 Forward 12-Month EPS Growth—Actual vs. Macroeconomic Model

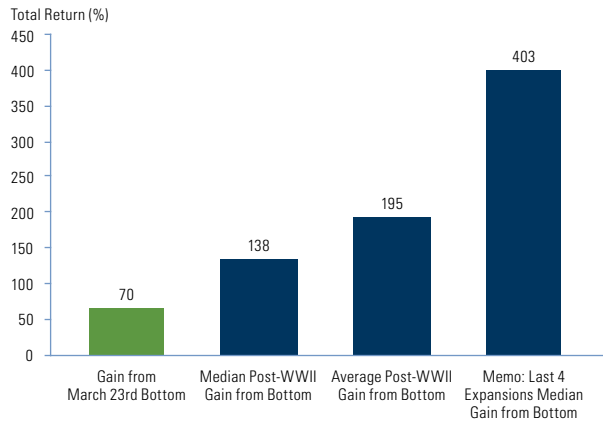
The strong rebound in macroeconomic fundamentals implies double-digit earnings growth in 2021.



Data through 2020, forecast through 2021.
 Note: The forecast EPS growth is based on ISM US manufacturing PMI new orders and US corporate Baa spreads, advanced by 6 months.
 Source: Investment Strategy Group, Datastream, Bloomberg.

Exhibit 121: S&P 500 Total Return from Equity Trough to Beginning of Next Recession

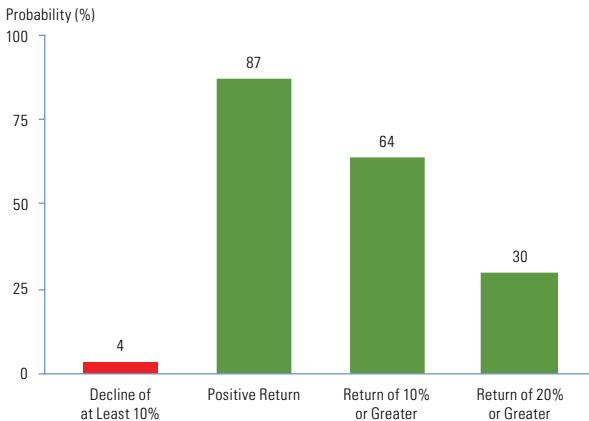
Past economic expansions imply ample upside for stocks despite the 70% rally from last year's March low.



Data as of December 31, 2020.
 Note: Recession start date is defined as the first date of the NBER business cycle peak month.
 Source: Investment Strategy Group, Bloomberg, NBER.

Exhibit 120: Odds of Various S&P 500 One-Year Total Returns During US Economic Expansions

Investors enjoy high odds of a positive return and a greater likelihood of large gains when the economy is expanding.



Data as of December 31, 2020.
 Note: Based on data since 1945.
 Source: Investment Strategy Group, Bloomberg.

in macroeconomic fundamentals seen in recent months would independently imply double-digit earnings growth (see Exhibit 119). Our 5.4% US GDP growth forecast is also consistent with a greater than 20% increase in profits, based on the historical interplay between US GDP and corporate earnings.

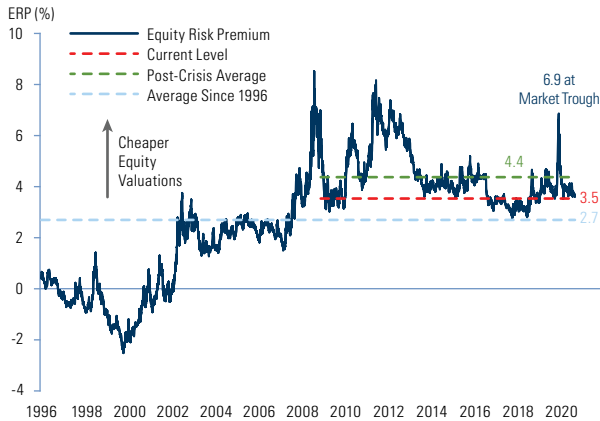
The recommendation to stay invested is further reinforced by equities' performance during past economic expansions. As seen in Exhibit 120, investors have enjoyed 87% odds of a positive return—and a much greater likelihood of large gains than of large losses—in years when the economy is expanding. In fact, nearly three-fourths of historical equity declines in excess of 20% occurred during US economic contractions. With our forecast placing just 10% odds on a recession this year, the economic backdrop in 2021 is favorable for stocks.

We think this economic tailwind is still in its infancy. The US is just emerging from a deep recession that has left large output gaps (e.g., depressed capacity utilization, elevated unemployment rate) that will take a number of years to normalize (see Section II, United States). Past economic expansions have been associated with sizable cumulative equity gains, implying ample upside despite the 70% equity rally from last year's March low (see Exhibit 121). Given these historical analogs and our fundamental views, we expect equities to deliver mid-single-digit annualized returns that will be superior to cash and bonds for the foreseeable future.

Importantly, we do not see current valuations as an impediment to realizing these returns. While S&P 500 valuations stand in the top 10% of their historical distribution, interest rates are even more

Exhibit 122: S&P 500 Implied Equity Risk Premium (ERP)

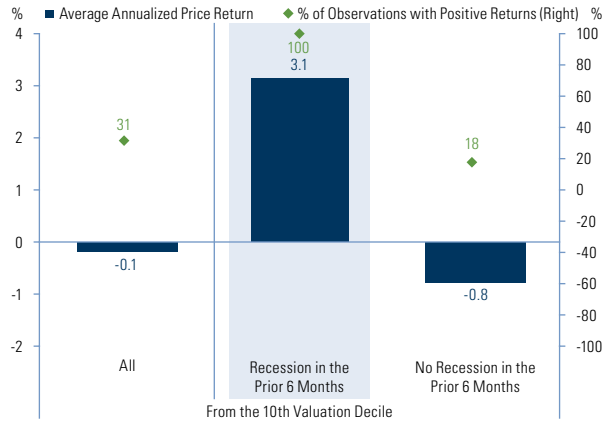
Today's ERP is still attractive and is considerably higher than the negative levels seen during the technology bubble.



Data through December 31, 2020.
 Note: The ERP is estimated as forward 12-month earnings yield less 10-year US Treasury yield.
 Source: Investment Strategy Group, FactSet, Bloomberg.

Exhibit 124: US Equity Price Returns Over the Next Five Years Starting from the 10th Valuation Decile

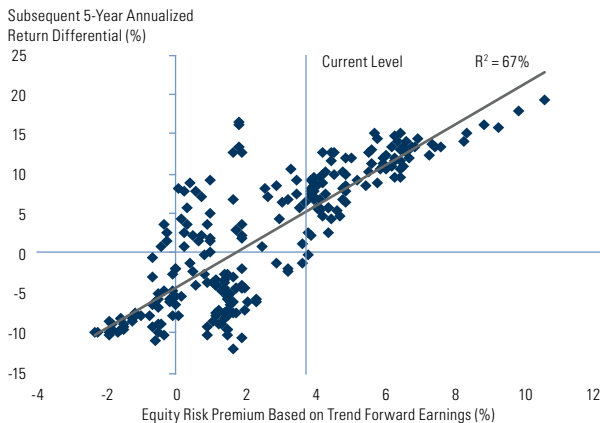
Returns were still attractive from the 10th valuation decile in the years following the end of past recessions.



Data as of December 31, 2020.
 Note: Based on data since 1945. The annualized total return is implied by the historical average annualized price return plus today's lower dividend yield of about 2%.
 Source: Investment Strategy Group, Bloomberg, NBER, Datastream, Robert Shiller.

Exhibit 123: Trend ERP vs. Subsequent 5-Year Return Differential Between Stocks and Bonds

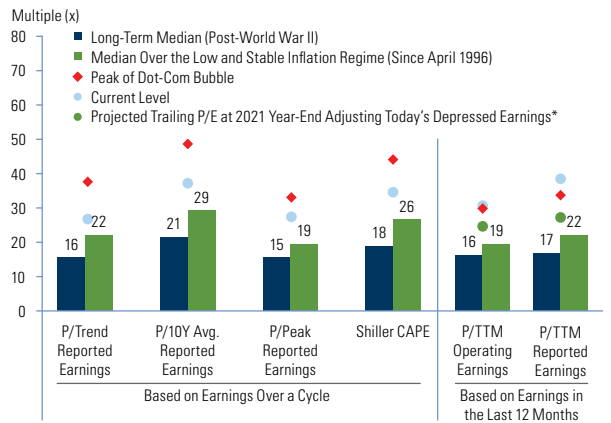
Today's ERP has been associated in the past with stocks significantly outperforming bonds over the next 5 years.



Data as of December 31, 2020.
 Note: The y-axis shows the subsequent 5-year annualized total return differential between the S&P 500 and the 10-year US Treasury.
 Source: Investment Strategy Group, Bloomberg, FactSet.

Exhibit 125: S&P 500 Valuation Multiples

Periods of low and stable inflation have supported valuations that are 35% above the post-WWII median.



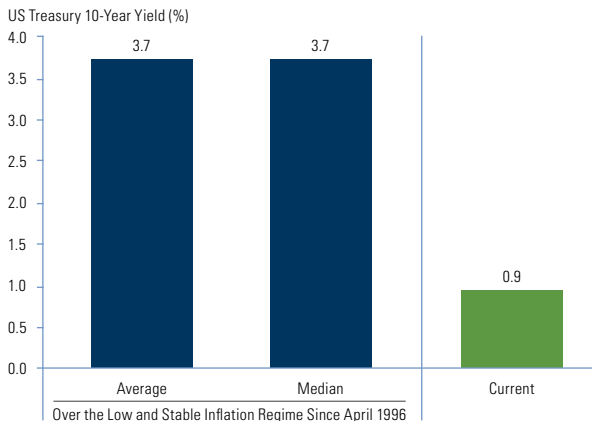
Data as of December 31, 2020.
 Source: Investment Strategy Group, Bloomberg, Robert Shiller, Datastream, S&P Global.
 * Based on the midpoint of ISG's central case forecast range for the S&P 500 at 2021 year-end.

extreme, residing in the bottom 1%. As a result, the implied equity risk premium (ERP)—the difference between the earnings yields and the bond yield—is still an attractive 3.5% and is considerably better than the negative ERP seen during the technology

bubble (see Exhibit 122). In fact, at times when the ERP was similar to today's levels,⁶¹ stocks have outperformed bonds 89% of the time in the following five years, by an annualized average of 6% (see Exhibit 123). Similarly, the S&P 500 has

Exhibit 126: US Treasury 10-Year Yield in the Low and Stable Inflation Regime Since 1996

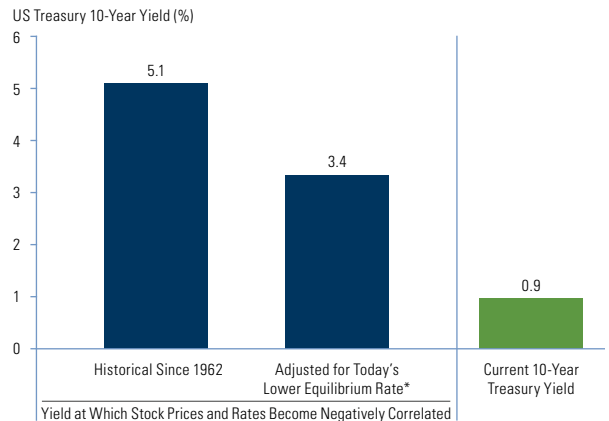
Interest rates today are considerably lower than in past periods of low and stable inflation.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 127: Inflection Point for Negative Correlation Between Stock Prices and Bond Yields

Interest rates still have ample room to increase before they become a material headwind for US equities.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg, Global Financial Data, Haver Analytics.
* Adjusts for the reduction of 1.75 percentage points in the long-run equilibrium nominal rate, in line with the shift in Federal Reserve projections since 2012.

still generated mid-single-digit annualized total returns—even in periods starting with 10th-decile valuations—in the years following the end of past recessions (see Exhibit 124). This stands in sharp contrast to the flat returns seen when a recession unfolded after the start of the five-year window.

Valuations must also be considered in the context of the prevailing macroeconomic environment. Because periods of low and stable inflation—such as the one the US has been in since 1996—give investors greater confidence in future cash flows, they have supported valuations that are 35% above the post-WWII median (see Exhibit 125). While current valuations stand above even those levels, interest rates—again—are considerably lower than in similar periods of the past (see Exhibit 126). All else being equal, a lower discount rate applied to future cash flows increases their value.

Of course, the impact of interest rates on valuations cuts both ways, with many investors increasingly worried about higher inflation leading to a hasty backup in interest rates. While we do expect inflation to temporarily breach the FOMC's 2% target this year, we think this largely reflects depressed base effects from last year. In a broader sense, the pandemic has been a disinflationary shock that meant extraordinary fiscal

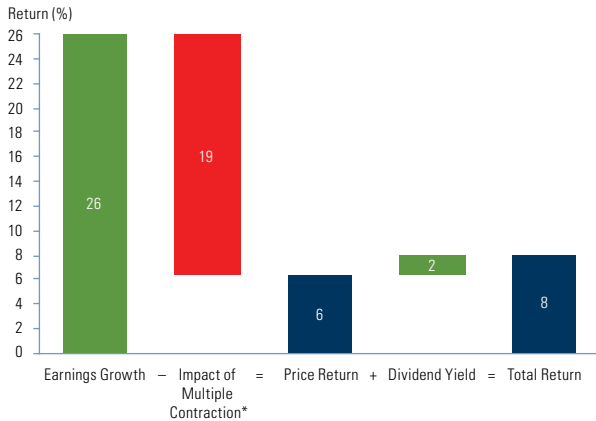
and monetary responses were required to arrest the collapse in economic activity. The negative impacts of this shock on unemployment and productive capacity will continue to exert downward pressure on inflation for some time.

Although a disorderly move in either inflation or interest rates is unlikely, we do anticipate that both will normalize as the economy recovers. Yet interest rates still have ample room to increase before they become a material headwind for US equities, provided they are rising in response to improving real growth (see Exhibit 127). This is because rates that are rising in response to better growth tend to benefit earnings sufficiently to overcome the downward pressure they place on valuation multiples. Our central case equity view for 2021 incorporates this dynamic, with strong earnings growth more than offsetting the lower P/E multiple we expect (see Exhibit 128). It is also

The S&P 500 has still generated mid-single-digit annualized total returns—even in periods starting with 10th-decile valuations—in the years following the end of past recessions.

Exhibit 128: Decomposition of ISG Central Case S&P 500 Return at Year-End 2021

We expect strong earnings growth to more than offset a lower P/E multiple in 2021.



Data as of December 31, 2020.

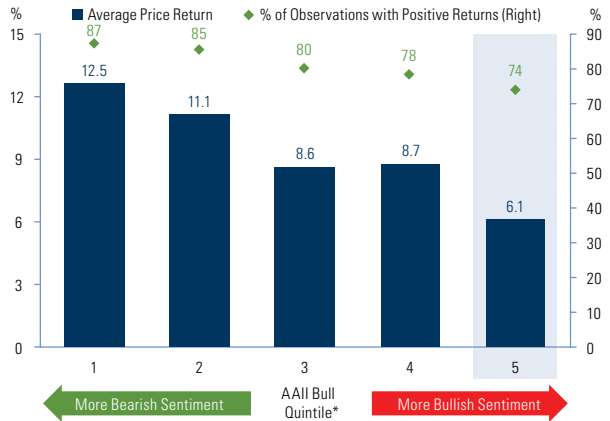
Note: The returns and decomposition are based on the midpoint of ISG's central case forecast range.

Source: Investment Strategy Group, Bloomberg.

* Includes the compounding effect between earnings and multiples. Earnings growth and impact of multiple contraction do not add up to the 6% price return due to rounding.

Exhibit 130: S&P 500 Yearly Price Returns from Each AAIL Sentiment Quintile

Even extremely bullish sentiment has not precluded attractive equity returns over the next year.



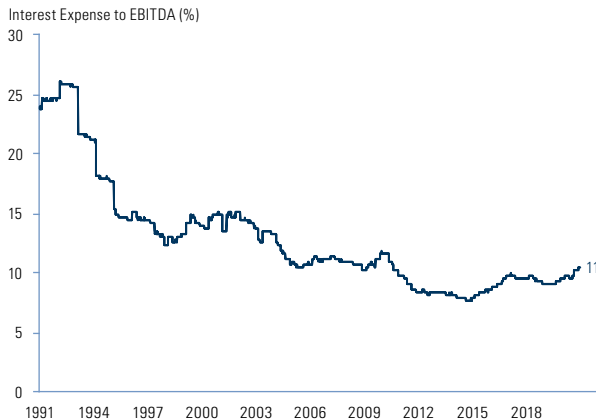
Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg, American Association of Individual Investors (AAIL).

* Quintiles are based on AAIL bullish sentiment 4-week average and determined over expanding windows since 1990.

Exhibit 129: S&P 500 Interest Coverage

Interest expense as a share of profits stands near multi-decade lows.

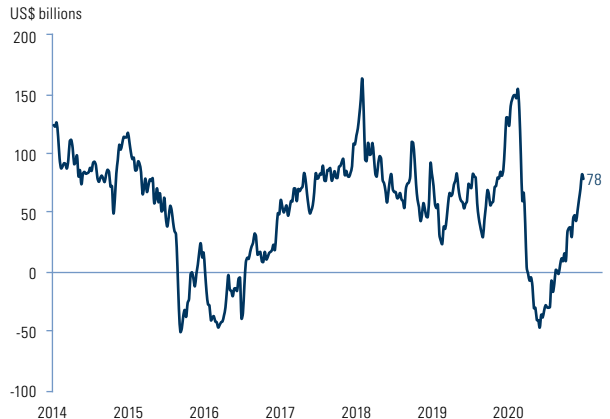


Data through December 31, 2020.

Source: Investment Strategy Group, FactSet.

Exhibit 131: Non-Dealers' Position in US Equity Index Futures

Positions in US equity index futures remain well below the peaks of recent years, implying room for further purchases.



Data through December 31, 2020.

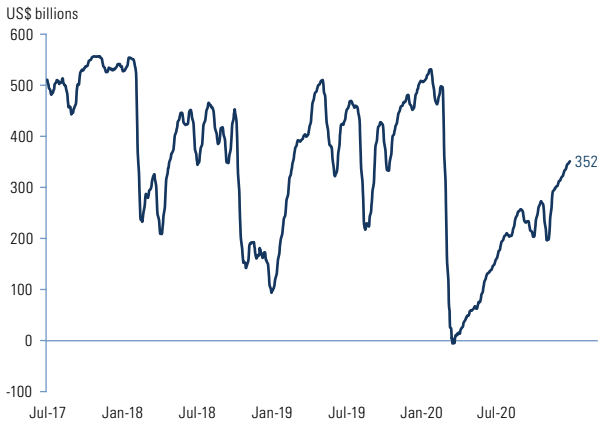
Source: Investment Strategy Group, US Commodity Futures Trading Commission (CFTC).

worth remembering that 92% of S&P 500 debt is fixed-rate debt, and only 14% matures over the next two years.⁶² Thus, it would take a number of years for higher rates to negatively impact aggregate S&P 500 interest expense, particularly because this expense as a share of profits stands near multi-decade lows (see Exhibit 129).

While the pockets of speculative excess we discussed earlier are also a potential risk, there are several important caveats regarding market sentiment. Like valuations, extreme sentiment has historically been a much better buy signal than a sell signal (see Exhibit 130). This is because fearful sentiment coincides with elevated risk premiums

Exhibit 132: Estimated Global Equity Position of Systematic Macro

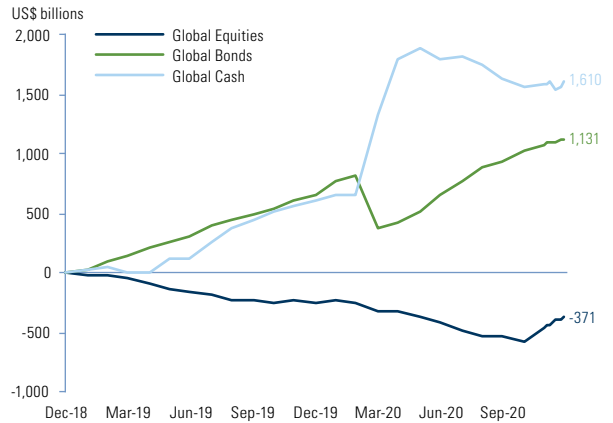
Systematic macro investors still have room to increase their purchases.



Data through December 31, 2020.
 Note: Systematic macro community includes CTA/trend-followers, risk-parity/volatility-weighted and volatility-control investors.
 Source: Investment Strategy Group, Goldman Sachs Global Markets Division.

Exhibit 134: Cumulative Global Fund Flows Since Year-End 2018

Investors' preference for cash and bonds in recent years provides capacity for them to rebalance into equities.



Data through December 31, 2020.
 Source: Investment Strategy Group, Goldman Sachs Global Investment Research, EPFR Global.

Exhibit 133: Household Ownership of US Equities

Current ownership levels are significantly below those seen at the height of the technology bubble.



Data through Q3 2020.
 Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Federal Reserve Board.

that boost expected returns, whereas bullish sentiment often reflects improving fundamentals that can support prices as long as they persist.

It is also important to differentiate between what investors say and what they actually do. While some might argue that today's bullish sentiment surveys imply there is no one left to buy, broader positioning metrics suggest ample scope

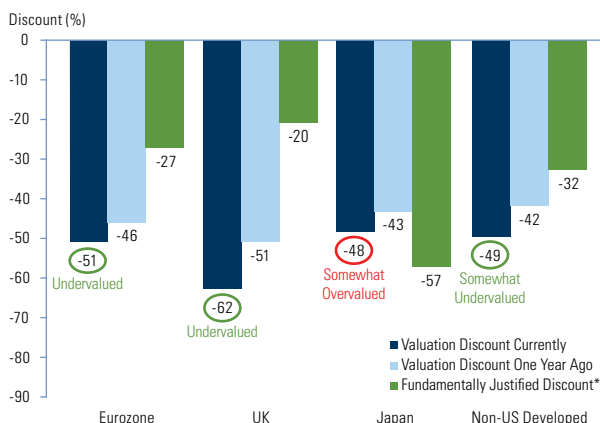
for further purchases (see Exhibits 131 and 132). The household ownership of US equities tells a similar tale, with the current reading significantly below the frothy levels seen at the height of the technology bubble (see Exhibit 133). At the same time, media headlines that focus on record equity inflows since November 2020 conceal the significantly larger and more persistent outflows that preceded them (see Exhibit 134). The lopsided nature of the flows since 2019—evident in the \$3.1 trillion difference between equity outflows and cash/bond inflows—provides plenty of capacity for investors to rebalance into equities.

Outside of sentiment, investors also worry about tax increases should the Democrats sweep the Georgia runoff elections. However, that scenario would give the Democrats just a one-vote majority in the Senate including the vice president. Such a thin margin is likely insufficient to pass any aggressive tax hikes, especially with some moderate Democrats willing to break ranks on taxes. At the same time, a Democratic sweep would increase the odds of additional stimulus—particularly state and local aid. This is the more important implication, in our view, as additional aid would help states expedite the vaccine rollout, the success of which is vital to the bullish market narrative.

In short, we do not see any of the risks presented in this year's *Outlook* being disruptive enough to reverse the ongoing economic expansion, although

Exhibit 135: Non-US Developed Markets' Equity Valuation Discount to the US

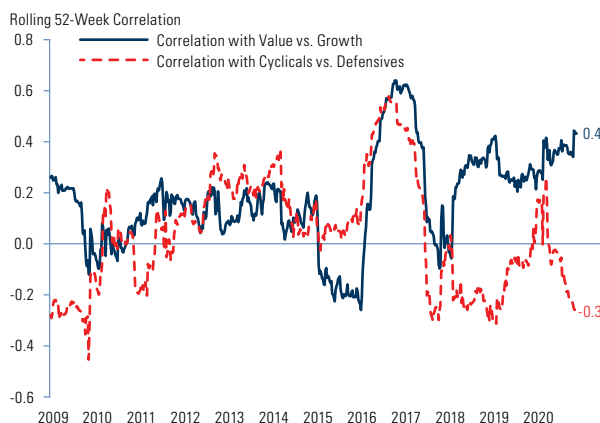
The valuation gap between the US and other developed markets has widened further from one year ago.



Data as of December 2020.
Source: Investment Strategy Group, Datastream, Goldman Sachs Global Investment Research.
* Based on Earnings Growth and Return on Equity.

Exhibit 137: Correlations of Non-US Developed Markets' Performance Relative to US Equities

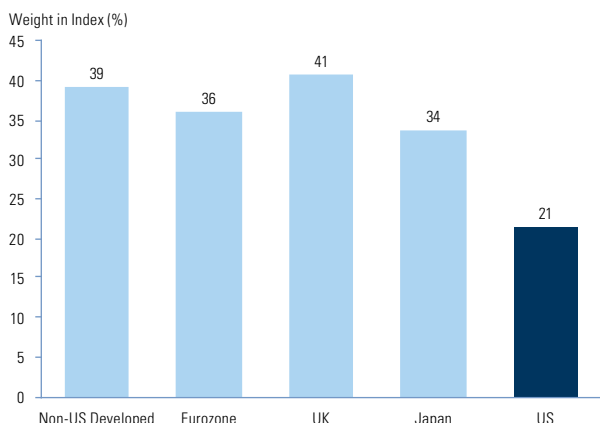
The relative performance of non-US developed markets' equities had low correlations with value vs. growth and cyclical vs. defensives in the past.



Data through December 31, 2020.
Source: Investment Strategy Group, Datastream.

Exhibit 136: Equity Index Weight in Sectors That Are Both Value-Oriented and Cyclical

Sectors that are both value-oriented and cyclical represent a larger share of non-US developed markets than of the US.



Data as of December 31, 2020.
Note: Sectors that are both value-oriented and cyclical include financials, industrials and materials. MSCI EAFE is used as a proxy for non-US developed markets.
Source: Investment Strategy Group, Bloomberg.

Non-US Developed Market Equities: Narrowing the Gap

In our 2020 *Outlook*, we considered whether equity investors should rotate out of the US and into other developed markets given their more attractive valuations. Our conclusion was that the difference in their valuations did not warrant a rotation, as it was only modestly larger than was justified by the lower growth and profitability of these non-US companies.

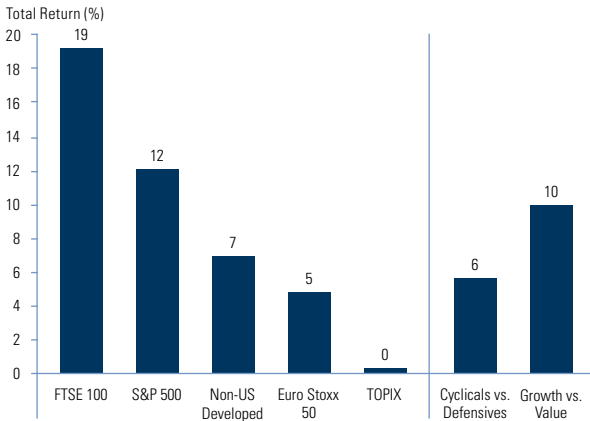
But a year later, the investment case for a rotation is back in contention. As seen in Exhibit 135, the valuation gap between the US and other developed markets has widened further after another year of non-US underperformance. At the same time, there are signs that this trend may be reversing, as other developed market equities actually outperformed in the last two months of the year. While there have been a number of false dawns in relative returns, the drivers of that outperformance—namely, the combination of cyclical sectors and value-oriented sectors outperforming—align well with the sector mix of other developed markets (see Exhibit 136). Additionally, the earnings of the largest developed markets outside the US are particularly sensitive to faster global growth, which we expect in 2021.

Still, we are not yet recommending that clients tactically rotate out of the US and into other

they could be the source of a market pullback. At the same time, the key pillars of the equity advance so far—ongoing global monetary stimulus, positive economic growth, recovering corporate earnings, and progress on vaccines and treatments—continue to support our recommendation to stay invested.

Exhibit 138: Total Returns in 2016

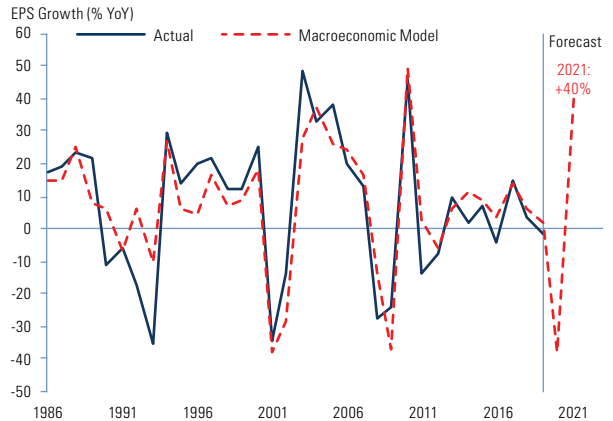
Non-US developed markets underperformed US equities in 2016 despite the outperformance of value and cyclicals.



Data as of December 31, 2016.
Source: Investment Strategy Group, Datastream.

Exhibit 139: Eurozone Earnings Growth—Actual vs. Macroeconomic Model

We expect the Eurozone's earnings to recover strongly in 2021, rising 35–45%.



Data through 2019, forecast through 2021.
Note: The macroeconomic model is based on sales-weighted GDP growth and change in average Brent crude oil price.
Source: Investment Strategy Group, Worldscope, I/B/E/S, Datastream.

developed markets. While the undervaluation relative to fundamentals is intriguing, the durability of last quarter's outperformance is more suspect. Consider that the relative performance of other developed markets has exhibited unstable correlations with value versus growth and cyclicals versus defensives historically (see Exhibit 137). As a result, the continued value leadership we expect is not a reliable driver of relative outperformance for other developed markets. The experience in 2016—the last year in which value outperformed growth and cyclicals outperformed defensives—corroborates this point, as non-US developed markets actually underperformed US equities (see Exhibit 138).

For 2021 as a whole, we expect very similar total returns for both US equities and non-US developed market equities. As a result, we do not recommend rotating out of US equities at this time.

Eurozone Equities: A (Slow) Road to Recovery

A modest 2.6% loss for Eurozone equities in 2020 belied significant volatility. Although it seems like a distant memory, Eurozone equities were actually up 3.5% early last year prior to the pandemic, but suffered a blistering 38% drawdown thereafter. The subsequent 52% rally from that March low

was driven by a recovery in valuations, as the region's earnings are estimated to have declined by close to 40% last year.

We expect earnings to recover strongly this year, rising 35–45% (see Exhibit 139). Yet because the significant increase in the forward-looking P/E ratio last year reflected investors' expectations for such a rebound, we expect P/E multiples to compress as earnings normalize. Combining this declining P/E multiple with our earnings forecast and assumed 2.5% dividend yield, our base case calls for a high-single-digit to low-double-digit total return this year (see Exhibit 112).

As discussed in Section I of this report, we are currently overweight Eurozone banks. Eurozone banks rallied sharply in the final quarter of last year following positive vaccine news, gaining 35%. Even so, the sector continues to trade at a double-digit discount to the market and substantially below its pre-COVID-19 relative valuation level. We expect this gap to narrow as the sector's loan loss provisions normalize, its return on equity recovers and dividend payments resume over the course of this year.

UK Equities: Laggards No Longer

The FTSE 100 upheld a multiyear tradition of underperforming global peers again last year. A

Exhibit 140: Cumulative Net Purchases of Japanese Equities by Foreign Investors

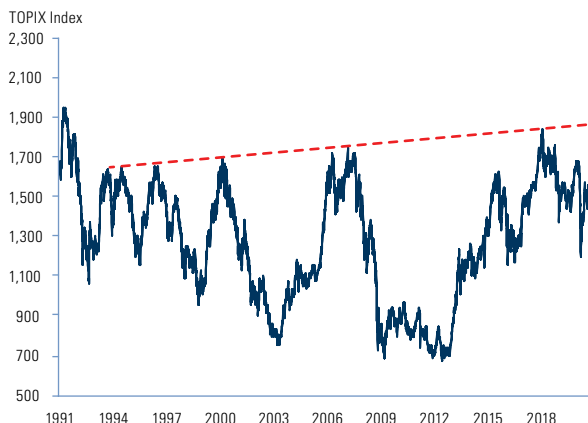
Foreign investors have been on a relentless exodus from Japan since 2016.



Data through December 12, 2020.
Source: Investment Strategy Group, Ministry of Finance Japan.

Exhibit 141: TOPIX Price Index

Japan's equity index is approaching a trend line that has capped its equity advances for nearly three decades.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

particularly large contraction in the UK economy—reflecting both the pandemic and the lingering uncertainty of Brexit—conspired with a high proportion of value stocks in the FTSE 100 to push the index 11% lower last year. This represented the worst return among all regional equity indices in developed markets in 2020.

Old traditions are hard to break, but we think the UK is in a better position to leave its laggard status behind this year. The synchronized acceleration in global economic activity, and the gradual rise in interest rates that we expect, should benefit UK equities' value-tilted sector mix. Stronger global growth should also benefit the international earnings of FTSE 100 firms, which happen to represent the bulk of these firms' business mix. In addition, the index's sizable financial sector exposure should benefit from the resumption of dividend payments that were suspended during the pandemic, as income-oriented investors are enticed back into stocks. Finally, the recent agreement in principle on free trade between the UK and EU removes the cliff-edge risk that existed for this year.

Against this backdrop, our base case calls for a high-single-digit to low-double-digit total return this year (see Exhibit 112), reflecting a strong rebound in earnings, a decline in the P/E multiple as earnings normalize and the FTSE's 3.3% dividend yield.

Japanese Equities: Cyclical Beneficiaries

Investors have been on a relentless exodus from Japan since 2016. As seen in Exhibit 140, net selling by foreign investors—who tend to be marginal buyers of Japanese equities—has completely reversed the inflows that accrued in the four years following the launch of former Prime Minister Shinzo Abe's "Abenomics" policies in 2012. Our views have been aligned with this consensus, as we have not recommended a tactical allocation to Japan since 2016.

Even when we assess Japan today across the four pillars of our equity framework—valuation, fundamentals, sentiment/positioning and technical analysis—it does not emerge as a strong tactical overweight. Yet given the broad-based apathy of foreign investors toward Japan in recent years (ourselves included), we cannot help but recall a famous Mark Twain quip, "Whenever you find that you are on the side of the majority, it is time to reform—(or pause and reflect)."⁶³

To be sure, Japan is well positioned to benefit from the recovery in global growth that we expect, given that cyclical sectors account for 77% of Japan's market cap. Moreover, there are signs that sentiment and positioning may be reversing their multiyear downtrends. Sell-side analysts' ratings of Japan's companies no longer aggregate to a net sell. At the same time, speculative positioning—a

gauge of hedge funds' exposure to Japan—recently turned net long.

Even so, some notable headwinds to outperformance remain. Japan's valuations are actually somewhat high relative to their fundamentals, suggesting better value may reside in other countries. For example, Japanese companies trade at a forward P/E ratio that is 1.2 times their expected growth, while the companies of other non-US developed markets trade at 1.1 times. Japan also faces notable technical resistance, as it trades within 6% of a trend line that has capped its equity advances for nearly three decades (see Exhibit 141).

Our base case price return for 2021 implies Japan will reach this trend line. Whether Japanese equities can surmount it, however, depends on better-than-expected fundamental developments, perhaps arising from the policies of Prime Minister Suga. For now, our high-single-digit total return forecast for Japan is not high enough to entice us back into this market (see Exhibit 112).

Emerging Market Equities: Smoother Sailing

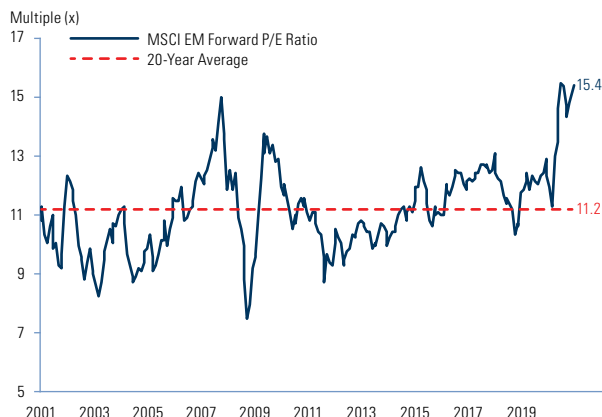
To say that investors had to navigate turbulent waters in EM equities last year is an understatement. As the coronavirus capsized the global economy, the MSCI EM Index sank 34% from peak to trough—a decline that has been exceeded only 1% of the time historically. A swift and aggressive response from global policymakers, however, enabled EM equities to surf the tidal wave of stimulus. All told, EM equities advanced a remarkable 74% from the pandemic lows, finishing last year with an 18% gain.

In the year ahead, we expect calmer waters for EM investors based on three factors. First, all 27 MSCI EM countries are forecast to have positive real GDP growth this year, the first such synchronized recovery since 2007. Second, EM exports should rebound as the global economy recovers, providing a boost to EM GDP and corporate revenue growth. Finally, commodity and memory chip prices have scope to rise on the back of today's supply/demand imbalances, further supporting EM economies and profits.

Against this backdrop, EM earnings are likely to rebound sharply after an 11% contraction last

Exhibit 142: MSCI EM Price-to-Forward Earnings Ratio

The swift rally from last year's lows has pushed EM equity valuations close to 20-year highs.



Data through December 2020.

Source: Investment Strategy Group, FactSet.

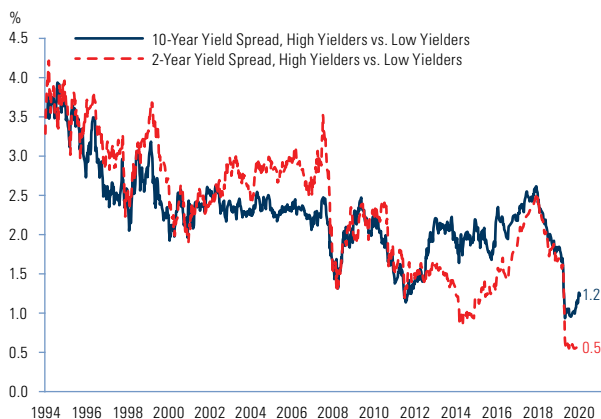
year. Our forecast points toward a 30% rise in earnings in 2021 and a 9% gain in 2022, driven by a recovery in sales along with higher profit margins. We also anticipate that EM forward multiples will increase modestly this year, as they have 75% of the time historically when US 10-year interest rates have risen and global economic policy uncertainty has fallen—both of which we expect this year. Combined with EM equities' 2% dividend yield, these elements imply a high-single-digit to low-double-digit total return this year (see Exhibit 112).

Of course, there are still risks that could rock the boat in 2021. The infrastructure of many EM countries makes them ill equipped to properly handle and administer vaccines, which could allow the pandemic to persist for much longer. Meanwhile, Chinese equities—which represent 39% of MSCI EM market cap—face several headwinds, including lingering US-China tensions, fading stimulus and tighter regulation of technology companies. Finally, the swift rally from the lows has pushed EM equity valuations close to 20-year highs (see Exhibit 142), increasing the magnitude of any potential pullback.

Given these crosscurrents, we recommend a tactically neutral allocation to EM equities at this time, but continue to survey the EM landscape closely in search of attractive opportunities.

Exhibit 143: Developed Market Interest Rate Differentials

Developed market yield differentials have narrowed significantly.



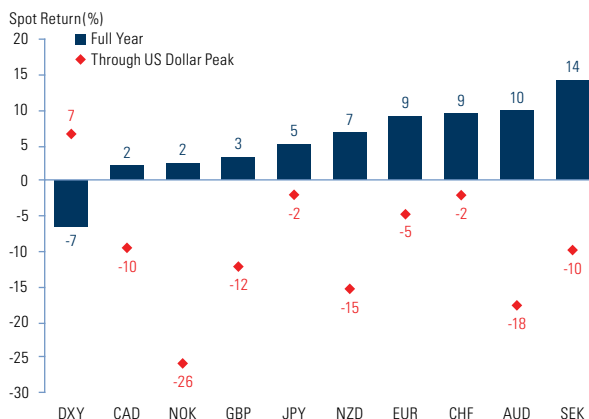
Data through December 31, 2020.

Note: Includes the US, the UK, Germany, Japan, Canada, Australia and Switzerland. Spread is calculated between the average of the three highest-yielding currencies and the average of the three lowest-yielding currencies. Since 2013 and 2015 the US dollar ranks among the highest-yielding currencies based on 10-year and 2-year yields respectively.

Source: Investment Strategy Group, Bloomberg.

Exhibit 144: Intra-Year Volatility in G-10 Currencies in 2020

Last year's mostly positive spot returns belied significant volatility during the year.



Data as of December 31, 2020.

Note: US dollar peaked on March 20, 2020.

Source: Investment Strategy Group, Bloomberg.

2021 Global Currency Outlook

While the US dollar fell 7% last year, its descent was even steeper considering how it started the year. The greenback initially benefited from a bid for safe haven assets during the early stages of the pandemic, pushing the currency to a 7% gain for the year. Demand grew so large, in fact, that the Federal Reserve had to extend swap lines to foreign central banks to ease their US dollar shortages. But a series of Federal Reserve rate cuts made the greenback less attractive to foreign investors by eroding its yield advantage relative to other currencies (see Exhibit 143). These narrower yield differentials—combined with growing confidence in the recovery—resulted in the dollar falling 13% from its peak and reversing

its strength across a variety of currencies (see Exhibit 144).

That reversal in the US dollar's performance was notable for both its breadth and its magnitude. As seen in Exhibit 145, the reserve currency weakened against every developed market peer last year, the first clean sweep since 2017. European currencies were particularly strong, with the euro, Swiss franc and Swedish krona among 2020's best performers. Indeed, the euro—the dollar's most heavily traded partner—finished the year near its strongest level in more than two years.

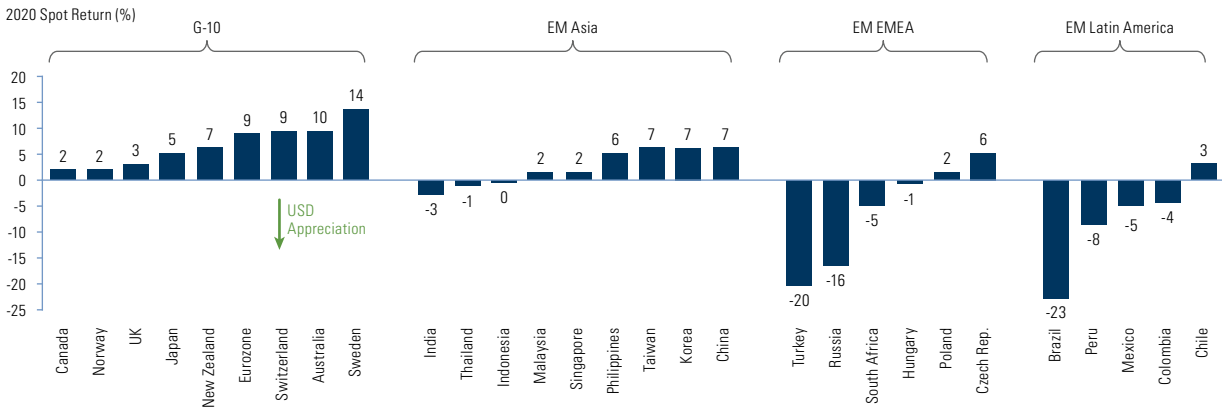
EM currency performance was less uniform. While several Asian and European EM currencies bested the dollar, the Russian ruble, Turkish lira and Brazilian real each posted double-digit losses. Volatile commodity prices, differing approaches to containing the pandemic and several idiosyncratic factors all contributed to these disparate returns, reminding investors that growth and monetary policy are not the only determinants of exchange rates.

In our central case forecast, the euro, yen and EM currencies enjoy a modest, single-digit gain versus the US dollar. While the expected decline in the US dollar is small, we continue to

In our central case forecast, the euro, yen and EM currencies enjoy a modest, single-digit gain versus the US dollar. As a result, we recommend clients fully hedge their offshore fixed income.

Exhibit 145: 2020 Currency Moves (vs. US Dollar)

The US dollar weakened against most other major currencies in 2020.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

recommend that clients hedge a portion of their currency exposure. Specifically, we recommend clients fully hedge their offshore fixed income. In addition, US and non-US client investors should hedge 50% and 70%, respectively, of their non-local developed market equity holdings.

US Dollar

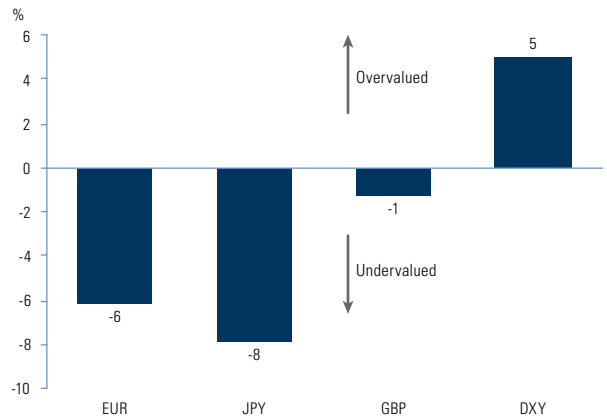
Following two consecutive years of US dollar strength, 2020 marked a setback for the world's reserve currency, with its full-year performance ranking as its second-worst in the post-GFC period. After the currency's decade of dominance, some investors are even asking whether the dollar's best days are behind it.

To be sure, the US dollar faces several headwinds in the year ahead. Even after tumbling 13% from a three-year peak set in March, the dollar remains overvalued (see Exhibit 146). As a result, a repeat of last year's decline would merely return the dollar closer to fair value. At the same time, the dollar's narrower yield advantage relative to other developed market currencies—reflecting the Federal Reserve's shift to the zero bound on policy rates—makes the dollar less enticing to foreign investors.

The dollar also faces downward pressure from the shifts of non-US investors. As seen in Exhibit 147, cheap hedging costs are incentivizing foreign investors to reduce the currency risk of their US investments. The desire of foreign central banks to modestly diversify their reserve holdings away from the US dollar is another potential weight.

Exhibit 146: Fair Value Misalignments Across Developed Market Currencies

The US dollar remains overvalued even after it declined last year.



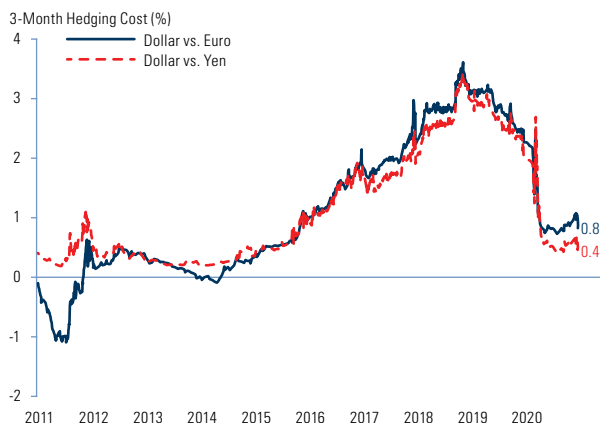
Data as of December 31, 2020.
Note: Misalignment is a simple average of fair value misalignment based on GSDEER, GSFEER, CPI-based PPP and OECD's GDP deflator-based PPP.
Source: Investment Strategy Group, Bloomberg, Goldman Sachs Global Investment Research.

Although there is little evidence of any material shifts, the euro has emerged from the pandemic as a stronger contender for a portion of reserve holdings. This reflects lower risk of economic and political fragmentation within the bloc after the EU passed a joint recovery fund, as well as the recent trade agreement between the EU and the UK.

To be clear, we have long argued and continue to believe there is no credible threat to the dollar's

Exhibit 147: Hedging Costs of Dollar Assets for Eurozone and Japanese Residents

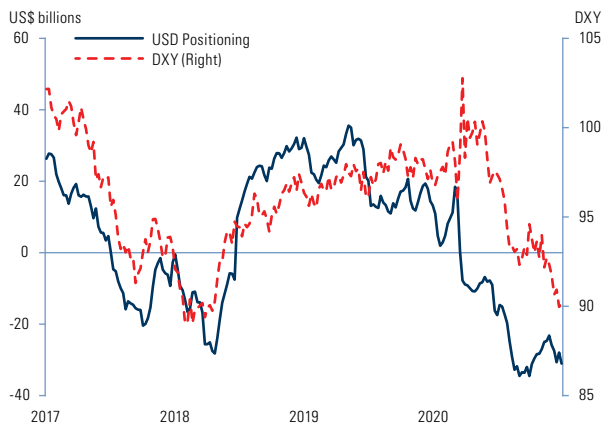
The current cost of hedging dollar exposure for European and Japanese investors is low compared to recent years.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 148: US Dollar Non-Commercial Positioning and Performance

Investors are already positioned for additional dollar weakness, lowering the hurdle for dollar-friendly surprises.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg, US Commodity Futures Trading Commission (CFTC).

position as the dominant global reserve currency. We also note that the risks to the dollar are not completely one-sided. After all, much of last year's dollar weakness reflected investor reaction to a sharp easing of US monetary policy. A repeat is unlikely, as the federal funds rate is already at its effective lower bound and the Federal Reserve remains dismissive of introducing negative policy rates. At the same time, investors are already positioned for additional dollar weakness (see Exhibit 148), lowering the hurdle for dollar-friendly surprises. One such surprise could be stronger relative economic growth in the US. Indeed, we expect the US's growth to outpace that of developed market peers in the Eurozone and Japan, as the global economy snaps back from the COVID-19 economic crisis.

The euro enjoyed a banner year in 2020. The currency snapped a two-year losing streak relative to the US dollar, outperformed several of its European peers and posted its second-strongest annual gain since the GFC.

Given these crosscurrents, we expect only a modest, single-digit depreciation in the dollar this year.

Euro

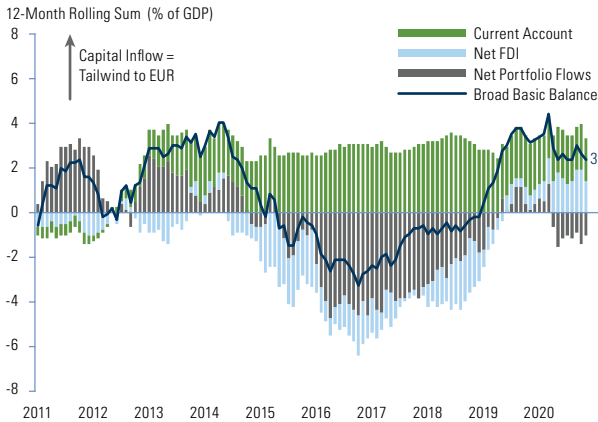
The euro enjoyed a banner year in 2020. The currency snapped a two-year losing streak relative to the US dollar, outperformed several of its European peers and posted its second-strongest annual gain since the global financial crisis. In fact, the euro's sizable 9% increase last year masked an even larger 14% gain from its intra-year low.

A critical driver of the euro's strength was the approval of an EU-wide recovery package. Although this falls short of the fiscal union enjoyed by the US, it was nonetheless an important step toward fiscal integration by European leaders. In the eyes of the market, this solidarity trumped the political tensions arising among Eurozone countries in response to the pandemic, evident in the euro's ending the year at a nearly two-year high.

Unfortunately for euro bulls, there are several reasons that the bar for further upside is set higher in 2021. Investors are now close to their benchmark weight in the euro, a sharp contrast to the tailwind that arose from their sizable underweight position

Exhibit 149: Eurozone Broad Basic Balance

The Eurozone's persistent broad basic balance surplus should provide a tailwind for the currency.



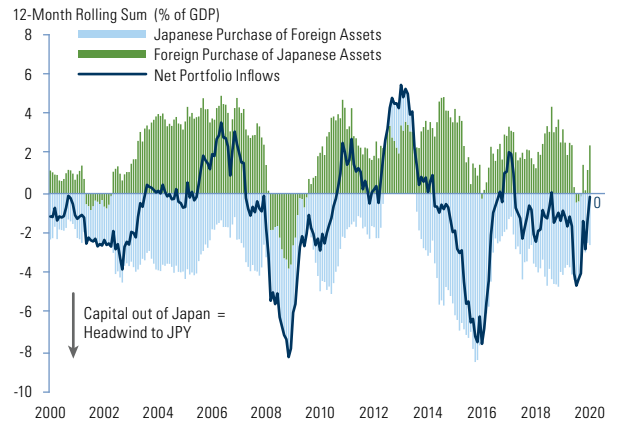
Data through November 2020.

Note: The broad basic balance reflects the sum of the current account, net direct investment and net portfolio flows.

Source: Investment Strategy Group, Haver Analytics.

Exhibit 150: Japanese Net Portfolio Flows

Japanese domestic portfolio outflows are slowing.



Data through October 2020.

Source: Investment Strategy Group, Haver Analytics.

at the start of last year. Moreover, the upward pressure on the euro from narrowing interest rate differentials with its trading partners' currencies has largely run its course as global policy rates have converged. This is particularly true now that the ECB and other major developed market central banks are unlikely to raise policy rates for several years. There is also the risk that the nascent Eurozone recovery will falter, particularly as virus containment measures continue to restrict economic activity.

Still, we take some comfort from the fact that currencies are always traded on a relative basis and the challenges presented by the pandemic are not specific to Europe. With that in mind, the Eurozone's broad basic balance surplus,⁶⁴ persistently around 3% of GDP (see Exhibit 149), should provide a tailwind for the currency, as should its modest undervaluation.

Given this balance of risks, we see further euro appreciation limited to a modest, single-digit return relative to the US dollar in 2021. Accordingly, we removed our long euro position relative to the Swiss franc and the US dollar last year.

Yen

The yen's winning streak continued last year despite the pandemic. Not only did the yen register its fifth consecutive year of gains versus the US dollar in 2020, but its 5% increase ranks among the largest annual gains in the past decade. That

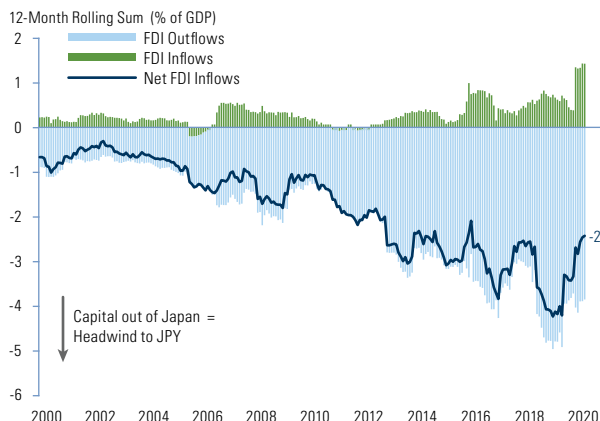
the yen had to reverse a 3% intra-year loss in 2020 to maintain this streak is a further testament to the currency's resilience.

While no hot streak can last forever, we believe several factors support further modest yen strength in the year ahead. Consider that Japanese investors are selling fewer yen to fund higher-yielding offshore investments because the convergence of major central bank policy rates toward the BOJ is narrowing global interest rate differentials. For instance, Japan's Government Pension Investment Fund—which manages the world's largest pension pool—is now closer to meeting the higher international equity and bond targets it announced several years ago. In turn, the capital outflows—and the downward pressure they exerted on the yen—have slowed (see Exhibit 150). There is also scope for further yen upside, as the currency is still 20% below where it stood in 2012 at the onset of Abenomics and remains undervalued despite years of appreciation.

Of course, there are some potential obstacles to further appreciation. While the capital outflows that exert downward pressure on the yen have slowed, they have not disappeared. For example, the Japanese corporations that slowed their cross-border investments last year may reestablish their strategy of selling yen to invest in foreign operations with better growth prospects once the more durable recovery we expect this year takes hold (see Exhibit 151).

Exhibit 151: Japanese Net Foreign Direct Investment

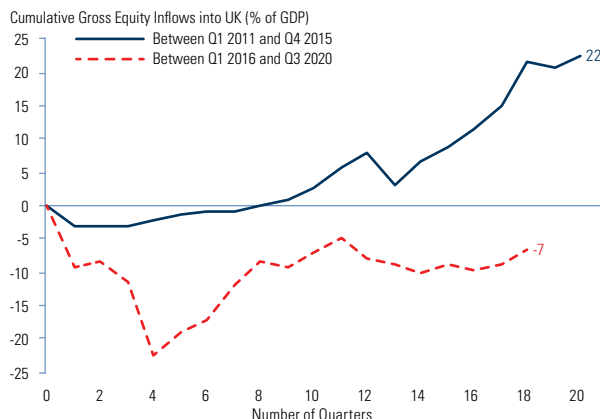
Japanese direct investment abroad may pick up in 2021 after slowing last year.



Data through October 2020.
Source: Investment Strategy Group, Haver Analytics.

Exhibit 152: Foreign Purchases of UK Equities

Foreigners have been net sellers of UK equities since 2016.



Data through Q3 2020.
Source: Investment Strategy Group, Haver Analytics, Office for National Statistics.

Against this backdrop, we see further yen appreciation limited to a modest, single-digit gain relative to the US dollar. As a result, we removed our short yen tactical tilt relative to the dollar last year.

Pound

As has been the case every year since the 2016 EU referendum, developments around Brexit represented the main driver of the pound's performance last year. The currency's 3% appreciation versus the dollar and 5% decline relative to the euro reflected both the receding risk of a "no-deal" departure from the EU and the realization that the UK economy's growth potential had likely been reduced as a consequence of Brexit.

As was true last year, we expect the risks to the pound will be two-sided and leave the currency range-bound in 2021. On the one hand, investor sentiment in the pound should be bolstered by the fact that Prime Minister Boris Johnson delivered

on his promise to take the UK out of the EU and secure a new free trade agreement—albeit more narrowly than originally envisioned. In turn, the UK averting a disorderly no-deal Brexit could generate inflows that would benefit the currency, particularly because years of political uncertainty have caused foreigners to be underweight pound-denominated assets (see Exhibit 152).

On the other hand, the UK faces domestic fissures even after Brexit. Prime Minister Johnson's support for leaving the EU—in addition to his uneven coronavirus response—has eroded confidence among key constituencies in Scotland. In fact, support for Scottish independence is growing, with most Scots now polling consistently in favor of leaving the UK. This represents a meaningful shift from 2014, when voters defeated a referendum on Scottish independence by a 55% to 45% margin. Meanwhile, the conservative majority in London has promised to reject demands for a second Scottish independence referendum, setting the table for fresh conflicts in Westminster.

Against this backdrop of difficult-to-handicap political developments, we are tactically neutral on the pound.

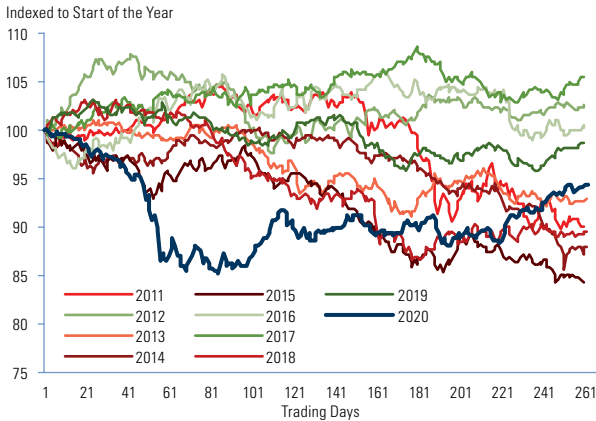
Emerging Market Currencies

EM currency investors began last year optimistic that improving US-China trade relations would underpin a

We expect EM currencies to appreciate 2% against the US dollar in 2021. Yet we remain vigilant in monitoring the risks that could undermine this view.

Exhibit 153: EM Currency Spot Returns

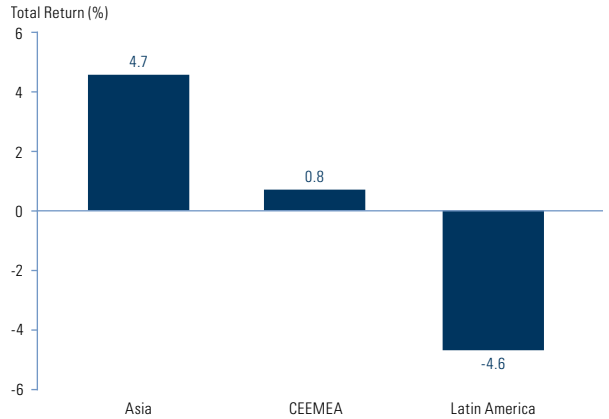
EM currencies recovered from their worst performance in a decade at the March 2020 low, finishing last year down 6%.



Data through December 31, 2020.
Source: Investment Strategy Group, JP Morgan, Bloomberg, Macrobond.

Exhibit 154: EM Currency Total Returns Across Regions in 2020

Asian EM currencies outperformed broader EM exchange rates, while Latin America underperformed.



Data as of December 31, 2020.
Note: CEEMEA represents Central and Eastern Europe, Middle East and Africa.
Source: Investment Strategy Group, Macrobond, JP Morgan.

recovery in the asset class. But that optimism was quickly supplanted by a sober realization that the mysterious virus that originated in China was creating a full-scale pandemic. The collapse in global economic activity that followed resulted in a 15% year-to-date loss for EM currencies⁶⁵ at the March 2020 low, the worst first-quarter performance in the past decade (see Exhibit 153). While the asset class recovered some of this drop over the course of last year, it still declined 6% in 2020—its seventh loss in the past 10 years.

Its position at the epicenter of the pandemic weighed heavily on China early in the year. However, forceful COVID-19 mitigation measures enabled the country to emerge first from the health crisis and avoid subsequent waves of infections. As a result, China experienced a strong V-shaped economic recovery, leading to a sharp improvement in its current account on the back of strong exports and decreased outward-bound tourism. Additionally, China's inclusion in prominent fixed income indices triggered portfolio inflows, bucking the trend of broader EM portfolio outflows. Add to that China's relatively wide interest rate differential relative to the United States, and the stars aligned for the Chinese renminbi to deliver a spectacular total return of 9.8% last year.

Other Asian emerging currencies followed suit, delivering an average total return of 4.7% and handily outperforming broader EM exchange rates.

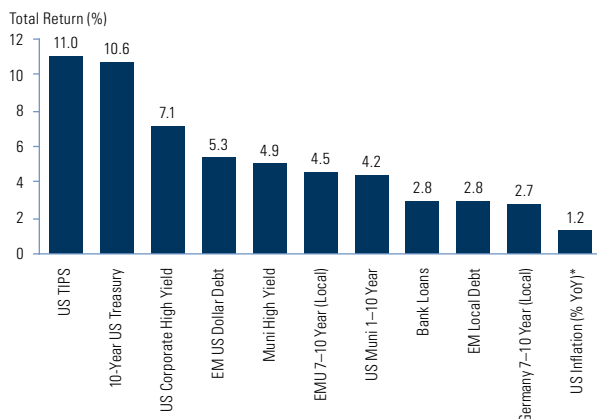
The notable underperformer was Latin America, whose currencies lost 4.6%, on average. Central and Eastern Europe, Middle East, and Africa (CEEMEA) currencies closed the year roughly flat (see Exhibit 154).

This bifurcation in performance is likely to persist in the year ahead. The Asian economies experiencing strong V-shaped recoveries and large investor inflows should recover their pre-pandemic output levels quickly, avoiding lasting economic scarring. In contrast, we expect Latin American economies to experience more-temper recoveries, weighed down by limited capacity for fiscal spending and weaker health-care systems. Nonetheless, most EM currencies are likely to enjoy a tailwind as long as the very easy financial conditions facilitated by today's ample monetary and fiscal stimulus remain in place.

All told, we expect EM currencies to appreciate 2% against the US dollar in 2021. Yet we remain vigilant in monitoring the risks that could undermine this view, including delays to vaccine distribution, tighter credit conditions in China, potential FX intervention in Asia and the complicated trajectory of political developments in Latin America.

Exhibit 155: Fixed Income Returns by Asset Class in 2020

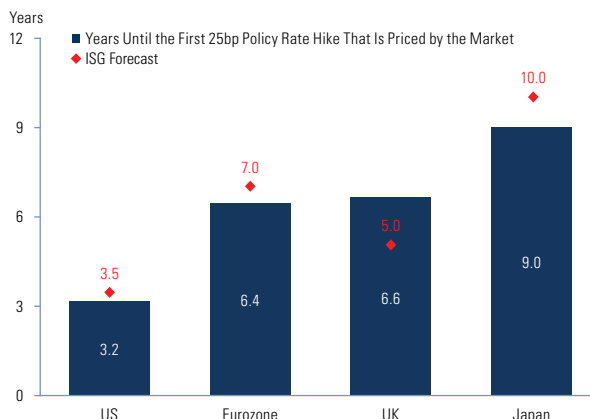
Lower yields and aggressive monetary stimulus produced positive returns across fixed income categories.



Data as of December 31, 2020.
Source: Investment Strategy Group, Datastream.
* Inflation data as of November 2020.

Exhibit 156: Market Expectations for Timing of the First Central Bank Policy Rate Hike

We and the market expect policy rates to be on hold for at least several years.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

2021 Global Fixed Income Outlook

Last year was a reminder of the important strategic role bonds play in a portfolio, despite the prevailing low level of yields. During the worst of the equity declines, bonds served as a meaningful portfolio hedge that dampened volatility. They also generated some coupon income in the US, although the amount varied by bond sector. And while risky assets staged a substantial recovery from their lows, every major fixed income asset class still managed to deliver positive, inflation-beating returns in 2020 (see Exhibit 155).

Looking ahead, we see several factors that are likely to weigh on fixed income returns, particularly in government bond markets. First, we expect a global economic recovery on the back of widespread vaccinations to put upward pressure on interest rates. Although those pricing pressures are likely to be small given that most economies still have excess capacity, the potential for upside surprises exists. Second, the flight-to-safety premium embedded in sovereign bond prices because of the pandemic is likely to shrink as evidence emerges of the more durable economic recovery we expect. Third, interest rates around the globe are already at or near all-time lows, and policymakers seem more circumspect about the incremental benefits of even lower target rates. Both the ECB and the BOJ decided against more

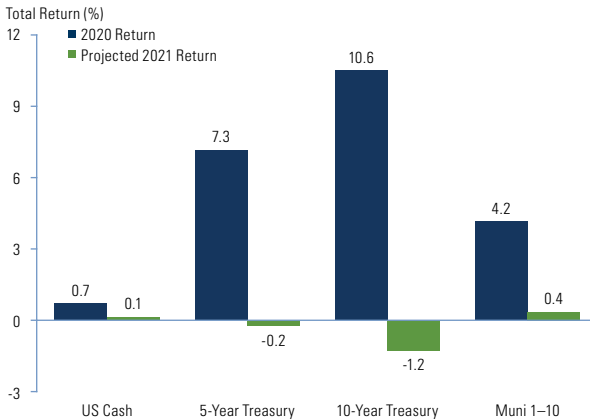
deeply negative policy rates last year despite the pandemic, while the US Federal Reserve remarked that the “effectiveness of negative rates is very mixed.”⁶⁶ Finally, government bond supply is expected to remain at high levels this year, as governments around the world continue issuing debt to finance fiscal stimulus.

Still, it is important to distinguish between the gradual increase in rates we expect and a disorderly backup. As mentioned, there is still ample economic slack in most global economies, and inflation stands well below central bank targets in most developed market countries. In turn, policy rates will likely remain at the effective lower bound for several years, helping to anchor interest rates (see Exhibit 156). Similarly, the asset purchase programs of major central banks will limit the extent to which currently depressed term premiums are repriced higher, while also absorbing a portion of government bond issuance.

Although we expect only a moderate increase in global interest rates, most bonds are still likely to underperform cash given today’s meager coupon levels (see Exhibit 157). Within bonds, we favor credit risk over duration risk, which we have expressed through a small tactical overweight to US bank loans versus investment grade fixed income. Even so, investors should not completely abandon their high-quality bond allocation in search of higher yields. We believe high-quality

Exhibit 157: US Treasury and Municipal Bond Return Projections for 2021

We expect mixed fixed income returns relative to cash this year.



Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

Past performance is not indicative of future results.

Exhibit 158: Market-Implied Timing of Fed Liftoff

The Federal Reserve is expected to be on hold for several years based on market pricing.



Data through December 31, 2020.

Note: Based on when US Fed Funds Overnight Index Swaps (OIS) first price policy rates 25bps above current levels.

Source: Investment Strategy Group, Bloomberg.

bonds still offer attractive hedging properties against unexpected shocks, as they did in 2020.

In the sections that follow, we will review the specifics of each major fixed income market.

US Treasuries

The diversification benefits of US Treasuries were clearly visible in last year's first quarter. As global economies came to a standstill and equity markets collapsed in March, the 10-year note generated a one-month rolling return greater than 10%—a performance seen only one other time in the past 30 years, during the depths of the GFC. Even though interest rates moved well off their lowest levels by the end of last year, the 10-year note still delivered a double-digit gain for 2020.

We expect a much less volatile rate environment this year, with the midpoint of our 1.0–1.5% year-end target range for 10-year US Treasury yields implying a moderate shift upward from current levels. That expectation is supported by our forecast for a strengthening economic recovery that absorbs economic slack and helps normalize inflation. Large budget deficits should also help lift yields, as they will necessitate a steady supply of Treasury issuance in the years to come. Recent estimates suggest there will be nearly \$2 trillion of net issuance this year—even after accounting for the Federal Reserve's bond purchases—in Treasuries with maturities of more than one year.⁶⁷ This stands in sharp contrast

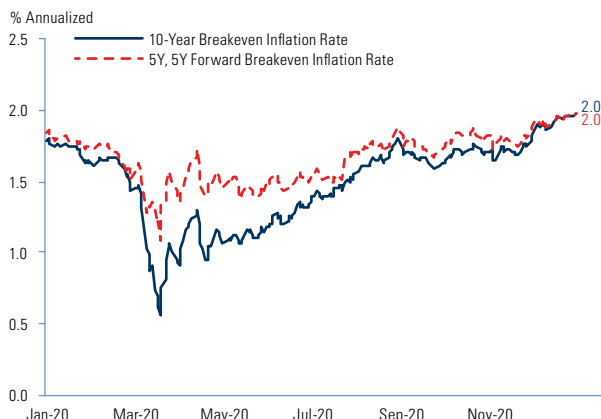
to last year's more than \$400 billion contraction in Treasury supply. Furthermore, there is scope for bond term premiums—the compensation for bearing interest rate risk—to shift higher, as they have been above current levels 95% of the time historically.

Given this backdrop, investors might rightly ask why our expectations for interest rates are not even higher. We see several factors containing the pace of increases in yields. Chief among these is the Federal Reserve's new flexible average inflation targeting (FAIT) framework,⁶⁸ which conditions any increase in policy rates on three metrics: maximum employment, current inflation at 2% and inflation on track "to moderately exceed 2% for some time."⁶⁹ Because these conditions will likely take years to fulfill, the Federal Reserve is helping to anchor interest rates by holding policy rates at the zero bound (see Exhibit 158). Similarly, the asset purchase programs of global central banks will help moderate the pace at which today's low term premiums move higher, while also reducing net government bond issuance.

Although our forecast implies slightly negative Treasury returns this year, we continue to recognize the hedging benefits of duration. As the past few years have reminded us, Treasuries are one of a limited number of asset classes that can effectively hedge against deflationary pressures, recessions and unforeseen shocks. For this reason and because even the most thoughtful forecasts

Exhibit 159: US 10-Year and 5-Year, 5-Year Breakeven Inflation Rates

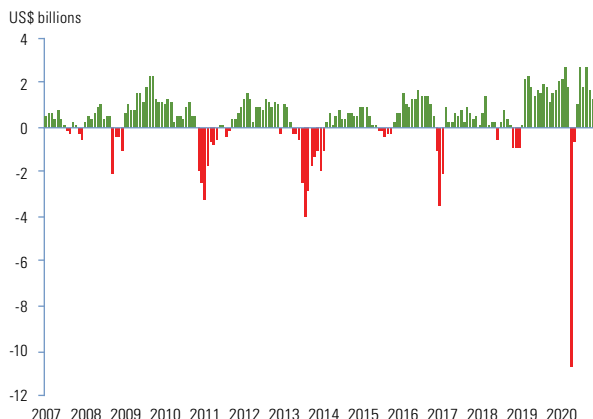
Breakeven inflation rates have recovered and are near levels implied by the Fed's 2% target.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 160: Municipal Bond Mutual Fund Net Flows

Demand has recovered for municipal bond mutual funds after the turmoil in March 2020.



Data through December 2020.
Note: Bars show 4-week average flows.
Source: Investment Strategy Group, Investment Company Institute (ICI).

can be wrong, clients should maintain a sufficient allocation to bonds in the “sleep well” portion of their portfolios, even if their expected returns are unattractive.

Treasury Inflation-Protected Securities (TIPS)

TIPS’ performance was strong again in 2020, with last year’s 11% return building on 2019’s high-single-digit advance. Yet the road to those gains has seen a few potholes, including TIPS losing 1.8% in March of last year alone. Fortunately, the dearth of liquidity that precipitated that decline was remedied by the Federal Reserve’s policy interventions. In fact, 10-year breakeven inflation rates ended 2020 above where they began the year despite the global pandemic.

Recent trends point toward a continuation of this move higher in market inflation expectations,

including both 10-year breakeven inflation rates and the Federal Reserve’s preferred measure: five-year average inflation, five years from now (see Exhibit 159). In turn, we expect TIPS to outperform nominal bonds this year, although both bond sectors are likely to deliver slightly negative returns. We do not forecast higher TIPS returns because the amount of slack in the economy implies only a gradual increase in underlying inflation, in our view. While headline inflation may exceed the Federal Reserve’s 2% target this year, Chairman Powell has said the FOMC would view that as “a transient increase in the price level”⁷⁰ that it is likely to look past.

Although TIPS are expected to marginally outperform nominal bonds, their unfavorable tax treatment is an important offset. As a result, we advise US clients with taxable accounts to instead use municipal bonds for their strategic allocation.

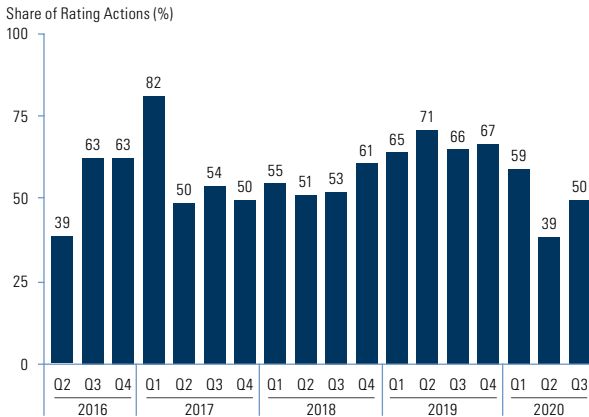
A five-year AAA-rated municipal bond buyer earns no incremental after-tax yield relative to Treasuries at current tax rates, a yield differential that has been higher 95% of the time historically.

US Municipal Bonds

Unlike their Treasury counterparts, municipal bonds were not a place of refuge for investors’ portfolios during last year’s turbulent first quarter. The US municipal bond 1–10 year index was down more than 6% at its worst point during the pandemic, and the asset class saw the fastest pace of fund outflows

Exhibit 161: Public Finance Upgrades as a Share of Rating Actions

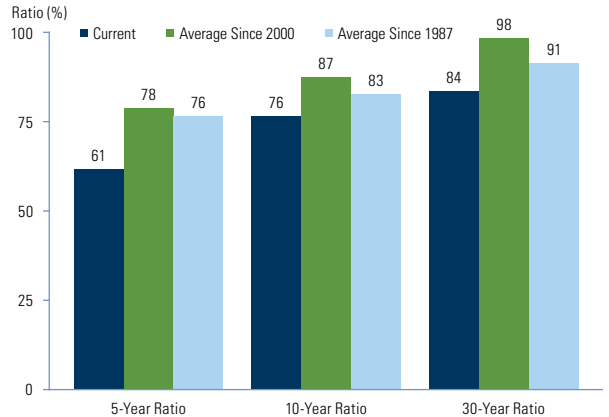
Credit rating actions in municipal bonds have been below their historical average thus far in the pandemic.



Data through Q3 2020.
Source: Investment Strategy Group, Moody's.

Exhibit 162: Ratio of Municipal Bond Yields to Treasury Yields

Elevated municipal bond valuations offer less buffer to absorb the higher interest rates we expect this year.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

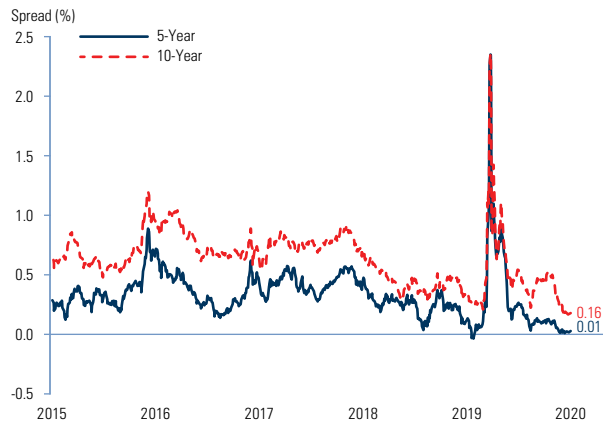
in recent memory (see Exhibit 160). Although municipal bond performance subsequently recovered on the back of monetary and fiscal support, its 4.2% total return last year still lagged other fixed income indices.

For the year ahead, we expect municipal bonds to reclaim some of that underperformance but deliver subdued absolute returns. Our forecast reflects the offsetting forces of several crosscurrents.

On the positive side, municipal fundamentals were at healthy levels at the start of the pandemic; the median state's general fund reserve balance was projected to reach an all-time high of 7.8% of annual spending.⁷¹ Although tax revenues declined substantially in last year's second quarter, they are now recovering. Partly as a consequence, rating downgrades have been contained (see Exhibit 161), with Moody's noting in its July 2020 report that "the classic strengths of rated state and local governments in particular—the ability to disconnect spending from revenues, their broadly stable revenue structures, typically ample reserves, and good coverage for even narrow special tax pledges—enable us to reasonably look beyond the current crisis."⁷² At the same time, municipalities stand to benefit from a Democratic president who is on record as being more receptive to additional state and local aid. Municipal pension liabilities have also sidestepped near-term damage, compliments of last year's swift equity market recovery.

Exhibit 163: Incremental Yield of Municipal Bonds Over Treasuries

The current incremental after-tax yields of municipal bonds relative to Treasuries stand near record lows.

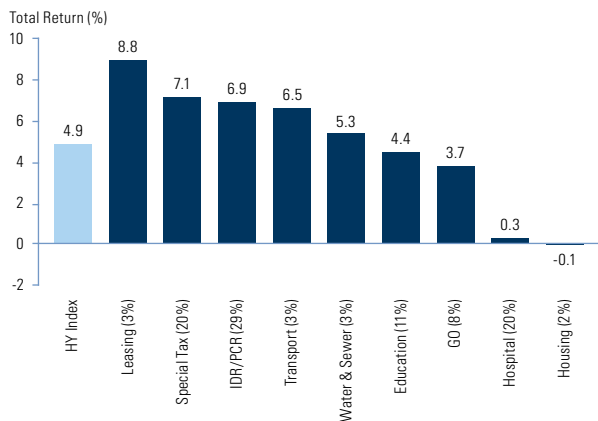


Data through December 31, 2020.
Note: Lines show the spread of AAA municipal bond yields over after-tax Treasury yields.
Source: Investment Strategy Group, Bloomberg.

Nonetheless, municipal bonds' elevated valuations are an offsetting negative factor, as they offer little buffer to absorb the higher rates we expect. As seen in Exhibit 162, the yield ratios of municipal bonds to Treasury rates across different maturities stand below their long-term averages. Incremental after-tax yields have also compressed substantially (see Exhibit 163). In fact, investors

Exhibit 164: High Yield Municipal Bond Subsector Returns in 2020

The pandemic has impacted certain subsectors disproportionately, resulting in performance dispersion.



Data as of December 31, 2020.

Note: Percentages after descriptions denote subsector weights in the index.
Source: Investment Strategy Group, Bloomberg.

Exhibit 165: High Yield Municipal Bond Spread

The incremental yield relative to investment grade bonds is above its long-term average.



Data through December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

taking some credit risk by buying a five-year AAA-rated municipal bond earn no incremental after-tax yield relative to Treasuries at current tax rates, a yield differential that has been higher 95% of the time in the past 35 years.

Combining these factors, we expect municipal yields to rise along with those of Treasuries, resulting in a 0.4% total return for intermediate municipal bond indices in our base case.

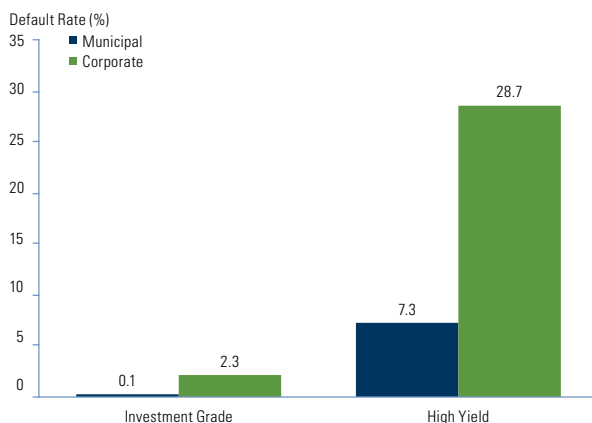
US High Yield Municipal Bonds

High yield municipal bonds were in a tug-of-war last year. While their longer duration benefited from declining interest rates, their higher credit risk—particularly in certain sectors negatively impacted by the pandemic—dragged down returns (see Exhibit 164). The net result was a 4.9% gain, which generally lagged the performance of comparable fixed income asset classes.

We see scope for the asset class to recoup some of that underperformance this year. Despite last year's gains, high yield municipal bonds still offer a 2.5% incremental spread versus investment grade bonds with similar maturity, higher than the 2.2% long-term average (see Exhibit 165). This spread could partially offset higher Treasury yields this year, resulting in an attractive 5% return, which we believe is adequate compensation for the incremental default risk, particularly given the better long-term relative default rate characteristics

Exhibit 166: 10-Year Cumulative Default Rates, Averaged Over the Period from 1970–2019

Muni defaults have historically been low relative to those of corporate bonds.



Data as of December 31, 2020.

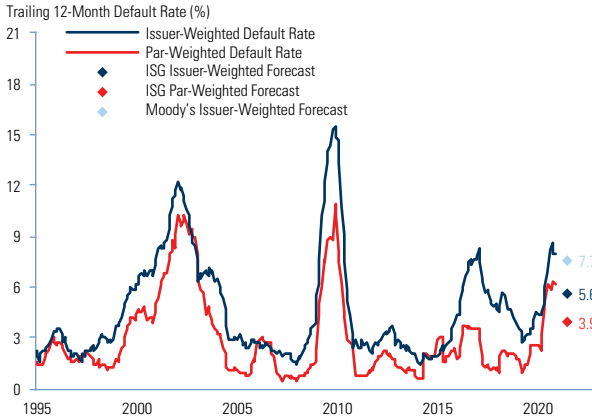
Source: Investment Strategy Group, Moody's.

of this asset class compared with those of the corporate sector (see Exhibit 166).

Consequently, we recommend clients retain their strategic allocation. Clients seeking additional income for their portfolios could even consider a small overweight, provided they understand and accept the material liquidity and credit risks that exist within the sector.

Exhibit 167: High Yield Trailing 12-Month Default Rates

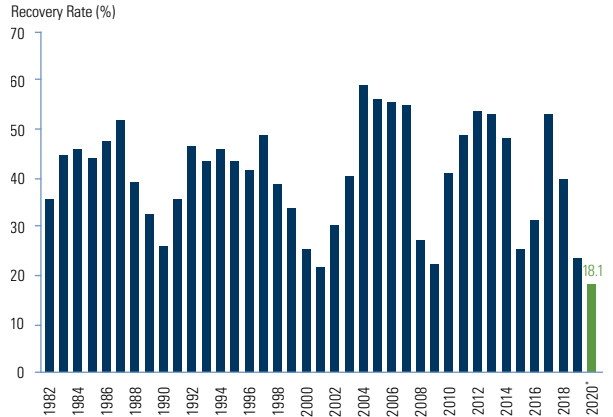
Default rates picked up in 2020 as economic activity deteriorated.



Data through November 2020.
Source: Investment Strategy Group, JP Morgan, Moody's.

Exhibit 168: High Yield Trailing 12-Month Recovery Rates

Recovery rates have fallen to all-time lows.



Data as of November 2020.
Source: Investment Strategy Group, JP Morgan.
* Last 12 months through November 2020.

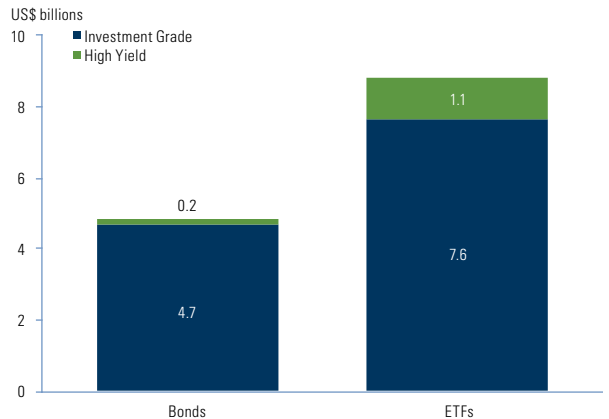
US Corporate High Yield Credit

Like many other risky assets, corporate high yield credit experienced a dramatic reversal of fortune last year. At the apex of pandemic-related concerns in March, high yield bonds and leveraged loans were down nearly 20% for the year, as credit spreads widened to levels last seen during the GFC. Soon after, corporate defaults spiked (see Exhibit 167)—driven by sectors such as energy and retail that were particularly hard-hit by the pandemic—and recovery rates fell well below their long-term average (see Exhibit 168). Yet by year-end, high yield bonds had generated a 7.1% total return, outpacing the gain of similar duration US Treasuries by more than two percentage points.

This remarkable change of fate reflects several factors, many of which we expect to continue supporting the asset class this year. The Federal Reserve's Secondary Market Corporate Credit Facility—launched on March 23 of last year to purchase fallen angels and high yield ETFs, as well as investment grade bonds and ETFs—provided a critical backstop to the market at a time when liquidity had evaporated. While the actual purchases by the facility have been limited, the mere presence of a “buyer of last resort” helped arrest the widening in credit spreads and allowed issuers to access the market again (see Exhibit 169).

Exhibit 169: Holdings of Federal Reserve Corporate Credit Facilities

The facilities had a strong signaling effect to the market despite limited actual purchases.

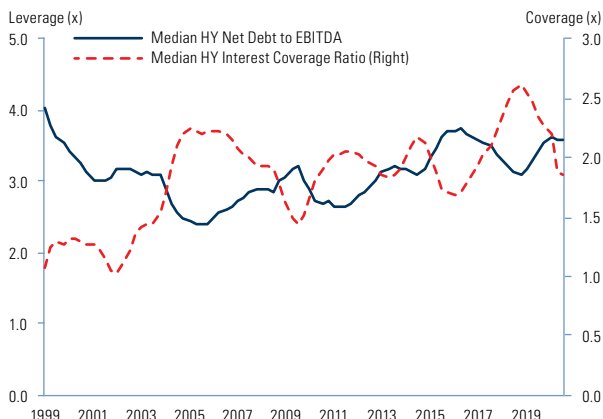


Data as of November 30, 2020.
Source: Investment Strategy Group, Federal Reserve.

More broadly, the combination of accommodative monetary and fiscal policy has helped underpin a recovery in the US economy and cap the rise in corporate defaults. We expect widespread vaccinations this year to enable a more sustained reopening of the economy, resulting in well above-trend 5.4% US GDP growth (see Section II, United States). This improving economic

Exhibit 170: High Yield Net Leverage and Interest Coverage

Net leverage has not increased as issuers have built liquidity buffers.



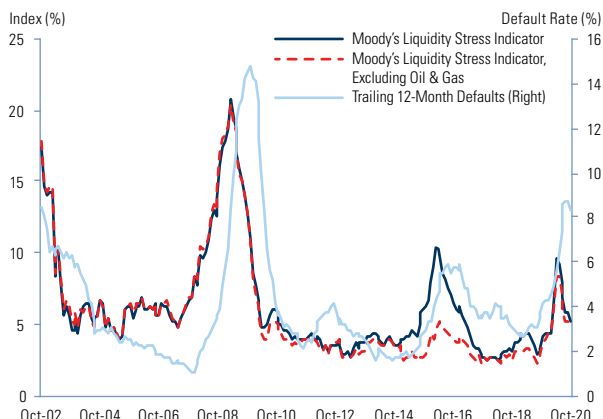
Data through Q3 2020.

Note: Data based on 4-quarter moving averages.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 171: Moody's Liquidity Stress Indicator and Default Rates

Leading indicators suggest declining default rates ahead.



Data through November 2020.

Source: Investment Strategy Group, Moody's.

environment is particularly important for the health of high yield firms, considering almost three-quarters of their sales originate domestically.

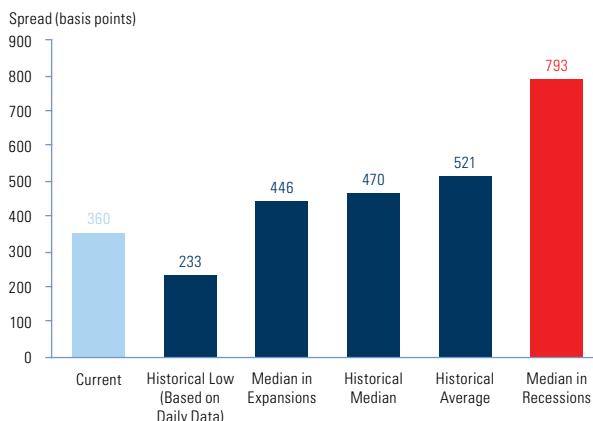
In fact, the strength of the US economy is an important driver of our 3.9% par-weighted default forecast for 2021. Recall that nearly half of last year's 6.2% par-weighted defaults came from just the energy and retail sectors.⁷³ We expect default pressures for these sectors to ease as improving economic growth is likely to lift oil prices, and broadly administered vaccinations enable consumers to resume in-person activities. At the same time, further employment gains will bolster aggregate demand and boost corporate revenues.

Responsible management choices made last year also support lower defaults. As seen in Exhibit 170, the net leverage of the median high yield issuer did not increase in 2020 despite record-breaking high yield bond and leveraged loan issuance of nearly \$800 billion. This is because nearly half of the issuance proceeds were used to refinance existing debt, while only 20% of the proceeds were used for leveraged buyouts (LBOs) and other acquisition financing. Of equal importance, firms implemented aggressive cost-cutting measures to sustain profitability.⁷⁴

Leading default indicators tell a similar tale. Moody's Liquidity Stress Indicator—a measure of strain in the high yield market and a past predictor of future defaults—has declined substantially in

Exhibit 172: High Yield Spreads Relative to History

Spreads already stand below their median levels from past economic expansions.



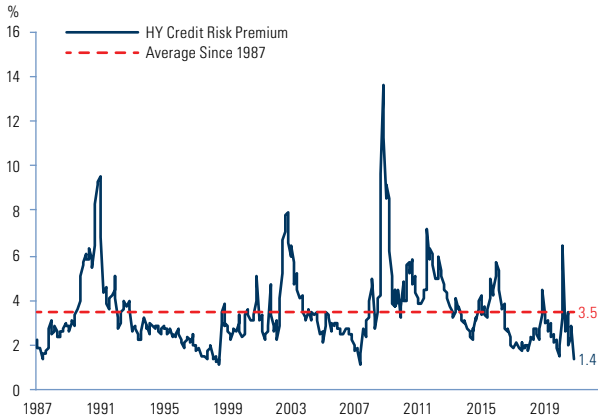
Data as of December 31, 2020.

Source: Investment Strategy Group, Bloomberg.

recent months, implying lower defaults ahead (see Exhibit 171). Other measures are also consistent with the notion that defaults have peaked, as bank lending standards eased in the fourth quarter of 2020 and the ratio of US banks' net loan losses to average total loans turned lower in the third quarter. Finally, our default model—which forecasts the forward 12-month default rate based on the macroeconomic environment and corporate

Exhibit 173: ISG High Yield Credit Risk Premium Estimate

Today's well below average credit risk premium in high yield bonds suggests investors expect low future returns.



Data through December 31, 2020.
Source: Investment Strategy Group.

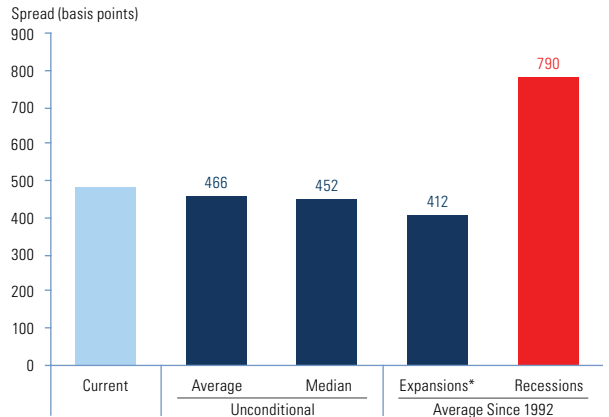
fundamentals—indicates a 3.9% default rate on a par-weighted basis, down from a peak of nearly 11% early last year.

Of course, improving fundamentals do not necessarily translate to robust returns. Today's below-average high yield bond spreads are already consistent with a benign outcome for defaults this year (see Exhibit 172). In turn, the credit risk premium—an estimate of the incremental return that high yield investors earn in excess of risk-free Treasuries after accounting for default losses—is small, having been below current levels only 1% of the time historically (see Exhibit 173). While there is scope for spreads to tighten further as the default outlook improves over time, our forecast for higher interest rates will erode part of that benefit, resulting in a positive but suppressed high yield bond total return of 2.2%.

We find bank loans more attractive for several reasons. First, today's loan spreads have more room to compress, as they stand 40–80 basis points higher than their median during past expansions (see Exhibit 174). They also offer more than 120 basis points of incremental yield relative to high yield bonds, despite having lower expected defaults and higher recoveries. Second, the coupon payment on bank loans resets every three months, resulting in a duration of only 0.25 years, which makes them attractive in the environment of rising Treasury yields we expect. Third, there is scope for improving

Exhibit 174: Leveraged Loan Spreads Relative to History

Leveraged loan valuations are attractive, evident in spreads that stand above their historical average.



Data as of December 31, 2020.
Source: Investment Strategy Group, Credit Suisse.
* Excluding 6 months before recessions.

inflows into bank loan funds, which have lost nearly 50% of their assets since 2018 as the Federal Reserve paused and then aggressively cut its policy rate. While we do not think policy rates will normalize anytime soon, we expect inflows into bank loans to improve due to their relative attractiveness.

Against this backdrop, we expect bank loan returns of about 4.6%, and hence think it makes sense for clients to have a small tactical overweight.

European Bonds

European fixed income delivered another year of positive returns in 2020, but its performance trailed that of US Treasuries as interest rates declined more significantly in the US. Peripheral bonds were again a standout, with Greek and Italian 10-year government bonds adding high-single-digit returns to their respective 26% and 12% gains from 2019.

Both the global pandemic and central banks' reactions to it impacted fixed income returns last year. The strength in German bunds and UK gilts was concentrated in last year's first quarter, as the growth and inflation outlook collapsed due to COVID-19 and demand for safe-haven assets spiked higher. In response, the ECB and BOE eased monetary policy dramatically, contributing to a decline in interest rates across markets and maturities. The ECB's securities purchase programs also triggered a substantial tightening in peripheral

bond spreads despite the further deterioration in the public finances—and higher bond issuance—of high-debt Eurozone countries.

We expect this accommodative monetary policy to persist in 2021, with both the ECB and BOE continuing their asset purchase programs and offering ample liquidity to banks—on very generous terms—to foster the flow of credit to the private sector. At the same time, both central banks are likely to leave their policy rates at current levels. With the ECB's deposit rate already at -0.5%, the case for additional cuts is weak. That said, the Governing Council is likely to keep the threat of additional cuts in its communication toolbox as a way to deter unwanted currency appreciation. We do not expect the BOE to cut its policy rate into negative territory, though the risk cannot be ruled out given that the Monetary Policy Committee appears split on the merits of negative rates.

Although monetary policy is clearly a headwind to higher interest rates, there are some countervailing forces. Chief among these are the improvement in economic activity and associated moderate acceleration in inflation we forecast in both regions in 2021. Elevated gross issuance of government bonds to fund various fiscal initiatives is also expected to put upward pressure on rates.

Acknowledging these crosscurrents, the midpoints of our forecast ranges signify that interest rates will increase, albeit modestly, in both the Eurozone and the UK in 2021. Our year-end forecast for the 10-year German bund yield is -0.6–0%, and we foresee a range of 0.2–1.0% for the 10-year UK gilt yield. Although today's environment of low yields and easy monetary policy favors the higher coupon rates being offered by European peripheral bonds, we recommend a neutral stance because we do not believe the incremental yield is large enough to compensate for the embedded credit risk.

The rebound in global GDP growth that we expect should continue to support base metal and oil demand, but could prove detrimental to safe-haven demand for gold, especially as interest rates adjust higher.

Emerging Market Local Debt

Last year showed once again that the returns of EM local debt (EMLD) are as much a function of how local currencies perform as they are of the bonds' coupon rate and duration. After all, the fixed income portion of the asset class—reflecting the bonds' yield and change in price in response to shifting interest rates (duration)—generated an 8.4% total return last year. Yet broad-based depreciation of EM currencies significantly eroded this gain, leaving dollar investors with a much smaller return of 2.7%.

Looking forward, we expect EM local bond prices to decline this year. This view is underpinned by our forecast for higher bond yields in response to a robust global economic recovery, some normalization in inflation, increased local issuance of long-end debt and, unlike last year, less direct intervention on behalf of EM central banks.

Even so, we expect the other return drivers of EM local debt—namely currency and yield—to more than offset this decline in bond prices. Continued inflows into emerging markets are a key part of this expectation, as they should temper the magnitude of the move higher in local interest rates while also providing a tailwind to emerging market currencies.

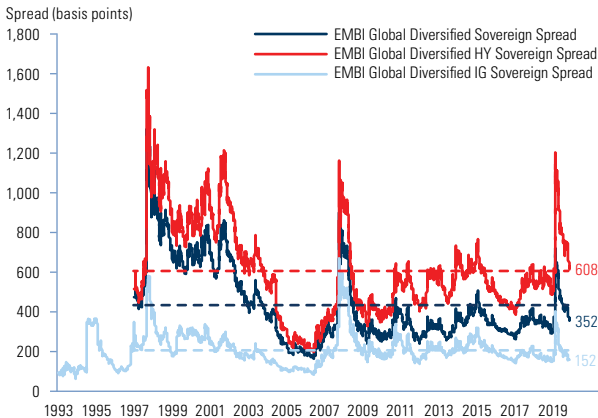
In short, the 4.2% yield of EMLD, combined with our expectation for 2% currency appreciation, is more than sufficient to offset the 1.9% drag from lower bond prices. The sum of these components implies a 4.3% total return for the asset class this year. Although this is similar to the expected return from our tactical overweight to bank loans, the five-year duration of EMLD makes it more vulnerable in the rising interest rate environment we expect. In addition, the more acute downside risks in emerging markets—reflecting weaker institutions, fragile health-care systems and greater geopolitical vulnerabilities—make the investment case less compelling, in our view.

Emerging Market Dollar Debt

Emerging market dollar debt (EMD) delivered a 5.2% total return in 2020, with wider credit spreads offsetting an 8.4% tailwind from falling Treasury yields. While the higher rates we expect this year will weigh on EMD bond prices, EMD's 4.6% yield—coupled with scope for spreads to compress

Exhibit 175: EM Sovereign Spreads

The overall spread for EM dollar debt obscures IG spreads near their all-time lows but just average HY spreads.



Data through December 31, 2020.

Note: Dashed lines show historical averages.

Source: Investment Strategy Group, Macrobond, Bloomberg, JP Morgan.

further—still implies a positive total return in the 4.0–5.0% range.

Of course, the linchpin of that calculation is the likelihood of further spread compression. History suggests better-than-even odds, as spreads have traded below current levels about 60% of the time during the past decade. Spreads could also benefit from a global search for income in a low-rate world, as EMD’s mid-single-digit yield is very attractive in such an environment. Additionally, we expect the pressure on spreads to abate this year as the pace of issuance moderates on the back of narrowing fiscal deficits and greater issuance of local currency bonds.

But the risks are not one-sided. With spreads already below their long-run average, there is more room for wider spreads than narrower ones, given

the historical distribution. This is particularly true considering the composition of credits underlying the headline EMD spread. As seen in Exhibit 175, spreads in the investment grade cohort of EMD are already near their all-time lows, whereas the high yield universe remains above average. As a result, further spread compression in EMD would ultimately need to come from the high yield universe, raising the risk of idiosyncratic setbacks.

Considering these crosscurrents, and the fact that EM sovereign bonds remain vulnerable to the higher US rates we expect this year, we do not recommend a tactical position in EMD at this time.

2021 Global Commodity Outlook

Commodity performance across the various subsectors of the S&P Goldman Sachs Commodity Index (GSCI) was as turbulent as it was uneven last year. For instance, while both base metals and energy experienced large price declines in the spring as global demand collapsed, base metals have vastly outperformed during the recovery. As seen in Exhibit 176, this subsector generated an excess return of 14% in 2020, sharply higher than the comparable 46% loss in the energy sector. Meanwhile, precious metals outperformed throughout much of last year, reflecting large inflows of capital looking for a perceived safe haven or in search of alternatives to fixed income in an environment of increasingly negative real interest rates. In fact, gold prices reached a record high last year just as oil futures plumbed all-time lows. Given the much larger weighting of energy in the index, however, the S&P GSCI still ended 2020 with double-digit losses.

These contrasting performances set the stage for potential reversals of fate this year. In particular,

Exhibit 176: Commodity Returns in 2020

Performance across commodity groups was turbulent and uneven in 2020.

	S&P GSCI	Energy	Agriculture	Industrial Metals	Precious Metals	Livestock
Spot Price Average, 2020 vs. 2019	-18%	-31%	3%	-2%	27%	-11%
Spot Price Return	-6%	-21%	22%	18%	27%	-6%
Investor ("Excess") Return*	-24%	-46%	14%	14%	22%	-22%

Data as of December 31, 2020.

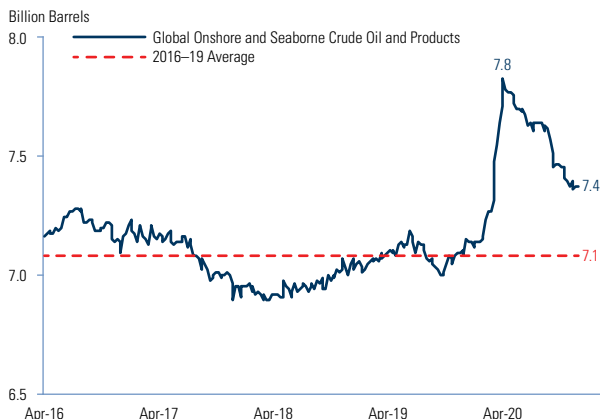
Source: Investment Strategy Group, Bloomberg.

* Investor (or "excess") return corresponds to the actual return from being invested in the front-month contract and differs from spot price return, depending on the shape of the forward curve. An upward-sloping curve (contango) is negative for returns, while a downward-sloping curve (backwardation) is positive.

Past performance is not indicative of future results. Investing in commodities involves substantial risk and is not suitable for all investors.

Exhibit 177: Observable Global Petroleum Inventories

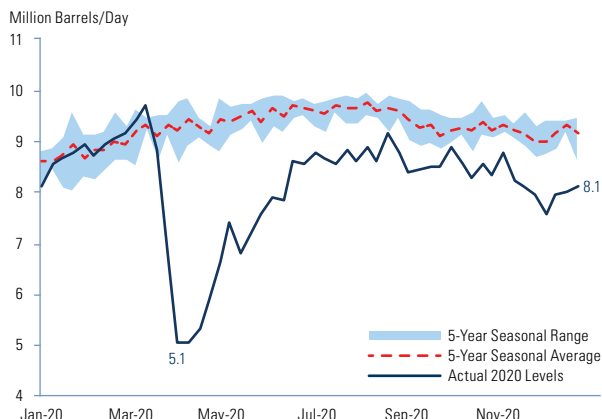
Global supply cuts led to a rapid decline in petroleum inventories, which still remain elevated.



Data through December 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 178: US Gasoline Demand

Transportation fuel demand has not yet fully recovered in the US.



Data through December 2020.
Note: Demand is implied from refining output, net imports and inventory changes.
Source: Investment Strategy Group, Energy Information Administration.

the rebound in global GDP growth that we expect should continue to support base metal and oil demand, but could prove detrimental to safe-haven demand for gold, especially as interest rates start to adjust higher. At the same time, oil prices should benefit from the lifting of travel restrictions and greater mobility, provided oil producers continue to manage their supply levels adequately.

We discuss our outlook for both oil and gold in the sections that follow.

Oil: Recovering Demand Meets Constrained Supply

Even for an asset as volatile as oil, WTI futures' record-setting foray into negative territory last April was surprising. While technical aspects of the futures market certainly exacerbated the decline, the rapidly deteriorating fundamental backdrop was the primary culprit. Recall that the oil market faced simultaneous demand and supply shocks early last year, as widespread lockdowns sapped a quarter of global oil demand at the same time that supply ballooned from an untimely and unexpected market share battle between Saudi Arabia and Russia, the largest producers in the OPEC+ alliance.

The response to this price collapse was almost as notable. OPEC and its partners eventually agreed to and implemented the largest production cuts on record. US producers were also quick to react, temporarily shutting in wells and reducing their drilling activity by as much as 75% in a

matter of weeks. By May, US production had fallen by 4.5 million b/d, or 22%, from its March levels. OPEC and Russia removed an additional 7.6 million b/d, or 21%, by June, helping to bring global supply closer to depressed demand levels.

These combined supply cuts appear to have succeeded thus far, judging by the recovery in Brent oil to around \$51 and the rapid decline in visible inventories (see Exhibit 177). But despite recent improvement, today's still-elevated inventories make clear that the market can ill afford to fall back into surplus. Thus, investors face two key issues for the year ahead: 1) the extent to which demand is likely to improve, and 2) whether oil producers will maintain supply discipline if demand and oil prices recover further.

Turning first to demand, the deployment of vaccines will be critical to the recovery of two important sources of oil consumption: commuting and airline travel. Commuting demand has already recovered to near pre-COVID-19 levels in several Asian countries, but remains about 10% weaker than normal in the US and Europe (see Exhibit 178). We expect that gap to close as employees return to the office and the labor market recovers. In the short term, aversion toward public transportation could actually boost oil demand as employees opt to drive their own vehicles to work. Longer term, it remains to be seen if work-from-home practices persist in a vaccinated world.

Exhibit 179: OPEC and Russia Oil Production

Current OPEC+ production remains 5 million b/d below pre-COVID levels, implying ample spare capacity.



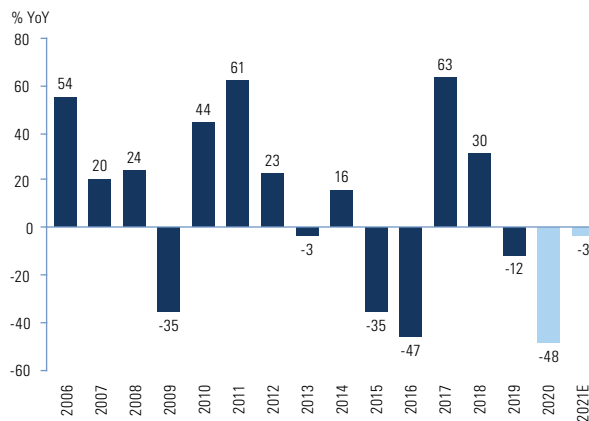
Data through November 2020.

Note: Excludes quota-exempt countries of Iran, Venezuela and Libya.

Source: Investment Strategy Group, Bloomberg.

Exhibit 180: US Exploration and Development Capital Expenditures

US oil producers have dramatically reduced capital spending for new production.



Data through 2020, forecast through 2021.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Airline travel also looks poised to recover as restrictions are lifted. While jet fuel accounted for only about 8% of pre-COVID-19 global oil demand, it represents more than 40% of the current decline in oil demand given that its usage collapsed by nearly half. Assuming sufficient vaccine distribution by midyear, we expect the summer travel season to foster a meaningful acceleration in global oil demand. In fact, pre-COVID-19 demand levels could be recaptured toward the end of the year, although the uncertainties inherent in vaccine deployment likely make this a moving target.

These demand uncertainties will require constant fine-tuning on the part of producers, increasing the risk of miscalculations. Last spring's massive OPEC+ production cuts have been only partially reversed, and the group's current production remains 5 million b/d below pre-COVID-19 levels, implying ample spare capacity (see Exhibit 179). An untimely removal of these cuts or another round of competition for market share could push too many barrels back to the market prematurely. The same could be said of a relaxation of US sanctions on Iran. While both are legitimate concerns, we expect Iran's exports will remain mostly contained in 2021, as negotiations between Iran and the new US administration are likely to be lengthy, with demands from both sides remaining far apart. We also expect OPEC leaders to coordinate a gradual normalization. More broadly, OPEC+ seems attuned

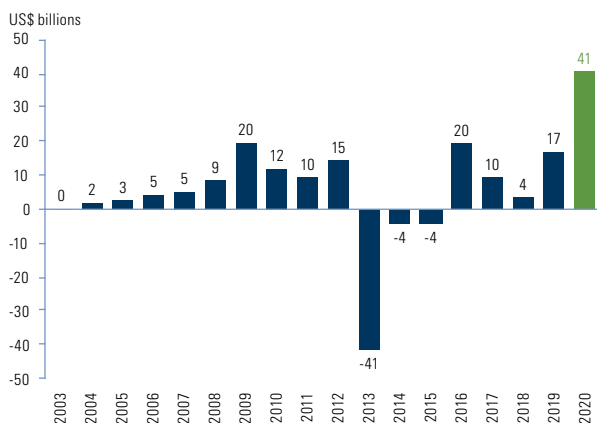
to the pitfalls of oversupplying the market again, having agreed in late 2020 to collectively revisit production levels on a monthly basis to better adjust its supply to market conditions.

These OPEC+ supply adjustments are complicated by the trajectory of US oil production. While last year's collapse in drilling activity and the typically rapid decline in production from active shale wells suggest a slow recovery, recall US production surprised to the upside following a similar oil price collapse in 2014–15 on the back of efficiency gains, M&A activity and lower input costs. Some estimates suggest drilling and completion costs for US shale have fallen by more than 20% in the past several months. Moreover, US drilling activity—while well below pre-COVID-19 levels—is rebounding, which will likely prevent further declines in US production, particularly at higher prices.

Still, we think an encore of 2014–15 is unlikely, as that rebound in US production was financed by capital markets that are now much more cautious toward the oil and gas sector. Partly as a result, producers have dramatically reduced capital spending for new production (see Exhibit 180), focusing instead on generating positive cash flows and consolidation through M&A. It is also worth remembering that drilling activity would likely shrink again in the face of lower prices, which would provide some stability to the market.

Exhibit 181: Annual Inflows Into Gold-Backed Exchange-Traded Funds

Financial instruments tied to gold saw record net inflows last year.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

Exhibit 182: Global Stock of Negative-Yielding Debt

Global fixed income instruments worth nearly \$18 trillion currently have a negative yield.



Data through December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

This fundamental backdrop, along with the likely path of OPEC policy, points to an oil supply deficit that should allow inventories to normalize throughout the year, supporting our year-end WTI forecast range of \$45–65 per barrel. Further price upside is mitigated by today’s large overhang of spare capacity but could still materialize on a combination of bullish factors, such as large supply disruptions and stronger-than-expected demand. Downside risks from any renewed COVID-19-related demand disruption or OPEC disagreements cannot be dismissed but would likely prove more transient. Against this backdrop, clients may want to be tactically overweight US energy and midstream sectors that have been shunned by investors over the past several years (see Section I, Our Tactical Tilts).

This fundamental backdrop and the likely path of OPEC policy points to an oil supply deficit that should allow inventories to normalize throughout the year, supporting our year-end WTI forecast range of \$45–65 per barrel.

Gold: An Even Tougher Act to Follow

Gold investors had few complaints in 2020. Not only did the precious metal reach a new all-time-high price of \$2,064 in August, but it was also never down more than 3% on a year-to-date basis and finished the year with a 25% gain. This marked the strongest performance in a decade and the eighth-best return of the past 50 years.

Of course, this stellar performance was aided to a large degree by the macroeconomic and financial market fallout from the unexpected COVID-19 crisis. After all, gold is often viewed as a safe haven by investors. So it is understandable that investors would flock to gold given the enormous uncertainties arising from the pandemic. What is more remarkable is the magnitude of those flows. Financial instruments tied to gold saw \$41 billion of net inflows last year—the largest amount since their inception in 2003, and more than double the prior record (see Exhibit 181).

Gold prices also received a strong boost from the combination of lower interest rates and a weaker US dollar. Recall that the opportunity cost of holding gold declines as interest rates fall because it is a non-interest-bearing asset. This dynamic is particularly relevant today, as nearly \$18 trillion of global fixed income instruments currently have a negative yield (see Exhibit 182). Meanwhile, the 13% decline in the US

dollar index (DXY) from late March to the end of last year made gold less expensive for non-USD investors and consumers, while also contributing to renewed fears about fiat currency debasement.

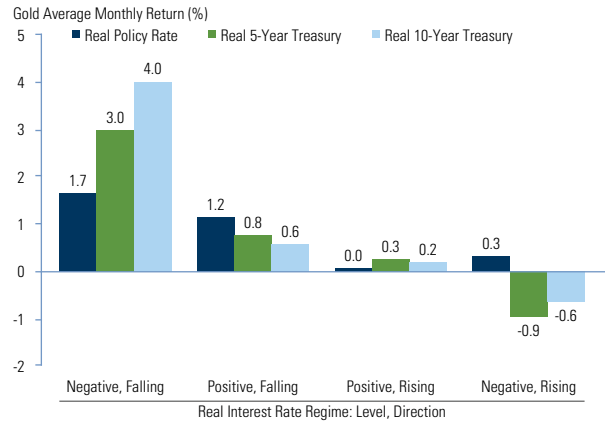
In our view, the prospects for gold’s performance this year are far less lustrous. As discussed earlier in this report, we do not expect current monetary policies to lead to high inflation or currency debasement, two often cited reasons for holding gold. Similarly, our forecast for a low-single-digit decline in the DXY this year is unlikely to stoke the same type of currency debasement fears that prevailed in 2020. Of equal significance, we expect real interest rates to rise this year, which has historically been a headwind for gold prices.

This last point is important, as many investors focus exclusively on the level of real rates rather than their direction. Yet Exhibit 183 shows that both matter, as gold fared best in periods of negative and falling rates, like last year, but worst in periods when real rates were negative and rising. As we expect stronger global growth to lift real interest rates this year, the environment for gold could turn much less supportive.

A unique characteristic of gold that has underpinned its ascent also contributes to its downside potential this year. Unlike other commodities, gold never actually gets consumed. As a result, the investment demand for gold—which helps drive its price higher—can quickly turn into supply when enough investors rotate out of the asset. Partly because of this dynamic, gold

Exhibit 183: Average Gold Returns by Real Interest Rate Regime

Gold prices have typically suffered in the rising real interest rate environment we expect this year.



Data as of December 31, 2020.
Source: Investment Strategy Group, Bloomberg.

prices can fall very quickly once momentum turns. Investors need only recall the 42% decline in gold prices between 2012 and 2015 following a similar run-up in prices. This risk is particularly acute today given that gold ETFs currently hold the equivalent of an entire year’s worth of global gold mining output, or about 3,300 tons of gold.

Given these risks and our forecast for an improving macroeconomic environment, clients should limit their exposure to gold in the year ahead, in our view.

Abbreviations Glossary

AII: American Association of Individual Investors

ACWI: All Country World Index

AMC: [Gavi COVAX] Advance Market Commitment

ATM: at the money

BCG: Boston Consulting Group

b/d: [oil] barrels per day

BIS: Bank for International Settlements

BMGF: Bill and Melinda Gates Foundation

BOE: Bank of England

BOJ: Bank of Japan

bp, bps: basis point/points

CAI: Current Activity Indicator

CAPE: cyclically adjusted price/earnings ratio

CEEMEA: Central and Eastern Europe, Middle East, and Africa

CFTC: US Commodity Futures Trading Commission

CME: Chicago Mercantile Exchange

CPI: consumer price index

DARPA: Defense Advanced Research Projects Agency

DM: developed market/markets

DPI: disposable personal income

DXY: US dollar index

EAFE: Europe, Australasia and the Far East

EBITDA: earnings before interest, taxes, depreciation and amortization

ECB: European Central Bank

EM: emerging market/markets

EMD: emerging market dollar debt

EMEA: Europe, the Middle East and Africa

EMLD: emerging market local debt

EMU: European Economic and Monetary Union

EPS: earnings per share

ERP: equity risk premium

ETF: exchange-traded fund

EU: European Union

FAIT: flexible average inflation targeting

FAO: Food and Agriculture Organization of the United Nations

FRB: Federal Reserve Bank

FDI: foreign direct investment

FOMC: Federal Open Market Committee

FX: foreign exchange

GDP: gross domestic product

GFC: global financial crisis

GIR: (Goldman Sachs) Global Investment Research

GPIF: Government Pension Investment Fund (Japan)

GSCI: Goldman Sachs Commodity Index

HY: high yield

IG: investment grade

IMF: International Monetary Fund

IPO: initial public offering

ISG: (Goldman Sachs) Investment Strategy Group

ISM: Institute of Supply Management

LBO: leveraged buyout

LIBOR: London Interbank Offered Rate

LTM: last 12 months

M&A: merger(s) and acquisition(s)

MLP: master limited partnership

mun: municipal bond

NBER: National Bureau of Economic Research

OECD: Organisation for Economic Co-operation and Development

OPEC: Organization of the Petroleum Exporting Countries

PCE: personal consumption expenditure[s]

P/E: price-to-earnings

PMI: purchasing managers' index

pp: percentage point

PPP: purchasing power parity

Q: quarter

SME: small and medium-size enterprise

SOE: state-owned enterprise

SPAC: special purpose acquisition company

TIPS: Treasury Inflation-Protected Securities

TLTROs: targeted longer-term refinancing operations (ECB)

TOPIX: Tokyo Price Index

TTM: trailing twelve months

UK: United Kingdom

US: United States

WHO: World Health Organization

WTI: West Texas Intermediate

WTO: World Trade Organization

WWII: World War II

YE: year-end

YoY: year over year

Notes

- Using direct alpha—a methodology that accounts for the timing of cash flows when comparing private funds to public benchmarks—and using the average across vintages 2009 to 2015.
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- These forecasts have been generated by ISG for informational purposes as of the date of this publication. Total return targets are based on ISG’s framework, which incorporates historical valuation, fundamental and technical analysis. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. The following indices were used for each asset class: Barclays Municipal 1-10Y Blend (Muni 1-10); BAML US T-Bills 0-3M Index (Cash); JPM Government Bond Index; Emerging Markets Global Diversified (Emerging Market Local Debt); Barclays High Yield Municipal Bond Index (Muni High Yield); HFRI Fund of Funds Composite (Hedge Funds); Barclays US Corporate High Yield (US High Yield); MSCI EM US\$ Index (Emerging Market Equity); FTSE 100 (UK Equities); MSCI EAFE Local Index (EAFE Equity); Euro Stoxx 50 (Eurozone Equity); TOPIX Index (Japan Equity); S&P 500 (US Equity). A moderate risk portfolio is allocated among equities, fixed income and additional asset classes and designed to track 8% volatility.
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such. Refer to the Backtest section for the effect of fees if the estimated returns are gross.

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Period	Gross Return	Net Return	Differential
1 year	6.17%	4.61%	1.56%
2 years	12.72%	9.43%	3.29%
10 years	81.94%	56.89%	25.05%

A description of fees is available in Part 2A of the GS&Co. Form ADV. Past performance does not guarantee future results.

Simulated Performance. Simulated performance is hypothetical and may not take into account material economic and market factors that would impact the investment manager's decision-making. Simulated results are achieved by retroactively applying a model with the benefit of hindsight. The results reflect the reinvestment of dividends and other earnings, but do not reflect fees, transaction costs, and other expenses, which would reduce returns. Actual results will vary, and these results are not a reliable indicator of future performance.

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